Calendar 2009-2010

Fall Semester 2009
Day and evening classes begin Mon., Aug. 24
*Labor Day (day and evening) Mon., Sept. 7
Spring 2010 advancement to candidacy due Tue., Sept. 15
Veterans Day (classes held; staff holiday) Wed., Nov. 11
**Thanksgiving Break Thu.-Sat., Nov. 26-28
Classes resume Mon., Nov. 30
Final instructional day Sat., Dec. 5
Final examination period Mon.-Sat., Dec. 7-12
Commencement Sat., Dec. 5
Winter Recess Sat.-Sat., Dec. 19-Jan. 9

Spring Semester 2010
Day and evening classes begin Mon., Jan. 11
*Martin Luther King Day Mon., Jan. 18
Summer 2010 advancement to candidacy due Mon., Feb. 15
*Presidents’ Day Tue., Feb. 16
Spring Break Mon.-Sat., Mar. 15-Mar. 20
Classes resume Mon., Mar. 22
Final instructional day Sat., May 1
Final examination period Mon.-Sat., May 3-8
Commencements Fri.-Sun., May 7-9
Fall 2010 advancement to candidacy due Mon., May 17
School of Law Commencement Sun., May 16

Summer Sessions I, II, and III 2010
First 5- and 8-week Sessions begin Mon., May 17
*Memorial Day Mon., May 31
First 5-week Session ends Sat., Jun. 19
Second 5- and 8-week Sessions begin Mon., Jun. 21
*Independence Day Mon., Jul. 5
First 8-week Session ends Sat., Jul. 10
Third 5-week Session begins Mon., Jul. 12
Second 5-week Session ends Sat., Jul. 24
Third 5-week and Second 8-week Sessions end Sat., Aug. 14
Summer Commencement Sat., Aug. 14

Inquiries
Address inquiries concerning:
Graduate study to the Graduate School, The University of Akron, Akron, OH 44325-2101. 330-972-7063.
Athletics to the Athletic Director, The University of Akron, Akron, OH 44325-5201. 330-972-7080.
Registration, scheduling, residency requirements, and veteran’s affairs to the Office of the Registrar, The University of Akron, OH 44325-6208. 330-972-8300.
Undergraduate admissions information, campus tours, housing, and transfer of credits to the Office of Admissions, The University of Akron, OH 44325-2001. 330-972-7077 or toll-free inside Ohio, 1-800-655-4884.
The University switchboard number is 330-972-7111.

University Closing Policy
The president, or designee, upon the recommendation of the Director Environmental Health and Occupational Safety, will determine when conditions—such as severe weather or a state of emergency—necessitate closing the entire University or cancelling classes at the main campus and/or Wayne College in Orrville.
The Chief of Police will promptly notify other designated University officials and members of the Department of Institutional Marketing, 330-972-7820, who will contact area media. University colleges/departments/schools are encouraged to establish a method for communicating the closing decision to departmental personnel. Closing information will be announced as early and as simply as possible to avoid confusion.
Cancellation of classes and closure announcements will be made as early as possible in the day and will clearly state the affected campus(es). Call 330-972-SNOW or 330-972-6238 (TDD/Voice) for updated information.

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 such other reasons as the University deems necessary.

The Graduate Bulletin is a supplement to The University of Akron Undergraduate Bulletin. The Undergraduate Bulletin contains information on undergraduate degree programs, non-degree continuing education programs, and additional information on the policies of The University of Akron.
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 330-972-INFO (4636)

Graduate School
Vice President for Research, & Dean, Graduate School
Dr. George R. Newkome 972-6458
Associate Dean, Graduate School
Dr. Mark B. Tausig 972-7664
Assistant to the Vice President for Research & Dean, Graduate School
Mrs. Dolli Quattrocchi Gold 972-6737
Senior Executive Administrative Assistant
Mrs. Cynthia S. Angerstien 972-6458
Administrative Assistant Senior
Ms. Heather A. Blake 972-7664
Coordinator, Graduate Student Financial Aid
Mrs. Karen L. Caldwell 972-6310
Director, McNair Scholars Program
Ms. Billi F. Copeland 972-2135
Student Services Counselor
Ms. Jessica N. Fritz 972-5169
Student Services Counselor
Ms. Brenda J. Henry 972-7665 Coordinator, Graduate Admissions
Ms. Theresa M. McCune 972-6405
Examiner Associate
Mrs. Sarah Sir Louis 972-5296

Graduate School
World Wide Web Location
Graduate School Homepage http://www.uakron.edu/gradsch/
Graduate School E-mail gradschool@uakron.edu

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 Education 972-6970
College of Engineering 972-7816
College of Health Sciences and Human Services 972-6519
College of Nursing 972-7551
College of Polymer Science and Polymer Engineering 972-7500
NEOUCOM (Northeast Ohio Univ. College of Medicine) 325-2511
The University of Akron–Wayne College 1-800-221-8308
Summit College 972-7220
University College 972-7066

Other Offices
Accessibility, Office of 972-7928
TTY/TDD 972-5764
Buchtelite, The (student newspaper) 972-7919
Center for Child Development 972-8210

Commuter Central 972-8690
Counseling, Testing, and Career Center
Counseling 972-7082
Testing 972-7084
English Language Institute 972-7544
Financial Aid, Office of Student
Scholarships (University) 972-6343
Scholarships (Non-University) 972-6368
Student Employment 972-7405
Student Volunteer Program 972-6841
Toll-Free 1-800-621-3847
Work Study 972-8074
Health Services, Student 972-7808
Information Centers
Student Union 972-INFO (4636)
Polksy's High Street Info Center 972-3531
Polksy's Main Street Info Center 972-3532
International Programs 972-6349
Immigration (Prospective Students) 972-6740
Immigration (Current Students) 972-6296
Libraries, University
Bierce Library 972-8161
Law Library 972-7330
Science and Technology Library 972-7195
University Archives 972-7670
Multicultural Development, Office of 972-7658
Academic Support Services/Access and Retention 972-6769
Ohio Residency Officer 972-7836
Pan-African Culture and Research Center 972-7030
Parking Services 972-7213
Peer Counseling Program 972-8288
Photocopying
DocuZip (Student Union) 972-7870
Polksy's Center 972-2043
Registrar, Office of the University 972-8300
Graduation Office 972-8300
Records and Transcripts 972-8300
Residence Life and Housing 972-7800
Student Affairs, Vice President for 972-7067
Student Judicial Affairs 972-6380
Student Union
Information Center 972-INFO (4636)
Reservation Line 972-8689
Study Abroad 972-7460
Ticketmaster 972-6684
Tours (of the University) 972-7077
WZIP-FM Radio Station 972-7105
Zips Programming Network 972-7014

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)
SECTION 1. 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 new institution was significantly aided in its efforts to survive by the patronage of 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 188 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 (1936), Law (1959), Community and Technical College (now Summit College) (1964), Fine and Applied Arts (1967), and Nursing (1967).

Considering the institution’s location in the heart of a burgeoning rubber industry, it seemed only appropriate that the world’s first courses in rubber chemistry would be offered at Buchtel College, in 1909. From those first classes in Professor Charles W. Knight’s laboratory would evolve the world’s first College of Polymer Science and Polymer Engineering (1988). 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 working 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. Committed to a diverse campus population, the University is at the forefront of all Ohio universities in recruiting and retaining 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 1892. 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, 26,000 students from 44 states and 79 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 2008 edition of Best Colleges: Region by Region. Its College of Polymer Science and 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 nearly 144,000 and include scientists, engineers, artists, lawyers, educators, nurses, writers, business people, and other professionals at work in every state and throughout the world.

The 223-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 1961 and participates on the NCAA Division I level in 19 sports.

The University’s ongoing, major campus renovation 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. This transformation continues today — UA’s first on-campus football stadium is scheduled for completion in time for the Zip’s 2009 home opener.

For more than 139 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 STATEMENT
The University of Akron, a publicly assisted metropolitan institution, strives to develop enlightened members of society. It offers comprehensive programs of instruction from associate through doctoral levels; pursues a vigorous agenda of research in the arts, sciences and professions; and provides service to the community. The University pursues excellence in undergraduate and graduate education, and distinction in selected areas of graduate instruction, inquiry, and creative activity.

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

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

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

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

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

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

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

Student success is our number one priority.

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

Principles of Our Campus Culture
Our campus culture acknowledges the importance of all in our community for their participation in our common enterprise as a university. We value the contributions
and we respect the needs of students, faculty, contract professionals, staff, administrators, maintenance and service personnel, and everyone else whose work and dedication enables us to pursue our individual and collective academic goals.

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

Expectations and Responsibilities

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

Inside the Classroom

Inside the classroom, faculty are expected to respect the sanctity of the teaching/learning process by honoring their commitment to students in terms of time, fairness, and enthusiasm. It is the responsibility of faculty to set and enforce the classroom rules of conduct. Faculty members are expected to treat men and women, persons of all colors and ethnicities, and persons with varying abilities, spiritual preference, or sexual orientation with equitable respect and consideration. Faculty should value and pursue excellence in teaching as well as research. Faculty shall not engage in sexual or other forms of harassment or engage in inappropriate dual relationships with students. Faculty must not tolerate academic dishonesty or discrimination or harassment from students to other students.

Students are expected to respect the sanctity of the teaching/learning process by expressing respect for the faculty member as the organizer and guide through this learning experience, as well as for fellow students. Disruptive, disrespectful, discriminatory, harassing, violent, and/or threatening behavior is explicitly prohibited. Academic dishonesty will not be tolerated. Students are expected to take responsibility for their own learning and, in return, can expect respect from teaching from the faculty member. Students should report unprofessional behavior on the part of faculty members. Students have a right to expect that they will not be sexually otherwise harassed, intimidated, or threatened.

On the Campus

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

Students can expect that all representatives of all departmental and administrative offices will treat them with respect, a sense of cooperation and with concern for their welfare. Students can also expect appropriate coordination of services among departments.

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

Additional Behavioral Expectations

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

ACCREDITATION

Accreditation assures that degrees are recognized and approved by select regional and national education associations, societies and councils. Accreditation serve two fundamental purposes: quality assurance and institutional and program improvement.

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

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

Accreditation provides the security of knowing that the University will honor most credits earned at a similarly accredited college or university. Degrees earned at the University are respected and sought after by prospective employers.

Institutional Accreditation: The Higher Learning Commission of The North Central Association of Colleges and Schools

Specialized Accreditations:

AACSB-The International Association for Management Education
Accreditation Board for Engineering and Technology
American Association for Family and Consumer Sciences
American Association of Marriage and Family Therapy—provisional
American Association of Nurse Anesthesia—Council on Accreditation
American Dental Association
American Psychological Association
American Speech-Language-Hearing Association
Association of Collegiate Business Schools and Programs
Commission on Accreditation for Athletic Training Education
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 for 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:

American Bar Association
Association of American Law Schools
League of Ohio Lawyers
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 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.
The Campus

Currently, the Akron campus covers 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 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 north-south 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 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:

Akron Polymer Training Center. The Akron Polymer Training Center at 225 East Mill St. is an instructional classroom and laboratory facility for Polymer Engineering and Engineering and Science Technology Polymer Science classes.

Arts & Sciences 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.

Athletics Field House. The building is adjacent to the Student Recreation Center and the Oakese Natatorium and is one of the best indoor facilities in the nation. The field house features a full 210-yard Astro Play field, 300-meter six-lane 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 collection, 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.

Buckingham Center. Located at 220 Wolf Ledges Parkway in the renovated Union Depot Building. This building houses the offices of the Associate Provost, Multicultural Development, Office of Multicultural Development, Black Cultural Center, Academic Achievement Programs, classrooms and a repository of African-American history.

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. Darrow School of Accountancy, and the departments of Finance, Marketing, and Management.

Center for Child Development. This former Girl Scout regional headquarters building at 108 Fir Hill has been renovated to accommodate the University's Center for Child Development.

Computer Center. This building located at 185 Carroll Street houses the University's Information Services offices, main computers, and Information Technology Services (Electronic Repair and Distributed Technology Services).

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 1962 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 82,000-square-foot 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 the College of Polymer Science and 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.

Guzetta Hall. Located at 157 University Avenue, Guzetta Hall is occupied by the Dean of the College of Fine and Applied 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.

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

Infocision Stadium-Summa Field. Located at 289 South Union, this state-of-the-art multiplex facility is scheduled for completion September 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 remodelled 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. Leigh is 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 of for Teaching and Learning, and Institutional Research, in addition to The John S. Knight Audition.

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 dinner between 11:30 p.m. and 9:30 p.m. Business and departmental functions, banquets, receptions, and parties can be scheduled during the hours of 7:30 a.m. to noon. The office of the Department of Development is located on the upper floors of the building.

Mcdowell Law Center. Named for C. Blake McDowell, prominent local attorney, alumnus, and benefactor of the University, the center houses the School of Law. Opened in 1973, 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.

Memorial Hall. Dedicated to the memory of Summit County men and women who served in World War II, this complex was completed in 1948. Memorial Hall contains the Office of Sport Science and Wellness Education, a multi-functional gymnasium with spectator seating, two smaller gymnasiums, a motor learning lab, a human performance lab, an athletic training lab, a weight training and fitness center, an athletics batting cage, and several classrooms.

Ocasek Natatorium. The natatorium houses an Olympic-size swimming pool with adjacent spectator seating area, and locker rooms and showers. The center also houses a light racquetball court as well as weight room facilities. The natatorium is named for former Ohio State Senator Oliver Ocasek.

Olin Hall. Named in honor of Professor Oscar E. Olin and Mr. Charles Olin, this facility 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, Classical Studies, Anthropology, and Archeology.

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

Physical Facilities Operations Center. This building, located at 146 Hill Street, houses physical facilities offices, craft shops, the central heating and cooling distribution center, and the Campus Police/Security Department.

The Polsky Building. The largest academic building in Ohio, this renovated downtown department store is home to the University Archives, the Archives of the History of American Psychology, the School of Speech-Language Pathology and Audiology and its Audiology and Speech Center, the Department of Public Administration and Urban Studies, the School of Social Work, the Continuing Education Office, the Office of International Programs, the Graduate School's Office, the Office of Research Services and Sponsored Programs, the Institute for Policy Studies, the Institute for Health Care Policy, and the 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 newly constructed 31,900 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, currently used by the Quaker Oats Company, now houses the Quaker Square Inn and Robert Dining Hall.

Robertson Dining Hall. This building houses the cafeteria and a dining room for students.

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

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 Sciences, ROTC-Military Science, in addition to Summit College’s Engineering and Engineering Center, is composed of two academic structures and a parking deck.

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, Center for Career Management, 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 recently remodeled 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 all of the 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, Office of Student Judicial Affairs, Computer Solutions — the computer technology store, DocuZip copy center, bank, Information Center, Ticketmaster outlet, Planet Underground, Starbucks, Zip card office and Barnes and Noble Bookstore. Visit our Web site at http://www.uakron.edu/studentlife.

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 and Biomedical Engineering department offices; faculty offices and research labs; a computer lab and 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 offices of the Dean, Associate Dean for Academic Affairs and Assistant Dean for Student Affairs and admission advisement offices. Other facilities include a lecture room that seats 245, general classrooms, a science and mathematics classroom/lab, a distance learning classroom, a Center for Literacy, two undergraded advanced demonstration classroom rooms, two computer-training classrooms, and a multi-media laboratory.

FACILITIES AND EQUIPMENT

The University’s addition of modern teaching aids demonstrates its recognition of the need, in this technological age, for up-to-date facilities and equipment. Many of these facilities are described below.

Buchtel College of Arts and Sciences

The Department of Biology houses greenhouses, controlled-environment chambers, an animal research facility, a molecular biology research center, modern labo-
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.

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 excellence 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: 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/philosophy/.

The Department of Physics is located on the first three floors of Ayer Hall. Facilities include research laboratories used for faculty and student research projects, laboratories for experiments associated with coursework and a computer lab for undergraduate and graduate students. The Department also has a number of smaller PC clusters for research. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/artsci/physics/index.php. The smallness of the department provides ample opportunity for interaction with all faculty members. This interaction combined with the laboratory space, computing facilities and reading room offers a unique learning experience to the student in an attractive and hospitable environment.

The Department of Political Science is located on the second floor of Olin Hall. The department maintains an instructional computer lab consisting of 16 fast and frequently updated computers that are 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.

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. Microsoft Office is available throughout the department for word processing. A full-time research programmer/analyst provides hardware and software support for the department and writes custom software for computerized research. In addition to the computer labs, a counseling clinic is maintained by the department and has videorecording capabilities for the study of counseling 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 curricula is tested, and a tutoring room. The Psychology Department provides ample opportunity for interaction with all faculty members.

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.

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. Most computers in the department also provide Internet access to encourage students and faculty to keep current on subjects of interest. 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.

The proximity of the faculty offices to the computer laboratories encourages regular interaction between students and faculty. The use of e-mails also enhances student-faculty communication. Staff members provide introductory seminars and are always available to assist and guide students. A friendly, informal, helpful atmosphere makes the department an enjoyable place to learn and gain practical experience.

College of Business Administration

The College of Business Administration is located in the 81,000 square foot four-story College of Business Administration Building, which houses the college’s offices, classrooms, computer laboratories, and advising services. The departments of Finance, Management, Marketing, the George W. Daverio School of Accountancy, the Fitzger- ald Institute for Entrepreneurial Studies, the Fisher Institute for Professional Selling and the Institute for Global Business share the CBA. All undergraduate programs are fully accredited by AACSB International — The Association to Advance Col- legiate Schools of Business, the most prestigious accrediting agency for business schools.

Tired, 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 student use. Each PC is equipped with Windows XP, Office 2007, Project 2007, Visio 2007, Ora- cle 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 da- tabses, financial news sources (e.g. CNBC), in-house databases such as COMPSTAT and CRSP and slightly delayed trading data. A sixth projector/simulated going to an instruc- tor’s station, and each area has cable TV, VCR and DVD capabilities. There is seating for four at each station, as well as 10 additional seats along the back wall. The lab also features its own wireless node.

The Goodyear Tire and Rubber Company Lecture Hall, the building’s largest classroom, is equipped with a state-of-the-art audio-visual system capable of projecting textbook material, transparencies, slides, videotapes, computer screen images, and the like onto the room’s 10-by-10 foot screen. Other classrooms also offer multi-media and internet capabilities.

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 includes a creative lab, an analytical lab, a call center and an applied research center, staffed by research and teaching assistants, a student learning suite, an entrepreneurial incubator, offices for the Institute and an executive educa- tion 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 busi- nesses 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 class space built in an amphitheater format.

Facilities for seminars, continuing education programs, and student organization meet- ings are provided in the John P. Murphy Executive Seminar Room and adjacent small- group meeting room.

Officers 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.

College of Creative and Professional Arts

The School of Communication features a television classroom/studio and a wide complement of supporting audio and video equipment, including graphics gener- ators and linear and non-linear editors. Portable audio and video equipment is avail- able for on-campus use. There is an audio production facility with multiply track capability. The School also houses radio station WZIP, an on-air 7500 watt FM radio station serving Northeast Ohio. WZIP-FM is operated by UA students under the supervi- sion 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 a Macintosh comput- er laboratory with complete desktop publishing layout, graphics, and print capa- bilities.

The School of Dance, Theatre, and Arts Administration is located in the new Guzzetta Hall addition. The Theatre Program offers 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 facil- ities. Kolbe Hall is the site of the 444-seat Daum Theatre, complete with support facilities. This conventional prosenium theatre is the home of theatre productions as is E.J. Thomas Performing Arts Hall. Student productions are performed in Studio 28, Sandefur Theatre, and Daum Theatre.

The School of Music is housed in Guzzetta Hall and also utilizes the E.J. Thomas Performing Arts Hall. Guzzetta Recital Hall seats 250 and is equipped with a pipe organ, harpsichord, two concert grand pianos, and a recording booth. The Music Computer Center is equipped with Macintosh computers and MIDI/sound and video equipment. An electronic music studio features digital and analog multitrack recording. A sound recording and mastering equipment for music composition. Classrooms, stu- dios, and 40 practice rooms (acoustical sound modules) are used for teaching, rehearsals, and practice.

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 Physical Education Building, 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 spe- cialties in Counselor Education and Marriage and Family CounselingTherapy), 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 CounselingTherapy, School Counseling and Class- room Guidance for Teachers. The department also operates a multidisciplinary clinic, the Clinic for Child Study and Family Therapy.

The Department of Curricular and Instructional Studies includes the areas of early childhood, middle childhood, secondary (adolescent to young adult), preschool to grades 12 (P-12) education and the areas of special education as an intervention spe- cialist for early childhood (P-3; mild/moderate/intensive), mild to moderate (K-12) or mod- erate to intensive (K-12). Initial teacher preparation programs are available at the undergraduate, post-baccalaureate and master’s degree levels. The early childhood program prepares teachers to teach age three to grade three. The middle childhood pro- gram prepares teachers to teach grades four through nine with specialization in each of two areas selected from reading/language arts, mathematics, science and social studies. The secondary program prepares teachers in grades seven to twelve to teach language arts; mathematics; science; social studies; family and consumer science (grades 4-12). 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 graduate students to be mas- ter teachers and supervisors of special education programs. The University Center for Child Development, under the direction of the College of Education, provides child care for children while serving as an experimental learning site for teacher education stu- dents.

The Department of Educational Foundations and Leadership serves undergradu- ate and graduate students in the College of Education. The department provides grad- uate courses in school administration and higher education administration. The department members also teach the core curriculum of historical, philosophic, psych- ological, 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 pro- gram in Higher Education Administration, undergraduate and masters programs in Post-secondary Technical Education, certificate in Technical & Skills Training and certificate in Postsecondary Teaching.

The Department of Sport Science and Wellness Education 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 train- ing, motor behavior, teaching skills (microteaching), and computer utilization in physi- cal and health education. The department has access to the James A. Rhodes Health and Physical Education Building (classrooms, the main gym, an indoor running track, a multi-purpose room, and four teaching station areas), Memorial Hall (classrooms, as well as large and small gyms), Ocasek Natorium (classroom, swimming pool, rac-quetball courts, and cardiovascular fitness and weight training area), Student Recre- ation and Wellness Center (cardiovascular fitness and weight training area) Athletic Field House (sports medicine equipment), and Lee Jackson Field (an outdoor running track).

College of Engineering

The offices, 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, Wherry Hall, and the Olson Research Building.

The master’s programs in the College consist of departmentally administered Master of Science degrees in Chemical, Civil, Electrical, and Mechanical Engineering. The Dean’s Office administers the Master of Science in Engineering degree with specializations in Biomedical Engineering, Polymer Engineering, and Engineering Manage- ment. 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, Micrscale Physicochemical Engineer- ing, 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 at the Olson Research Cen- ter and has classrooms, instructional laboratories and research laboratories. The depart- ment provides educational opportunities at both the undergraduate level (BS Biomedical Engineering) and the graduate levels (MS and Ph.D. in Engineering). Bio- medical engineering graduate students may also participate in the joint MD/Doctor of Philosophy in Engineering Degree program between the College of Engineering and the Northeast Ohio Universities College of Medicine. Research faculty members in the Biomedical Engineering Department have strong research programs in biomaterials science, biomechanics, bioinstrumentation, micro- biomaterials and are active participants in the Institute for Biomedical Engineering Research. There are seven major 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 Lab- oratory is equipped to conduct basic research on problems related to stroke, head injury and arthritis patients. The Biomedical Instrumentation Laboratory has con- tinuous wave and Doppler ultrasonic equipment, temperature sensing devices, blood pressures 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 labo- ratory is equipped with a Vicon Motion Analysis System, two AMTI force plates, a VASY-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 Biomechanics and Tissue Engineering Laboratory provides equipment infrastruc-
ture to investigate all aspects of biomaterials. The facility includes a wet lab for formation, development and analysis of biomaterials, including medical applications for 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 apply physiological joint movements, including a custom-built spine flexibility testing system and a KUKA six-degree of freedom serial robot arm with an ATi Delta six-axis 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.

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. It is equipped to support undergraduate research projects at all 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 feet high distillation unit with the Corning Glassplant 6-inch and 12-inch columns configured as a 12-plate bubble-cap column, an 8-foot high packed-bed column, and control systems. 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 adsorption and gas chromatography.

The Department of Chemical and Biomolecular Engineering has an Undergraduate Computer Laboratory with excellent on-line computer access and up-to-date software. Software programs include word processing, numerical calculations and programming, process simulation software (ChemCAD), and computational fluid dynamics software (CFX). 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 CarboTherm with additional luminescence, UV/VIS, and IR detectors. The labs are well equipped with various bioreactor assemblies, Sorval RC-5C refrigerated super centrifuge, Perkin-Elmer UV/VIS spectrometer and LS-50B luminescence spectrophotometer, and on-line NAD(p)H fluorometers. The Biomaterials Laboratory is available for polymer synthesis and storage including a nitrogen hood, Sephadex separation columns, an oil bath, a dry bath, a vacuum oven, a Buchr rotary evaporator, and a Labconco lyophilizer.

The Catalysis Research Laboratory is equipped with high pressure and high temperature IR reactor system with a Nicolet Magna-IR 560 Spectrometer Series II, a Nicolet Magna-IR 560 Spectrometer E.S.P. and a Baebers Prisma QMG 200 Mass Spectrometer for in situ catalyst preparation, in situ characterization, temperature programmed desorption of NO, H2, 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 lab is equipped with a gamma ray instrument for measuring porosity of packed columns and filter cakes, a Frazier Test to measure air permeability of filter media, a Hiac Royco BR8 particle counter, a Zeta Meter and a Brookhaven EKA Streaming Potential instrument for measuring zeta potentials. An optical system is set up to measure particle sizes and size distributions. The Nonlinear Control Laboratory is equipped with Unix based workstations and a variety of engineering software packages.

The Supercritical Fluids Laboratory, a key lab in the Ohio Supercritical Fluid Technology Consortium, is equipped with FTIR/RAMAN/ATR, GC/FID/TCD high pressure phase behavior apparatus, Berty Reactor, 1-liter stirred Reactor, dynamic light scattering, mechanical testing and high temperature GPC. The Thin Film Laboratory is equipped with plasma systems, thermal chemical vapor deposition, and in situ microbalance.

The Department of Civil Engineering is located in the Auburn Science and Engineering Center and Schrank Hall North and has five major laboratories. In the Environmental Engineering Laboratory, students learn to analyze water, wastewater and contaminated soils to assess its quality and to determine the most effective treatment processes. 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 with personal computers and associated facilities for civil engineering students for both class and personal use.

In the hydraulics laboratory a tilting flume enables the student to visualize water flow in streams and rivers. A pressurized pipe module is used to study frictional losses in different size pipes. Instructional laboratories introduce several hydraulic software tools such as FlowMaster for pressurized pipe and open channel flow calculations, EPANet, for water distribution pipe network analysis, 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, unconfined compression strength. In support of 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 100,000 lbs., five closed loop servo-hydraulic testing machines with a maximum capacity of 100,000 lbs., a load frame used to test full scale members and structural systems and a Charpy impact machine. One of the closed loop machines has the capability to apply both axial and/or torsional loads. Further, a full array of data acquisition equipment is available.

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

The Department of Electrical 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 voltmeters, and other basic measuring equipment.

The analog and digital electronics laboratory builds on the circuits sequence and introduces the student to more advanced design tools and concepts, including computer simulation of circuits. In addition to digital oscilloscopes, the laboratory contains signal generators and the like, specialized equipment such as a transistor curve tracer, single-board microcomputers, development systems, personal computers, and other specialized instruments.

The computer laboratory is open laboratory with free access to students. The laboratory contains networked personal computers with all software necessary for research purposes. The computer laboratory also serves courses in computer engineering and many elective courses and for research purposes.

The two control laboratories teach the basics of analog and digital control and are equipped with digital measuring equipment, analog and digital computers and 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 laboratory is dedicated to interfacing the computer to the outside world. Students learn how to connect devices to computers, how to program them, and how these can be used in design. The laboratory uses a variety of real-world designs and projects to keep students up to date on this important engineering activity. The equipment in the laboratory includes personal computers, single-board microcomputers and industrial controllers in addition to measurement equipment and components.

The power electronics lab is taught as part of a power electronics course and teaches design of power components and circuits for operation at high voltage, high current and high power. Digital controllers and all digital measuring equipment account for a very modern laboratory.

The electromagnetics/microwave laboratory uses basic experiments in transmission lines, waveguides and antennae to teach the principles involved. In addition to the basic equipment, the laboratory has a shielded room for specialized measurements.

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.

The Department of Mechanical Engineering is located in the Auburn Science and Engineering Center. There are eight laboratories in the Department of Mechanical Engineering. The Thermal and Fluid Science Laboratory has internal combustion
engines, a supersonic wind tunnel, a subsonic wind tunnel, and a water tunnel. The Heat Transfer Laboratory has temperature measurements systems, a gas laser, and a spectrum of heat exchangers. The Mechanical Measurements Laboratory has a complete complement of transducers, calibration equipment and standards, signal conditioners, and analog recording devices and microprocessor-based digital data acquisition systems. The Materials Testing Laboratory has a computer controlled servohydraulic structural testing machine and a uniaxial universal testing machine for performing static, quasistatic, cyclic and dynamic tests on a spectrum of engineering materials and several types of hardness testing equipment. The Parker Hannifin Motion and Control Laboratory has hydraulic and pneumatic servo systems as well as serval 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 several microprocessors, analog computers, and digital controllers, as well as equipment for process control and 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 Metallurgy and Failure Analysis Laboratory has a complete set of metallurgical instrumentation, and associated facilities, for the analysis of metals and advanced engineering materials, and electron microscopes for analysis of failure.

The facilities in the Department of Polymer Science contain extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. A nuclear magnetic resonance laboratory is maintained with several high-resolution instruments. The applied research section of the Maurice Morton Institute of Polymer Science operates a variety of analytical and compound/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/molding and compounding 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.

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. Nine laboratories, including a computer center, are available for authentic student learning experiences. All programs provide community experiences through internships, clinicals, and student teaching. These programs have active Advisory Committees of community professionals who provide advice and networking assistance. The School’s Center for Family Studies offers a variety of certificate programs in Divorce Mediation, Home Schooling Intervention and Support Services.

College of Health Sciences and Human Services

The School of Social Work

The School of Social Work 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.

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 for undergraduate students interested in the polymer industry. Options have also been developed in the College of Arts and Sciences in Chemistry and Physics which emphasize polymer science. In addition, an interdisciplinary undergraduate program leading to a degree in Mechanical Polymer Engineering, approved by the faculties of the colleges of Engineering and Polymer Science and Polymer Engineering was started in Fall 1995. Students in this program are administered in the College of Engineering, and the program is described in that section of this Bulletin.

The facilities of the Department of Polymer Science and the Maurice Morton Institute of Polymer Science (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.

The Department of Polymer Engineering and Institute of Polymer Engineering maintain a broad-based, 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 both manual and computer controlled, with semiautomatic and fully automatic processing equipment available. Polymer processing equipment includes extrusion and injection molding facilities, liquid silicone rubber molding facilities, and rotational molding equipment. The blending and compounding facilities include five twin-screw extruders, a microscope compander and seven internal mixers with flow visualization capability. The gas liquefaction and cryogenic facilities are equipped with liquid nitrogen and liquid oxygen storage vessels. The equipment includes both manual and semiautomatic equipment for filament winding, filament winding and filament winding with braiding. The facilities also include a complete complement of transducers, calibration equipment and standards, signal conditioners and data acquisition systems. The APT has trained thousands of incumbent employees in the rubber and plastics industry worldwide. By actively listening to our clients, we have responded by adding courses of interest in the new and emerging fields of bio-materi-als and polymers for bio-medical applications in anticipation of collaboration with
the newly formed BioInnovation Institute in Akron. With a diverse set of course offerings that serve our industry, the APTC is the largest polymer training center 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 and 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.

University Libraries

Library facilities are housed in three separate locations: in Bierce Library on Buchtel Common; the Science Library in Abrams 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, audio-visual 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.

Information Technology Services Division

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

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.

Information Technology Services (ITS) Division

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 360 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, Polsky’s Room 267 and the Exchange Street Residence Hall. 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 109A.

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 dial-in access to the University Computer Network as well as direct network connections or wireless for residence hall students.

Computer Repair Services

Distance Learning Services: Distance Learning Services provides synchronous video-conferencing 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 videoconferencing and Web collaboration technologies. In addition to accommodating traditional course offerings, Distance Learning Services also provides:

A corporate videoconferencing suite ideal for group meetings and personal interviews.

Microsoft Windows XP, XP Home, 2000, ME, 98, Vista

Microsoft Office 2007, 2003, 2000,

Microsoft Publisher

Adobe Acrobat Reader

Hummingbird Resume 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: 8:00 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. – 7 p.m.

Summer hours are modified and are posted on the Web page.

Polsky 367

Monday – Friday: 8 a.m. – 8 p.m.

The Zips Support Desk provides call-in, (330) 972-6888, email, support, desk@uakron.edu, and online chat support for all students, faculty and staff.

Hours of operation during the Fall and Spring semesters:

Monday – Thursday: 8 a.m. – midnight

Friday: 8 a.m. – 9 p.m.

Saturday: 10 a.m. – 4 p.m.

Sunday: 1 p.m. – 7 p.m.

Summer 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), Springboard!, and email (WebMail). For more information, visit Software Training Service’s Web site at http://www.uakron.edu/its/learning/training/index.php.

Computer Based Assessment & Evaluation 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 testing for incoming university students.

Distance Learning Services provides support for the design and development of web-based and multimedia instructional materials. Our team is comprised of Instructional, curriculum, graphic, and multimedia designers and producers.

- We support 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 Distance and Development Services at (330) 972-2443 or visit the website: http://www.uakron.edu/its/instructional_services.

Distance Learning Services:

Distance Learning Services provides synchronous video-conferencing 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 videoconferencing and Web collaboration technologies. In addition to accommodating traditional course offerings, Distance Learning Services also provides:

A corporate videoconferencing suite ideal for group meetings and personal interviews.

Microsoft Windows XP, XP Home, 2000, ME, 98, Vista

Microsoft Office 2007, 2003, 2000,

Microsoft Publisher

Adobe Acrobat Reader

Hummingbird Resume 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: 8:00 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. – 7 p.m.

Summer hours are modified and are posted on the Web page.

Polsky 367

Monday – Friday: 8 a.m. – 8 p.m.

The Zips Support Desk provides call-in, (330) 972-6888, email, support, desk@uakron.edu, and online chat support for all students, faculty and staff.

Hours of operation during the Fall and Spring semesters:

Monday – Thursday: 8 a.m. – midnight

Friday: 8 a.m. – 9 p.m.

Saturday: 10 a.m. – 4 p.m.

Sunday: 1 p.m. – 7 p.m.

Summer 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), Springboard!, and email (WebMail). For more information, visit Software Training Service’s Web site at http://www.uakron.edu/its/learning/training/index.php.

Computer Based Assessment & Evaluation 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 testing for incoming university students.

Distance Learning Services provides support for the design and development of web-based and multimedia instructional materials. Our team is comprised of Instructional, curriculum, graphic, and multimedia designers and producers.

- We support 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 Distance and Development Services at (330) 972-2443 or visit the website: http://www.uakron.edu/its/instructional_services.

Distance Learning Services: Distance Learning Services provides synchronous video-conferencing 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 videoconferencing and Web collaboration technologies. In addition to accommodating traditional course offerings, Distance Learning Services also provides:

A corporate videoconferencing suite ideal for group meetings and personal 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 802.11b wireless services. Remote access is provided by the use of VPN access. 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 – UAnet 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

RESEARCH CENTERS AND INSTITUTES

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 of the Graduate School, the Director of the 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 of the Graduate School and the Director of Research Services and Sponsored Programs.

Akron Global Polymer Academy
Katharine Owens, Ed.D., Associate Director of Operations

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.

Ray C. Bliss Institute of Applied Politics
John C. Green, Ph.D., Director

The Ray C. Bliss Institute of Applied Politics is a public education and research adjunct of The University of Akron and its Department of Political Science. The broad purposes of the institute, 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 research, development, and dissemination of advanced automotive technology and alternative energy systems and their enabling technologies. The Center 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 in excess of ten faculty and a large number of 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 Research Laboratory, the Controls Research Laboratory, the Battery Research Facility, the Hybrid Electric Vehicle Facility, and the Pervasive Automation Laboratory, among others.

Over a dozen M.S. and Ph.D. students have graduated in the last five years in CAVES-related fields. These graduates are actively sought after in the utilities, automotive, and related industries.

Center for Applied Polymer Research
Robert H. Seiple, M.S., Manager
Crittenden J. Ohlemacher, Ph.D., Assistant Manager

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 (IRPA, DMTA), electron microscopy (STEM, TEM, SEM, AFM), 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
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

The center exists to improve the economic literacy of individuals to help them function competently as citizens, producers and consumers.
The center conducts workshops, seminars and economic programs for teachers, students and interested groups. It provides consulting services in the area of economic education and acts as a clearinghouse for the gathering and dissemination of economic education materials and programs. It also fosters an understanding and appreciation of the American economic system.


Nancy K. Grant, Ph.D., Director

The intent and primary charge of the Center for Emergency Management and Homeland Security Policy Research (CEM/HSPR) is the improvement of the practice of emergency management. This center focuses on policy and its interaction with the function of emergency management. This policy analysis and research relates to contemporary network 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 crisis 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 system 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 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. The Center, an affiliate of the Work-Family Institute at Boston College, can supply current and credible information on work-family issues to its constituencies.

The Center is represented by faculty from 5 colleges and over 15 disciplines. It also includes leaders from various community systems, such as the 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 this Bulletin or the General 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 Information Technologies and eBusiness

Bindiganavale S. Vijayaraman, Ph.D., Director

The Center for Information Technologies and eBusiness is a volunteer organization whose mission is to teach students and develop faculty in the principles and practices of the selected disciplines of information technology and electronic commerce. The Center’s activities will identify, promote, and teach the best practices in the design, development, and application of information technology in organizations.

Center for Literacy

Evangeline Newton, 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. Further information about the Center for Literacy can be found at http://www.uakron.edu/education/index.php
Center for Urban and Higher Education

Bridgette A. Ford, Ph.D., Director

The Center for Urban and Higher Education is a public education and research unit within the College of Education with the broad purpose of improving student achievement pre-K through higher education. It serves both the University and the community by fostering collaboration among faculty, students, practitioners, and community leaders in educational conferences and seminars, research, and training.

English Language Institute

Debra L. Deane, M.A., Director

Established in 1979, the English Language Institute (ELI), part of Buchtel College of Arts and Sciences, offers two programs in English as a Second Language (ESL) instruction. The English for Academic Purposes Program provides non-credit ESL courses to international students and non-native residents who plan to pursue an undergraduate or graduate degree at The University of Akron or another U.S. university. The intensive, 20-hour per week 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, writing, listening, and speaking. The classes are designed to complement and enhance students’ English skills. All ELI classes are taught by native English-speaking instructors who adhere to the institute’s mission of providing an optimal learning environment for all students.

In addition to these instructional programs, 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 website at www.uakron.edu/eli, e-mail eli@uakron.edu, or call 330-972-7544.

Fisher Institute for Professional Selling

The Fisher Institute for Professional Selling was founded in 1994. Its mission is to enhance the image of the sales profession, promote professional selling and sales management as a rewarding lifetime career, to provide quality sales training and learning experiences, and to advance the knowledge of professional selling through the support of applied research.

William and Rita Fitzgerald Institute for Entrepreneurial Studies

James J. Divoky, D.B.A., Contact Person

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, 330-972-7043.

Institute for Global Business

Il-Woon Kim, Ph.D., Associate Director

The University of Akron received special funding from the State of Ohio to expand its offerings of undergraduate and graduate degree programming in international business. Thus, the College of Business Administration created the Institute for Global Business, which coordinates both credit and noncredit programs in international business. The Institute offers short courses and seminars to assist in improving international competitiveness of area business.

Institute for Health and Social Policy

Richard C. Stephens, Ph.D., Interim Director

The Institute for Health and Social Policy, located on the fifth floor of the Polsky Building, was established in February 1999 for the study of the delivery of effective health and social services. The mission, objectives and research continuum are defined as follows:

Mission
To improve the quality of services to specific target groups most at risk of health and social consequences in order to decrease morbidity and mortality and the burden of health and social problems on the community and individuals.

Objectives
- Conduct research appropriate to the mission
- Collaborate with units on campus
- Assist faculty in the development of proposals

Research Continuum
- Epidemiology
- Intervention Development
- Service delivery
- Technology transfer
- Policy

Most of the work conducted by the Institute is on behalf of government or non-profit agencies. Faculty and students have the opportunity to collaborate on research and evaluation projects of national significance.

The Institute also serves as an educational resource for students and the community for the most up-to-date social and health services research available and the latest advances in behavioral and social science research technologies.

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 (SEM, TEM EDS, EDX), polymer characterization (SEC, DSC, TGA, light scattering, FTR, UV-vis, X-ray, AFM, goniometer), polymer processing (mixing, extrusion, film, fiber, property, law cy, filament, winding, injection, extrusion, 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.

Institute for Teaching and Learning

Helen Gammar, 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
- Consulting with colleges, departments, and individual faculty on teaching, learning, evaluation, and assessment issues
- Developing and providing targeted professional development activities, information-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 website 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 Laws in Intellectual Property Law Program.
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. There is a combined graduate certificate program with Kent State University. Combined, the two universities offer a diverse range of graduate courses with aging-related content and joint faculty that are nationally and internationally recognized scholars in gerontology.

The Institute of Life-Span Development and Gerontology has grown into a campus-wide program involving more than 63 faculty in over 20 different departments, representing six colleges. Students in the certificate programs carry out field placements at numerous community service settings. There are over 30 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 has served as a major site for the Rehabilitation Research and Training Center Consortium on Aging and Developmental Disabilities involving seven universities in six states.

Examples of outreach activities include The Tri-County Senior Olympics.

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 and fibers. These particles and fibers can be used in applications including heterogeneous catalysis, 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 promotes networking, provides a forum for industrial-university cooperation, and is a consortium of industrial sponsors for fundamental and applied research in microscale physiochemical engineering.

Nursing Center for Community Health
Annette Mitzel, MSN, RN, Director

The Nursing Center for Community Health 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 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 University nutrition expertise and the extensive preventative health care needs of the campus and 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.

Taylor Institute for Direct Marketing
Dale Lewison, Ph.D., Director

The Taylor Institute for Direct Marketing in the College of Business Administration is the future of direct interactive marketing. With dedicated faculty and staff and a state-of-the-art facility featuring laboratories in telecommunication, TV infomercials, direct response, eMarketing, and marketing analytics, the Taylor Institute is able to provide students with leading-edge skills and practical experiences.

For more information, contact the Taylor Institute of Direct Marketing at (330) 972-8228 or taylormktg@uakron.edu.

Training Center for Law Enforcement and Criminal Justice
Michael Jalbert, Interim Director

The Training Center for Law Enforcement and Criminal Justice, employing the expertise of the Criminal Justice Technology faculty and the experienced professionals in the field of Criminal Justice, provides state certified training in the following areas: Basic Peace Officer Training Academies, Private Security, Academies, Police Refresher Training, Firearms Requalification, and In-service Seminars.

Training Center for Fire and Hazardous Materials
Captain 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 100 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.

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, and polymer science and polymer 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 Northeastern 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 Northeastern Ohio. Grant monies may be available to help with costs.

Student Affairs
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 website 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 self-esteem. Biofeedback services are also available for stress management. ULfile 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 CTCC 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, on-campus 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.

Center for Career Management
The Center for Career Management’s mission is to provide career services to all students and alumni of The University of Akron. Career Services for students and alumni include opportunities to participate in on-campus interviews with representatives from business, industry, education, and branches of the government. Numerous educational outreaches are provided throughout the campus community and includes a wide variety of topics such as resume writing, job search skills, dress for success, etiquette dining, and mock interviews. In addition, CCM offers leadership opportunities for students and sponsors career expos in collaboration with academic colleges, giving students the opportunity to network with hundreds of potential employers. CCM 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 available and may be scheduled by contacting the Center for Career Management. CCM is located in Simmons Hall, Room 301 and can be contacted at (330) 972-7747 or via the web at http://www.uakron.edu/ccm

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, surgical benefits, and in-hospital medical benefits. Brochures describing details of the student health insurance plan may be obtained at Student Health Services.

Completed health forms and other health-related records are confidential and are kept in the Student Health Services offices. For more information, contact Health Services at (330) 972-7808. Information about student health insurance also is available at http://www.leonardinsurance.com

Office of Accessibility
The University welcomes students with disabilities. 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 the 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, partnerships, and advocacy with many university departments. 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. This mission goes well beyond the legal requirements, including Section 504 of the Rehabilitation Act (1973) and the Americans with Disabilities Act (ADA) of 1990, and supports the University’s commitment to create a welcoming environment for all students. For more information, call (330) 972-7928 or (330) 972-5614 (TTY), see our Web site at www.uakron.edu/access, or visit Simmons Hall Room 105.

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 6:00 p.m. Monday through Friday. The program offers hourly flexible and half-day programs for children three to five years old and toilet trained. Full-day sessions are available year round for children 18 months to five years old.

A summer program is also offered for school-aged children. This program is offered from 7:30 a.m. until 6:00 p.m. For more information call the Center for Child Development, 330-972-8210.

The Student Union
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, a movie theater, game room, student organization offices, Student Judicial Affairs, Computer Solutions—the computer technology store, a ZipCard office, the DocuZip copy center, bank, Ticketmaster outlet, Information Center, Barnes & Noble Bookstore, Planet Underground, and Starbucks Coffeehouse. Visit our website at 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. The store also carries a wide range of classroom supplies, paperbacks, engineering and art supplies, photo supplies, greeting cards, University memorabilia and clothing.

• The Donfred H. Gardner Theatre, located on the second floor, screens second-run movies as well as occasional first-run sneak previews. The theater also hosts special events and performances.

• Ticketmaster Center, located on the second floor, sells tickets to most events in northern Ohio, including Blossom Music Center, Public Hall Cleveland, and the Quicken Loans Arena. Over-the-counter sales include tickets to campus functions, sporting events and local shows.

• 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 in 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. In addition, the store is a point of contact for other services, such as requesting a university network ID (UANet ID) or requesting a network connection in the residence halls.

• The Game Room, located on the first floor, has a pool hall, 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.

Office of Student Judicial Affairs
Student Judicial Affairs is the office that receives and reviews referrals that allege violations of the University’s Student Code of 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 (Student Code of Conduct). The Student Code of Conduct can be accessed by visiting www.uakron.edu/jsa or visiting the Office of Student Judicial Affairs, Student Union 216. For more information regarding the Student Code of Conduct, please contact the Office of Student Judicial Affairs at jsa@uakron.edu or (330) 972-6380.

Background Information
17

For more information call the Center for Child Development, 330-972-8210.
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 University
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. The Division of Student Affairs is responsible for security and safety policies governing residence halls, fraternities, and sororities and for teaching students about security and crime prevention.

It is the intent of the University to continue and enhance current safety and security education and awareness programs throughout the year. The purpose of these programs is to assure that the campus community frequently receives information and instruction on University crime and safety policies and procedures, and on drug and alcohol control and prevention.

A safe campus can be achieved only with the cooperation of the entire campus community. The University hopes students will read and become familiar with this material and be responsible for their own safety and the safety 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 Student Code of 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 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 prompt reporting of crimes.

Security considerations in maintenance are a high priority. Police officers patrol parking lots 24 hours each day. UA police also offer assistance to motorists with battery jumps, inflating tires, unlocking vehicles, and obtaining fuel for a small fee.

To request nonemergency assistance, call extension 2911. To schedule an appointment for an educational program, call extension 2911.

For emergencies, dial 911 from any campus telephone.

Student Campus Patrol
A student escort service operates 5 p.m. to 1 a.m. seven days a week for the safety of anyone walking alone on campus during the evenings. By calling extension 7263, an escort will come to the student’s location and accompany him/her to any campus building or parking lot.

Employed and trained by The University of Akron Police Department, the campus patrol teams are easily identified by labeled blue jackets or maroon t-shirts. These teams assist the University police in patrolling campus parking lots and other campus areas and report suspicious individuals or activities directly to the police dispatch center.

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

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 in 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 compiles with reporting standards set by the United States Department of Education guidelines. Our crime statistics can be found at our police department website, http://www.uakron.edu/opp/Preventa-
EMERGENCY PHONE NUMBERS

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td>2911</td>
</tr>
<tr>
<td>Campus Patrol</td>
<td>7263</td>
</tr>
<tr>
<td>(Police Nonemergency)</td>
<td>2911</td>
</tr>
<tr>
<td>Environmental and Occupational</td>
<td>6866</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>911</td>
</tr>
<tr>
<td>Fire</td>
<td>911</td>
</tr>
<tr>
<td>EMS/Medical</td>
<td>911</td>
</tr>
<tr>
<td>Electrical/Plumbing</td>
<td>911</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>911</td>
</tr>
<tr>
<td>Closing Information</td>
<td>7669</td>
</tr>
</tbody>
</table>

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.

Graduate School

George R. Newkome, Ph.D., Vice President for Research and Dean
Mark B. Tausig, Ph.D., Associate Dean

OBJECTIVES

The purpose of the Graduate School is to provide a quality program of education by the following means:

- Advanced courses in various fields of knowledge beyond the baccalaureate level.
- Opportunities to develop and apply research techniques and to use the resources appropriate to various graduate programs.
- Advancement of student's knowledge for the benefit of mankind through the efforts of its faculty and students.

Nature of Graduate Education

The Graduate School provides a qualified student with education which may be required for the full development of scholarly and professional capacities, subject to the criteria developed by graduate departments.

Graduate education involves the extension of knowledge. However, it is by no means a mere continuation of undergraduate study. At its best, graduate educa-
tion is characterized by an able, and enthusiastic advanced student who joins fac-
ulty leaders to form a community of scholars dedicated to the common pursuit of truth. Critical analysis, independence of thought, originality of method, intensity of purpose, freedom from bias, thoroughness of inquiry, keenness of perception and vital creativity combine to produce in the successful student both the professional competence and the breadth of understanding essential to leadership in many areas of human endeavor.

History of the Graduate School

Graduate study began a few years after Buchtel College opened its doors, and the first earned master's degree was conferred in 1882. The College of Education awarded its first master's degree in 1924, the Colleges of Engineering and Business Administration in 1959, the College of Fine and Applied Arts in 1967 and the College of Nursing in 1979. The School of Speech-Language Pathology and Audiology (previously the Department of Speech and later, the School of Communicative Disorders), now housed in the College of Fine and Applied Arts, was formerly a part of the Buchtel College of Arts and Sciences and conferred a master's degree in 1963. The first earned doctoral degrees were conferred in 1959. Professor Charles Bulger was appointed first dean of graduate work in 1933, and he continued in that capacity until 1950. Professor Ernest H. Cherrington, Jr. served as director of graduate studies from 1955 to 1960 and as dean of the Graduate Division from its establishment in 1960 to 1967. Dr. Arthur K. Brinnall was appointed dean of Graduate Studies and Research in 1967 being succeeded in 1968 by Dr. Edwin L. Lively. Dr. Claibourne E. Griffin succeeded Dr. Lively in 1974 and served in that capacity until 1977. Dr. Joseph M. Walton, associate dean of Graduate Studies and Research, was administrative head of the Graduate School during the 1977-78 academic year. Dr. Alan N. Gent was appointed dean of Graduate Studies and Research in 1978 and served in that capacity until 1986. Dr. Joseph M. Walton served as acting dean of Graduate Studies and Research from 1986 until 1989. In 1989 Dr. Patricia L. Carrell became dean of the Graduate School. Dr. Charles M. Dye was named interim dean in 1993 and became the dean of the Graduate School in 1995 until his retirement in July 2000. Dr. George R. Newkome was appointed Vice President for Research and Dean of the Graduate School in January 2001. The administrative functions of the Graduate School include establishment of suitable entrance requirements, admission of qualified students, maintenance of high-quality instruction and approval of graduate requirements for advanced degrees.

Graduate Programs

A qualified student who has completed the baccalaureate program with sufficiently high grades may continue studies through the University's Graduate School in a program leading to the master's degree as well as to the doctoral degree. An under-
graduate student who qualifies may enroll in certain graduate-level classes and apply the credits earned to the total required for the baccalaureate degree. To receive graduate credit for the courses, however, the student must first be admitted to the Graduate School.

The Graduate School offers programs of advanced study leading to the degree of Doctor of Philosophy in chemistry, counseling psychology, elementary education, engineering (biomedical, chemical, civil electrical, engineering applied mathematic, mechanical, and polymer), guidance and counseling, history, integrated biology, nursing, polymer science, psychology, secondary education, sociology, and urban studies and public affairs. The Doctor of Education degree is offered in educational leadership. The Doctor of Philosophy programs in nursing and sociology are joint programs with Kent State University. The Doctor of Audiology (Au.D.) Program is a joint degree program administered by The University of Akron and Kent State University. The Doctor of Philosophy program in urban studies and public affairs is a joint program with Cleveland State University. Further, the school also

tiveLaw\campussafety.php. 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.
offers programs of study leading to master’s degrees with majors in diverse areas as delineated in the following pages.

Several departments offer a limited amount of work which may be taken on the graduate level. Such courses may supplement the major program of study for students who do not wish to devote their entire attention to one field.

Graduate Faculty and the Graduate Council*

The graduate faculty is comprised of those members of the faculty who hold appointments at the rank of assistant professor or above and teach graduate courses, supervise theses and dissertations and are generally responsible for the conduct of the graduate programs at the University. They are appointed by the dean of the Graduate School after recommendation by the department, college dean and Graduate Council. Guidelines for recommendation and appointment include the following:
- quality and experience in upper-level and graduate-level teaching,
- possession of terminal degree in field,
- scholarly publication record,
- activity in research, and
- activity in profession or discipline.

The purpose of the graduate faculty is to encourage and contribute to the advancement of knowledge through instruction and research of highest quality, and to foster a spirit of inquiry and a high value on scholarship throughout the University. The graduate faculty recommends a student who has been nominated by the student’s college faculty for the appropriate master’s or doctoral degree.

Graduate Council is elected by the graduate faculty. Membership in the council presently includes two members from the College of Engineering, two members from the College of Business Administration, two members from the College of Education, four members from the Buchtel College of Arts and Sciences, one member from the College of Creative and Professional Arts, one member from the College of Health Sciences and Human Services, one member from the College of Nursing, one member from the College of Polymer Science and Polymer Engineering, and one student member elected yearly by the Graduate Student Council. Members serve three-year terms and may not succeed themselves. The dean of the Graduate School serves as chair of both the graduate faculty and the Graduate Council.

The functions of the council include examination of proposed graduate programs and course offerings, recommendation of policy for all phases of graduate education, recommendation of persons for membership in the graduate faculty and advising and counseling the dean in administrative matters.

*An exclusive listing of graduate faculty and Graduate Council can be found in the “Directory” of the Graduate Bulletin.

Graduate Student Government

All registered graduate students at the University are constituents of the Graduate Student Government (GSG). The government council consists of elected representatives from each of the graduate departments, an executive board of officers, and a faculty advisor.

The objectives of GSG are to govern graduate student affairs, represent graduate student sentiment, and promote interdepartmental social exchange and interaction between students. These objectives are met by appointing members to participate in various administrative committee meetings, such as the Faculty Senate, Graduate Council and Board of Trustees meetings.

Anyone wishing more information or anyone who wants to air a compliant, problem or suggestion concerning graduate students may contact the Graduate School or attend the GSG meetings, where all graduate students are welcome.

Other Graduate Student Organizations

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

SECTION 2. General Information

REGULATIONS

Student Responsibility

A student assumes full responsibility for knowing the regulations and pertinent procedures of the Graduate School as set forth in this Bulletin. Normally, the degree requirements in effect at the time a student is admitted to a program will apply through graduation. However, if existing programs are revised, the student has the option of pursuing the revised program as long as all requirements in the revised program are met. Additional information pertaining to programs can be obtained from the appropriate department chair.

Admission

Every person who desires to enroll in or audit any graduate credit course must be first admitted or approved by the Graduate School.

Online applications for admission to the Graduate School should be submitted electronically at least six weeks (domestic) and six months (international) before the start of the term for which admission is sought in order to allow adequate time for complete processing. No applications will be accepted after the University deadline for the program, which is usually about three weeks before the beginning of a term and is published in the Schedule of Classes. Some programs, such as nursing, counseling, and counseling psychology have earlier deadlines. Applicants should contact the departments for more detailed application information.

First-time applications to the Graduate School must be accompanied by an application fee. The fee for domestic students is $30. The fee for international students is $60. A fee of $25 must accompany all domestic and international reapplications.

An official transcript from each college or university attended must also be received by the Graduate School before the application will be processed. This applies to the complete academic record, both undergraduate and graduate. Transcripts should be sent from the institutions attended directly to the Graduate School. The applicant is responsible for seeing that the above conditions are met by the deadlines for filing applications.

All records, including academic records from other institutions, become part of the official file and cannot be returned for any purpose. An offer of admission will be made to an applicant who meets all admission requirements. However, it must be recognized that staff, facilities, and other resources are limited, so the number of students accepted will vary among departments and from term to term. An accepted applicant may begin graduate work in the fall, spring or summer semester. The offer of admission is void, however, if the applicant does not register for courses within two years from the time of admission. An individual whose offer of admission has lapsed must submit a new application to be reconsidered.

The student is admitted only for the purpose or objective stated on the application for admission. A new request for admission must be filed when the original objective has been attained or when the student wishes to change objectives. The admitted status terminates when the time limits have been exceeded or other conditions for continued admitted status have not been met.

No student will be admitted without approval and acceptance by a department within the University, but admission to a department does not necessarily imply admission to or candidacy for any graduate degree program in that department. Admission for graduate study in any program can only be granted by the dean of the Graduate School.

Nonaccredited American School Graduates

A student holding a baccalaureate degree from a non-accredited American college or university, is required to complete at least 10 semester credits of postbaccalaureate work at a 3.00 level before being considered for admission to the Graduate School. The accreditation status of the school at the time of the student’s graduation shall apply. A student should consult with the department chair in the major field to develop a postbaccalaureate program.

Transfer Students

A graduate student matriculated in the Graduate School of another college or university who wishes to transfer to The University of Akron to continue graduate education must be in good standing at the other school.

Entrance Qualifying Examinations

The use of examinations to determine admissibility to enter a graduate program or eligibility to continue in one is the prerogative of the departments offering graduate programs. The department has the right to select the examination and minimum acceptable level of performance. Information and procedure may be obtained from the chair of the appropriate department.
Deferred Admission may be granted if the applicant's record does not meet program requirements.

Transient status may be given to a person who is a regularly enrolled graduate student. A transient student is subject to the same rules and regulations as a regularly enrolled student of the University.

 Provisional Admission may be granted to a person who has not met all of the program requirements for full admission (2.74-2.5 overall GPA or 2.75 over the last two years). This admission status permits a student to take up to 15 semester credits of graduate coursework. Graduate courses taken under this admission status may be applied to a graduate degree program, but only when all requirements for full admission have been met.

 Deferred Admission may be granted if the applicant's record does not meet program requirements. After completion of a postbaccalaureate program of study, with an appropriate GPA, as prescribed by the department (usually two to five courses), the student may be reconsidered for provisional admission to the Graduate School. Graduate-level coursework cannot be taken by a student under the deferred admission status.

Conditional Admission may be granted to a person who has not yet attained the required proficiency in English. This proficiency can be demonstrated by an official TOEFL score of at least 550 (213 on the computer-based TOEFL) or by the successful completion of courses offered by the University's English Language Institute (ELI). Students may not enroll in graduate courses until the English proficiency requirement has been satisfied. Note: Some academic departments require higher TOEFL scores.

Non-Degree Admission may be granted to a person who wishes to take particular courses but who is not working toward a graduate degree. This admission status permits a student to take unlimited credits of graduate coursework. Graduate courses taken under this admission status may be applied later to a graduate degree program, but only when all requirements for full admission have been met.

Special Workshop status is for a person permitted to take workshops for graduate credit without being admitted to Graduate School. Such permission is granted by the workshop director upon receipt of a signed statement of possession of the appropriate college and department chair.

Conditional Admission may be granted to a person who has not yet attained the required proficiency in English. This proficiency can be demonstrated by an official TOEFL score of at least 550 (213 on the computer-based TOEFL) or by the successful completion of courses offered by the University's English Language Institute (ELI). Students may not enroll in graduate courses until the English proficiency requirement has been satisfied. Note: Some academic departments require higher TOEFL scores.

Transient status may be given to a person who is a regularly enrolled graduate student. A transient student is subject to the same rules and regulations as a regularly enrolled student of the University.

 Undergraduate status is for an undergraduate student at the University who may be required to take one or more graduate-level courses if all the following conditions are met.

- senior standing (at least 96 credits completed);
- overall grade-point average of 2.75 or better and a greater number of credits is approved by the Senior Vice President and Provost.

Academic Probation status refers to any student whose cumulative graduate grade point average falls below 3.00 and is no longer in good academic standing. Failure to return to good academic standing may result in academic dismissal. Students may be placed on academic probation by the appropriate college dean and department chair.

Academic Dismissal status refers to any student who fails to make satisfactory progress toward declared goals or who accumulates six semester credits of “F” or below. The accumulation of six semester credits of “F” will result in mandatory dismissal. A student who is dismissed from the Graduate School may not be readmitted for one calendar year and then only if evidence for satisfactory performance is submitted and found to be acceptable.

Postdoctoral status is divided into three categories:

- a Fellow is a person holding an earned doctorate who is engaged in advanced research. A fellow shall be considered a guest of the University and provided space and use of facilities within limits of practical need of the undergraduate and graduate programs. Tuition and fees shall be collected if allowed under sponsoring contract for any courses the fellow may choose to take;
- a Special is a person holding an earned doctorate who desires additional graduate degree. A special may be admitted to any program upon submission of application forms, application fee (if new student) and an official transcript from the institution awarding the doctorate. This student will be treated as a regular student subject to registration fees and program degree requirements;
- a Guestis a person holding an earned doctorate who desires to attend courses and seminars relevant to individual work or interest without registering or receiving credits. A written application should be submitted to the dean of the Graduate School for each course to be taken, and approval of the instructor, department chair and college dean shall be obtained. A guest is welcome to register for any course or seminar provided space is available. Normally, space and facilities for research cannot be provided for a postdoctoral guest but special requests will be considered. Requests should be submitted, in writing, to the dean of the Graduate School who will review such requests with the appropriate college dean and department chair.

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 persons 60 years of age or older, or in which the number of participating regular students is insufficient to cover the University's or college's course-related expenses as determined by the University.

Space availability is determined after the degree-seeking students have registered. Sixty-Plus registrations are held immediately before the start of each term and participants must register in person.

Sixty-Plus participants are subject to the same disciplinary and/or governance rules affecting all students.

A Sixty-Plus student will be issued a Student ID Card which will permit them to use specific University facilities and services and obtain student rates for purchases of goods and services.

To be eligible to enroll in a course for credit, the student's family income must be less than 200 percent of the Federal poverty guidelines as revised annually by the U.S. Secretary of Health and Human Services for a family size equal to the size of the family of the person whose income is being determined.

Course Load

A full load of coursework at the graduate level is normally 9-15 semester credits including audit. Full-time status is defined as a minimum of 9 semester credits; or as defined by the Internal Revenue Service for those students with graduate assistantships.

Registration

The responsibility for being properly registered lies with the student, who should consult with the assigned advisor in preparing a program of courses and/or research. A schedule of courses, hours, class location and registration procedures is obtainable from the registrar.

Cross Registration

Under specific circumstances a graduate student may take one or more graduate courses at Cleveland State University, Kent State University, The University of Akron, or Youngstown State University without registering as a transient student. The course for which a student wishes to register should contribute to the student's program of study and be unavailable when needed to complete the student's program at the home institution. The student must be in good standing (GPA=3.0) and within the time limits for degree completion. The graduate program unit at the student's home institution will establish a graduate special topics or independent study course identification capable of being "tagged" by the home university with a title.
that will correspond to the course title at the host university and with the initials of that university; i.e. CSU, KU, or YSU. Registration for such a course is controlled by the home department and will be permitted only upon receipt of an approved Cross Registration form. Cross Registration forms can be obtained at http://www.uakron.edu/gradsch/forms.php.

Financial Assistance
The University awards a number of graduate assistantships to qualified students. These assistantships provide stipends of $6,000 to $22,000 plus remission of tuition and some fees and are available in all departments with graduate degree programs. A graduate assistant renders service to the University through teaching and/or research. For information and applications, contact the department chair or school director. Partial tuition scholarships may be available for first-time graduate students on a limited basis.

A number of fellowships sponsored by industry and government agencies are available in some departments. For information, contact the chair of the department. Information about student loans can be obtained from the Office of Student Financial Aid.

Additional information concerning financial aid policies is available in the Graduate Assistant Handbook which can be obtained online at http://www.uakron.edu/gradsch/docs/gahandbook.pdf.

International Students
The University of Akron welcomes international students and seeks to make their educational experience pleasant and meaningful. Each year, approximately 890 international students from 85 countries pursue studies and research at The University of Akron.

Admission
International students may apply to begin their graduate studies for the Fall, Spring, or Summer Sessions. Students should submit their applications at least six months in advance of the date they wish to begin studying. Graduate students applying for assistantships should submit applications nine months before the term begins for best consideration. The following procedures should be followed:

- Access the online graduate application through the Graduate School website at http://www.uakron.edu/gradsch/. A nonrefundable application fee of $40 must also be submitted.
- An official transcript and degree from all institutions and universities attended. Original records in languages other than English must be accompanied by exact English translations and certified by the school, U.S. consulate, or other legal certifying authority.
- Proof of adequate financial support. An international student should submit to the Office of International Programs, The University of Akron, Polsky Building, Room 483, Akron, OH 44325-2101, the Declaration and Certification of Finances (DCF) and an original statement from the bank showing availability of sufficient funds to cover the cost of the first year of study. The Office of International Programs will prepare the Certificate of Eligibility (I-20A/B or DS-2019) upon receipt of adequate financial support and admission to the University.
- International applicants, U.S. citizens, and Permanent Residents whose native language is not English must submit evidence that they have a sufficient level of English to undertake graduate studies at The University of Akron. After submitting acceptable academic credentials and proof of English proficiency, applicants who are fully admitted may enroll in graduate course work and be eligible for University of Akron-funded assistantships, fellowships, or scholarships. Prospective teaching assistants must also achieve a minimum score of 50 on the Test of Spoken English (TSE) or a passing score on the University of Akron Developed English Proficiency Test (the U-ADEPT), or a 23 or greater on the speaking component of the internet-based TOEFL. See http://www.ets.org/toefl/ for information about the TSE. Visit http://gradsch.uakron.edu/UADEPT/uadept_index.html for details about U-ADEPT.
- Applicants to graduate programs can demonstrate their English proficiency in one of these ways:
  - A minimum score of 550 on the paper-based Test of English as a Foreign Language (TOEFL) or 213 on the computer-based TOEFL or 79 or higher on the internet-based TOEFL. (The following departments require a higher standard of proficiency: the Ph.D. program in Sociology requires a TOEFL of 577/223/90; the M.A. program in Urban Studies and Public Affairs requires a TOEFL of 570/230/98; English and History require a TOEFL of 580/237/92; and Biomedical Engineering requires a TOEFL of 590/243/96.) Scores more than two years old will not be accepted. See http://www.toefl.org for information about the TOEFL.

  - A minimum score of 6.5 on the International English Language Testing System (IELTS), which is managed by University of Cambridge ESOL Examinations, British Council, and IDP Education Australia. Scores more than two years old will not be accepted. See http://www.ielts.org for information about the IELTS.

- Successful completion of a full course of study in the Advanced Level of the English Language Institute (ELI) at The University of Akron. The ELI is an intensive (20 hour a week) program in English for academic purposes. The Advanced Level course of study is offered every Fall, Spring, and Summer according to the university’s academic calendar. For details about successful completion and about applying to the English Language Institute, see http://www.uakron.edu/eli/.

- Successful completion of 24 credit hours of upper-level undergraduate or 18 credit hours of graduate course work at a U.S. university or college in which English is the primary language of instruction. Successful completion is defined as maintaining a 3.0 GPA in full-time, continuous studies. Applicants must submit original transcripts of their course work.

- Successful completion of an undergraduate or graduate program at a university outside the United States in which English is the language of administration and instruction. English must be used for all administrative functions and for all areas of instruction (with the exception of foreign language courses) including course lectures, materials, discussions, readings, and writing assignments. Applicants must submit an original official document from the under-graduate or graduate institution certifying that all of the administrative functions and instruction are conducted in English. The document must be signed by an officer of the institution and carry an official seal. The Associate Dean of the Graduate School at The University of Akron will review the submitted documentation and inform the applicant if he or she has satisfied the English requirement. The decision will be final.

Costs, Financial Aid, and Medical Insurance
Information on estimated expenses for international graduate students on F-1/J-1 visas can be found on the form “Declaration and Certification of Finances” (DCF). This form indicates additional costs for an F-1/J-1 student’s dependents; should they accompany or join the student here. Annual tuition and living expenses for the 2009-2010 academic year will be approximately $23,000. Tuition is subject to change.

Graduate students may request financial aid through fellowships and graduate assistantships. A graduate student interested in applying for this aid should request the necessary forms when requesting the admission application.

The University of Akron requires that all international students carry major medical insurance that meets minimum established requirements. Such coverage must be effective throughout the students’ studies at The University of Akron. International students will not be permitted to register without proof of such coverage.

International Student Orientation
The required International Student Orientation takes place two weeks before Fall classes begin and the week before Spring classes begin and costs $75 (cost subject to change). The fee will be automatically assessed to student’s account during the first semester of enrollment.

International Transfer Credits
Transfer credit from foreign institutions is awarded at the discretion of the academic department with the final approval from the Graduate School. Transfer course work is only accepted from institutions that are recognized by the institution’s government as an approved study program. Transfer credit will not be accepted from institutions that are not recognized by the University of Akron’s Research and Development Office.

Grades
A student admitted to graduate study under any status at the University is expected to maintain a minimum 3.00 grade-point average (4.00=“A”) at all times. A minimum grade-point average of 3.00 is required for graduation. No more than six semester credits of “C,” “C+,” and “C−” may be counted toward the degree. Grades of “D+,” “D,” and “D−” are treated as “F” grades. No grades below “C−” may be counted toward a degree.
Academic Reassessment
A student who meets all the criteria described below may petition the Vice President for Research and Dean of the Graduate School to remove from his/her graduate cumulative grade point average all those grades earned under the student's prior enrollment at The University of Akron.

- Degree seeking graduate student
- Previous graduate enrollment at The University of Akron
- Not enrolled at The University of Akron for at least five years prior to current enrollment
- Maintain a current graduate grade point average of at least 3.00 or better for the first 15 hours of re-enrollment credit

If the student's petition is granted, the following will apply to the reassessment policy:

- This policy only applies to the student's grade point average.
- All University of Akron graders will remain on the student's official, permanent academic record (transcript); this process will affect the cumulative graduate grade point average only. It will not remove evidence/documentation of the student's overall academic history at the university.
- No grades/credits from the student's prior graduate enrollment at the university will be placed on the student's permanent academic record; this process will affect the cumulative graduate grade point average at The University of Akron. Thus, the student who successfully petitions for cumulative graduate grade point average recalculation under this policy automatically forfeits the right to use any of the excluded course work toward the current degree requirements.
- A student may exercise this graduate reassessment option only once, regardless of the number of times the student enters/attends a graduate degree program at The University of Akron.

Repeating Courses
Any graduate course may be repeated once for credit; however, the degree requirements shall be increased by the credit hour value of each course repeated. The hours and grades of both the original and the repeated section shall be used in computing the grade-point average. Required courses in which a "D" or "F" was received must be repeated.

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

Thesis and Dissertation Credits
Course number 699 will only be used for courses which indicate credit is being given for a master’s thesis. 899 will only be used for courses which indicate credit is being given for a doctoral dissertation. No credit for 699 or 899 will be given unless the thesis or dissertation is completed.

Colloquia, Seminars and Workshops
Colloquium (credit/noncredit grading)–A course that normally involves guest speakers, faculty or graduate students as speakers. The intent of the course is to introduce a broad range of topics using resource personnel. Normally, assignments are limited to class participation.

Seminar (letter grades)–A course that normally involves group discussion or other activities based on assigned material. Grades are awarded based on a combination of assignments, tests and class participation.

Workshop (credit/noncredit grading)–A course that normally operates over a shorter period than a semester or a summer session. Workshops focus on a particular aspect or aspects of a field of study, require a combination of assignments, tests and class participation, and may or may not be permitted to satisfy degree requirements.

Probation and Dismissal
Any student whose cumulative grade-point average falls below 3.00 will be placed on probation and is no longer in good standing. In consultation with the college or department, as appropriate, the dean of the Graduate School will dismiss full-time students who do not return to good academic standing within two consecutive semesters (excluding summers) and part-time students who do not return to good academic standing within the attempting of 15 additional credits.

For the purpose of administration of the full-time and part-time provisions of this policy, full-time and part-time status are determined by the semester in which the student goes on probation. Full-time enrollment constitutes nine or more graduate credits; part-time is less than nine graduate credits.

The dean of the Graduate School, with the approval of the relevant department chair, may also dismiss anyone who fails to make satisfactory progress toward declared goals or who accumulates six semester credits of "C+" or below. The accumulation of six semester credits of "F" will result in mandatory dismissal.

A student dismissed from the Graduate School for academic reasons may not be readmitted for one calendar year, and then only if evidence for expecting satisfactory performance is submitted and found to be acceptable.

Academic Dishonesty
Students at The University of Akron are an essential part of the academic community, and enjoy substantial freedom within the framework of the educational objectives of the institution. The freedom necessary for learning in a community so rich...
in diversity and achieving success toward our educational objectives requires high standards of academic integrity. Academic dishonesty has no place in an institution of advanced learning. The University community is governed by the policies and regulations contained within the Student Code of Conduct available at www.uakron.edu/sja, in Student Union 216, or by contacting Student Judicial Affairs at 330-972-6380 or sja@uakron.edu.

The University of Akron considers academic integrity an essential part of each student's personal and intellectual growth. Instances of academic dishonesty are addressed consistently. All members of the community contribute actively to building a strong reputation of academic excellence and integrity at The University of Akron.

It is each student's responsibility to know what constitutes academic dishonesty and to seek clarification directly from the instructor if necessary. Examples of academic dishonesty include, but are not limited to:

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

A student who has been accused of academic dishonesty will be asked to meet with the course instructor. The matter can be resolved informally at the College level and/or an academic sanction can be imposed. If the student opposes the decision, he/she may appeal to the College Dean.

A further discussion of these procedures and other avenues for recourse can be found in the Grievance Procedures for Graduate Students, available at the Graduate School, The Polsky Building 469, and included in the Appendix of this Bulletin.

### Ohio Residency Requirements

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

**A. Intent and Authority**

1. It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

2. This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.31 of the Revised Code.

**B. Definitions**

For purposes of this rule:

1. **“Resident”** shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state public assistance, and who may be subjected to tax liability under Section 5747.02 of the Revised Code; provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

2. **“Financial support”** as used in this rule, shall not include grants, scholarships, and awards from persons or entities which are not related to the recipient.

3. An “institution of higher education” shall have the same meaning as “state institution of higher education” as that term is defined in section 3348.011 of the Revised Code, and shall also include private medical and dental colleges which receive direct subsidy from the state of Ohio.

4. **“Domicile”** as used in this rule is a person’s permanent place of abode so long as the person has the legal ability under federal and state law to reside permanently at that abode. For the purpose of this policy, only one (1) domicile may be maintained at a given time.

5. **“Dependent”** shall mean a student who was claimed by at least one parent or guardian as a dependent on that person’s internal revenue service tax filing for the previous tax year.

6. **“Residency Officer”** means the person or persons at an institution of higher education that has the responsibility for determining residency of students under this rule.

7. “Community Service Position” shall mean a position volunteering or working for: (a) VISTA, Americorps, city year, the peace corps, or any similar program as determined by the Ohio Board of Regents and (b) An elected or appointed public official for a period of time not exceeding twenty-four consecutive months.

**C. Residency for Subsidy and Tuition Surcharge Purposes**

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

1. A student whose spouse or dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.

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

3. A dependent student of a parent or legal guardian or the spouse of a person who, as of the first day of a term enrollment, has accepted full-time, self-sustaining employment and established domicile in the state of Ohio for reasons other than gaining the benefit of favorable tuition rates. Documentation of full-time employment and domicile shall include both of the following documents:
   a. A sworn statement from the employer or the employer’s representative on the letterhead of the employer or the employer’s representative certifying that the parent, legal guardian, or spouse of the student is employed full-time in Ohio.
   b. A copy of the lease under which the parent, legal guardian, or the spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which parent, legal guardian, or spouse is the owner and occupant; or if parent, legal guardian, or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that parent, legal guardian, or spouse resides at that residence.

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

1. Criteria evidencing residency
   a. if a person is subject to tax liability under Section 5747.02 of the Revised Code;
   b. if a person qualifies to vote in Ohio;
   c. if a person is eligible to receive Ohio public assistance;
   d. if a person has an Ohio driver’s license and/or motor vehicle registration.

2. Criteria evidencing lack of residency
   a. if a person is a resident of or intends to be a resident of another state or nation for the purpose of tax liability, voting, receipt of public assistance, or student loan benefits (if the student qualified for that loan program by being a resident of that state or nation);
   b. if a person is a resident of or intends to be a resident of another state or nation for any purpose other than tax liability, voting or receipt of public assistance (see paragraph (D)(2)(a) of this rule).

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

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

1. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education shall be considered a resident of Ohio for these purposes.

2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person’s domicile.

3. A person on active duty status in the United States military service shall be considered a resident of Ohio for these purposes.

4. A person who is transferred by his or her employer beyond the territorial limits of the 50 states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person’s domicile as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.
5. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

6. A person who was considered a resident under this rule at the time the person started a community service position as defined under this rule, and his or her spouse and dependents shall be considered as residents of Ohio while in service and upon completion of service in the community service position.

7. A person who returns to the state of Ohio due to marital hardship, takes or has taken legal steps to end a marriage, and reestablishes financial dependence upon a parent or legal guardian (receives greater than fifty percent of his or her support from the parent or legal guardian), and his or her dependents shall be considered residents of Ohio.

8. A person who is a member of the Ohio national guard and who is domiciled in Ohio, and his or her spouse and dependents, shall be considered residents of Ohio while the person is in Ohio national guard service.

F. Procedures

1. A dependent person classified as a resident of Ohio for these purposes (under the provisions of Section C.1. of this rule) and who is enrolled in an institution of higher education when his or her parents or legal guardian removes their residency from the state of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

2. In considering residency, removal of the student or the student’s parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraphs C.1. or C.2. of this rule.

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

4. Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident. Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student’s financial support.

5. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

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

---

**Financial Aid**

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

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

To apply for the Federal Subsidized and Unsubsidized Stafford Loans, the student must complete and submit the Free Application for Federal Student Aid (FAFSA) or the Renewal Application to Federal Student Aid Programs. Applications are available in January for the following school year. Applications can be completed on the World Wide Web at [http://www.fafsa.ed.gov](http://www.fafsa.ed.gov). Inquiries may be directed to the Office of Student Financial Aid, Simmons Hall, 330-972-7032 or 1-800-621-3847.

---

**Payment Plan**

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

- Sign onto ZipLine -> Access my...Finances -> Sign up for Payment Plan
- Visit the Office of Student Accounts in Simmons Hall, Room 106
- Sign up by mail: University of Akron, Office of the Cashier, P.O. Box 2260, Akron, Ohio 44309-2260. Enclose a signed Installment Payment Plan application along with the required down payment. Make sure the information is received by the Office of Student Accounts on or before the due date.

To enroll in the Payment Plan full-time students pay a down payment of $1,000 and part-time students pay a down payment of $500. Financial aid can be used to pay for a portion or all of the required down payment. A $30 application fee is charged for the Payment Plan. The fee will be part of the first installment. The Payment Plan covers only one term. Each time a student wishes to use the Installment Payment Plan he or she must re-enroll. The deadlines to enroll can be found at http://www.uakron.edu/buisfin/studentfin/billing.php by selecting the term of interest. Students enrolling the Installment Payment Plan for the fall or spring semester will make three installments over the term. During the summer session there are two installments.

Questions concerning the Payment Plan can be directed to (330) 972-5100.

Graduate Assistantships

Graduate assistantships may be available through various graduate degree-granting academic units. Graduate assistantships and other graduate awards are distributed to the colleges through the Graduate School; therefore, a student interested in a graduate assistantship should contact the appropriate academic department.

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, graduate assistantships, and some types of employment may be made.

Regulations Regarding Refunds

All fees, e.g., instructional, general, parking, etc., are subject to change without notice. Students shall be charged fees and/or tuition and other fees in accordance with schedules adopted by the Board of Trustees. Registration does not automatically carry with it the right of a refund or reduction of indebtedness in cases of failure or inability to attend class or in cases of withdrawal. The student assumes the risk of all changes in business or personal affairs.

Fees Subject to Refund

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

Amount of Refund

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

- **In full**
  - if the University cancels the course;
  - if the University does not permit the student to enroll or continue except for disciplinary reasons. No refund will be granted to a student dismissed or suspended for disciplinary reasons;
  - if the student dies before or during the term; is drafted into military service by the United States; is called to active duty; or if the student enlists in the National Guard or Reserve prior to the beginning of the term. Notice of induction or orders to active duty is required if the student is called to active duty. A student who enlists voluntarily for active duty should see “in part” below.

- **In part**
  - if the student requests official withdrawal, the following refund percentages apply:
    - If 6.667% of class attended 100%
    - If 13.333% of class attended 70%
    - If 20% of class attended 50%
    - If 26.667% of class attended 30%
    - If 33.333% of class attended 20%
    - Greater than 33.333% of class attended 0%

- **Refunds for course sections are based in class length. The courses which have not been scheduled consistent with the standard 15 week fall/spring/summer semester will also be handled on a prorated basis according to the number of days of the section (class, institute, workshop) which has passed prior to official withdrawal compared to the number of days said section has been scheduled to meet. If a drop occurs on class day, it is counted as a day attended for the purpose of refund.

- **Refunds will be determined as of the date of formal withdrawal unless proof is submitted that circumstances beyond control of the student, e.g., hospital confinement, prevented the filing of the formal withdrawal earlier, in which case the refund will be determined as of said circumstance. The student assumes responsibility for filing for a refund.

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

Payment of Tuition and Fees/Withdrawal

Tuition and fees for the semester are to be paid or arranged for payment on or before published due dates. Students who receive financial assistance should be aware that they may be responsible for fees. Students will be responsible for assuring that their personal accounts are up-to-date. Payment plans are available for those students who wish to spread payments over an extended period. Students with accounts that are not fully paid or properly arranged for payment by the end of the semester may be prevented from registering for subsequent coursework. If a student enrolls in classes and then decides not to attend, it is still the student’s responsibility to drop his or her classes and to notify the University in order to prevent unnecessary charges.
SECTION 3. Academic Requirements

MASTER’S DEGREE REQUIREMENTS

Admission
When a student is admitted to graduate study, an advisor is appointed by the chair of the major department. A student who is academically qualified in general but deficient in course preparation may be required to make up the deficiencies at the postbaccalaureate level. This may be recommended prior to beginning graduate work, or in some cases, can be done simultaneously.

Residence Requirements
There are no formal residence requirements for the master’s degree. A student may meet the degree requirements of the Graduate School and the department through either full- or part-time study.

Continuous Enrollment Requirements
There is no formal Graduate School continuous enrollment requirement for the master’s degree. Individual master’s programs, however, may require continuous enrollment. Students should consult their advisors about this requirement.

Time Limit
All requirements must be completed within six years after beginning graduate-level coursework at The University of Akron or elsewhere. An extension of up to one year may be granted in unusual circumstances by the Graduate School upon written request by the student and recommendation by the advisor and department chair.

Credits
A minimum of 30 semester credits of graduate work is required in all master’s degree programs. This includes thesis credit. Some departments require more (see departmental requirements). A minimum of two-thirds of the total graduate credits required in any master’s program must be completed at the University. A maximum of six workshop credits may be applied to a master’s degree. Such credits must be relevant to the degree program, recommended by the student’s advisor and approved by the dean of the Graduate School.

It should be noted that the requirements listed by department elsewhere in this section refer to the minimum necessary for a degree. It is entirely within the prerogative of the department to assign additional credits of coursework or other requirements in the interest of graduating a fully qualified student.

No graduate credit may be received for courses taken by examination or for 500-numbered courses previously taken at the 400-number course level as an undergraduate. A minimum grade-point average of 3.00 is required for graduation of a candidate for a master’s degree.

Transfer Credits
Up to one-third of the total credits required for a master’s degree may be transferred from an accredited college or university, including The University of Akron. Departments and colleges may set more restrictive limits. All transfer credit must be at the “A” or “B” level (4.00 to 3.00) in graduate courses. The credits must be relevant to the student’s program as determined by the student’s academic department. A University of Akron student who seeks to enroll in courses elsewhere for credit must have full admission and be in good standing at The University of Akron and at the school at which the credits were earned. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better. Transfer credit from other institutions shall not be computed as part of a student’s University of Akron grade point average.

Individual course transfer of credit must fall within the six-year time limit to complete degree requirements. A block transfer of credit may be requested if a student has a prior graduate degree from an accredited college or university, including The University of Akron. A block transfer of credit does not apply toward the student’s six-year time limit to complete the degree.

Optional Department Requirements
Each department may set special requirements with regard to entrance examinations, qualifying examinations, foreign language, required courses and thesis. Details are available from the chair of the major department.

Advancement to Candidacy
A student should apply for advancement to candidacy after completion of one-half of the credits required for the degree in his or her program but no later than prior to the final semester of the graduate program. A student must be fully admitted and in good standing to be advanced to candidacy. Advancement to Candidacy forms can be obtained online at http://www.uakron.edu/gradsch/forms.php, from the academic department, or from the Graduate School.

Students must submit an Advancement to Candidacy form to the departmental office by the following dates:
- September 15 for Spring Commencement
- February 15 for Summer Commencement
- May 15 for Fall Commencement

Graduation
To be cleared for graduation, a candidate must have completed coursework with a minimum cumulative grade-point average of 3.00; submitted an advancement to candidacy/graduation application; paid all applicable fees; and met any other applicable department and University requirements.

If a thesis is required, a candidate must meet the preliminary and final thesis deadlines; submit one original, signed thesis signature page to the Graduate School; and submit one electronic copy of the thesis to OhioLINK. A manual entitled Guidelines for Preparing a Thesis or Dissertation can be obtained online at http://www.uakron.edu/gradsch/gdnThesDiss.php.

DOCTORAL DEGREE REQUIREMENTS*
A master’s degree is not a prerequisite for the doctorate; however, the first year of study after the baccalaureate will be substantially the same for both the master’s and doctoral student. Some programs admit students to doctoral programs directly after the bachelor’s degree; others require a master’s degree. No specific number or sequence of courses constitutes a doctoral program or assures attainment of the degree. A formal degree program consists of a combination of courses, seminars and individual study and research that meet the minimum requirements of the Graduate School and those of the committee for each individual student.

Admission
Usually, a student is not officially considered as a doctoral student until completion of a master’s program or its equivalent and approval for further study. Departments offering doctoral degree programs review each candidate carefully before recommending admission.

A minimum grade-point average of 3.00 is required for graduation of a candidate for all doctoral degrees.

Residence Requirements
A doctoral student may meet the degree requirements of the Graduate School and department by full-time study or a combination of full- and part-time study. The minimum residence requirement for a doctoral candidate in all programs is at least two consecutive semesters of full-time study and involvement in departmental activities. Full-time study is defined as 9-15 semester credits, except for graduate teaching and research assistants for whom full-time study is specified by the assistantship agreements. The summer sessions may count as one semester, provided that the candidate is enrolled for a minimum total of six semester credit hours per combined summer terms. Individual programs may have additional residence requirements such as credits or courses to be completed, proper time to fulfill the residence requirement, and the extent to which a resident may hold outside employment.

Before a doctoral student begins residency, the student’s advisor and the student shall prepare a statement indicating the manner in which the residence requirement will be met. Any special conditions must be detailed and will require the approval of the student’s committee, the department faculty member approved to direct doctoral dissertations, the collegiate dean and the dean of the Graduate School.

* The doctoral program in engineering is an interdisciplinary program offered on a collegiate basis. In the descriptions of University doctoral degree requirements on the following pages, citations of department or departmental faculty should be interpreted as citations of college or collegiate faculty with specific reference to the doctoral program in engineering.
Continuous Enrollment Requirement
All students admitted to doctoral programs must register for a minimum of one graduate credit as approved by their advisors during each Fall and Spring semester. Individual departments may exceed this minimum requirement. Doctoral students shall consult their advisors about additional requirements. Master’s programs may require continuing enrollment. Students should consult their advisors about this requirement.

Time Limit
All doctoral requirements must be completed within 10 years of starting coursework at The University of Akron or elsewhere. This refers to graduate work after receipt of a master’s degree or the completion of 30 semester credits. Extensions of up to one year may be granted by Graduate School under unusual circumstances upon written request by the student and recommendation by the advisor and department chair.

Credits
A doctorate is conferred in recognition of high attainment and productive scholarship in some special field of learning as evidenced by the satisfactory completion of a prescribed program of study and research; and the successful passing of examinations covering the special field of study and the general field of which this subject is a part. Consequently, the emphasis is on mastery of the subject rather than a set number of credits. Doctoral programs generally encompass the equivalent of at least three years of full-time study at the graduate level. A minimum of 90 percent of the total credits above the baccalaureate required in each student’s doctoral program must be completed at the University. A maximum of six workshop credits may be applied to a doctoral degree. Such credits must be relevant to the degree program, recommended by the student’s advisor and approved by the dean of the Graduate School.

No graduate credit may be received for courses taken by examination or for 400-numbered courses previously taken at the 400-number course level as an undergraduate without prior approval from the department chair.

A student seeking to transfer credit must have full admission and be in good standing at The University of Akron and at the school at which the credits were earned. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better. Transfer credits from other institutions shall not be computed as part of a student’s University of Akron grade point average.

Individual course transfer or credit must fall within the ten-year time limit to complete degree requirements. A block transfer of credit may be requested if a student holds a prior graduate degree from an accredited college or university, including The University of Akron. No more than 30 semester credits may be transferred from a single master’s degree. A block transfer of credit does not apply toward the student’s ten-year time limit to complete the degree.

Transfer Credits
Up to one-half of the total credits above the baccalaureate required in a doctoral program may be transferred from an accredited college or university, including The University of Akron. Departments and colleges may set more restrictive limits. All transfer credit must be at the “A” or “B” level (4.00 to 3.00) in graduate courses. The credits must be relevant to the student’s academic program as determined by the student’s academic department. A University of Akron student who seeks to enroll in courses elsewhere for transfer credit here must receive prior approval.

A student seeking to transfer credit must have full admission and be in good standing at The University of Akron and at the school at which the credits were earned. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better. Transfer credits from other institutions shall not be computed as part of a student’s University of Akron grade point average.

Individual course transfer or credit must fall within the ten-year time limit to complete degree requirements. A block transfer of credit may be requested if a student holds a prior graduate degree from an accredited college or university, including The University of Akron. No more than 30 semester credits may be transferred from a single master’s degree. A block transfer of credit does not apply toward the student’s ten-year time limit to complete the degree.

Language Requirements*
There is no University-wide foreign language requirement for the doctoral degree. The student is required to demonstrate one of the following skills depending upon the particular program.

- **Plan A:** Reading knowledge, with the aid of a dictionary, of two approved foreign languages. At the discretion of the major department an average of “B” in the second year of college-level courses in a language will be accepted as evidence of proficiency in reading knowledge for that language. English may be considered as one of the approved foreign languages for a student whose first language is not English; and demonstrated competence in research technique (e.g., statistics and/or computers) may be substituted for one of the two foreign languages. Under the last option, each department should define competence and publicize.

- **Plan B:** Comprehensive knowledge of one approved foreign language, including reading without the aid of a dictionary and such additional requirements as the department may impose.

- **Plan C:** In certain doctoral programs (counseling and guidance, elementary education, engineering, psychology, secondary education, urban studies and public affairs) the demonstration of competence in appropriate research skills may serve as a substitute for the foreign language requirements.

*The Doctor of Audiology (Au.D.) does not have a foreign language requirement.

Optional Department Requirements
Each department may determine requirements for a doctoral student with regard to entrance examinations, qualifying examinations, preliminary or comprehensive examinations and course sequences.

Advancement to Candidacy
A student should apply for advancement to candidacy after completion of one-half of the credits required for the degree in his or her program but no later than prior to the final semester of the graduate program. A student must be fully admitted and in good standing to be advanced to candidacy. Advancement to Candidacy forms can be obtained online at http://www.uakron.edu/gradsch/forms.php, from the academic department, or from the Graduate School.

Students must submit an Advancement to Candidacy form to the departmental office by the following dates:
- September 15 for Spring Commencement
- February 15 for Summer Commencement
- May 15 for Fall Commencement

Dissertation and Oral Defense*
The ability to do independent research and demonstrate competence in scholarly exposition must be demonstrated by the preparation of a dissertation on some topic related to the major subject. It should represent a significant contribution to knowledge, be presented in a scholarly manner, reveal the candidate’s ability to do independent research and indicate experience in research techniques.

A doctoral dissertation committee supervises and approves the dissertation and administers an oral examination upon the dissertation and related areas of study. This examination is open to the graduate faculty. The dissertation and oral examination must be approved by the committee before the dissertation is submitted to the Graduate School.

To be eligible to graduate during any given term, a candidate must meet both the preliminary and final dissertation submission deadlines. Each candidate is responsible for consulting the Schedule of Classes, their advisor/department, or the Graduate School to determine these deadlines.

A draft copy of the dissertation is due in the Graduate School prior to the preliminary deadline. The candidate must submit one original, signed dissertation signature page to the Graduate School and submit one electronic copy of the dissertation to OhioLINK. A manual entitled Guidelines for Preparing a Thesis or Dissertation can be obtained online at http://www.uakron.edu/gradsch/gdlInThesDiss.php. and the dissertation must conform to these instructions.

*The Doctor of Audiology (Au.D.) does not require a dissertation.

Graduation
To be cleared for graduation, a candidate must have completed the academic program with a minimum cumulative graduate grade-point average of 3.00; been advanced to candidacy; met the preliminary and final dissertation deadlines; submitted one original, signed dissertation signature page to the Graduate School; submitted one electronic copy of the dissertation to OhioLINK; passed an oral examination; paid all applicable fees; and met any other applicable department and University requirements.
SECTION 4.
Graduate Studies

Buchtel College of Arts and Sciences

Chand Midha, Ph.D., Interim Dean
Annabelle Foos, Ph.D., Associate Dean
Charles B. Monroe, Ph.D., Associate Dean

Mission Statement
The mission of the Buchtel College of Arts and Sciences is to provide high quality education in humanities, social sciences, and natural sciences. These varied disciplines constitute the foundation of a liberal arts education.

The College strives to foster excellence in teaching, scholarship, and service in a positive environment that will enhance lifelong learning and student accomplishment.

The College develops independent learning, critical thinking, personal responsibility, and leadership to prepare graduates to fulfill their career objectives in an environment of societal and cultural change.

Organization
The Buchtel College of Arts and Sciences has three administrative divisions: Humanities, Natural Sciences, and Social Sciences. The Humanities Division includes the departments of Classical Studies, Anthropology, and Archaeology; English; Modern Languages; and Philosophy. In these disciplines students learn about the evolution of civilizations, their languages, literatures, cultures, and their 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 technologies 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.

DOCTOR OF PHILOSOPHY DEGREE

The following programs leading to the Doctor of Philosophy degrees are offered in the Buchtel College of Arts and Sciences: the Doctor of Philosophy in Chemistry, the Doctor of Philosophy in Counseling Psychology, the Doctor of Philosophy in History, the Doctor of Philosophy in Integrated Bioscience, and the Doctor of Philosophy in Psychology. The Doctor of Philosophy in Sociology is offered jointly with Kent State University and the Doctor of Philosophy in Urban Studies and Public Affairs with Cleveland State University.

Doctor of Philosophy in Chemistry

The Doctor of Philosophy in Chemistry is granted for high scholarly achievement in analytical, inorganic, organic, physical, or biochemistry. Students with either a baccalaureate or master’s degree may be admitted to the program. They must satisfy the following requirements to receive the degree:

• Complete a course of study designed in consultation with an advisor or advisory committee. This consists of the completion of at least 90 credits beyond the baccalaureate degree, including 24 credits of appropriate coursework.
• Complete oral exam requirement.
• Complete seminar requirement.

• Defend dissertation in an oral examination.
• Complete all general requirements for the doctor of philosophy degree.

Interdisciplinary Option in Chemical Physics
The faculty in the Departments of Chemistry and Physics jointly offer an option leading to a Ph.D. in Chemistry for students who elect the interdisciplinary field of chemical physics.

Admission Requirements
Applicants for the Chemical Physics Option may be admitted with either a baccalaureate or a master’s degree, in either chemistry or physics. All applicants must have their graduate application and credentials evaluated by the Chemistry Department. All admission requirements for the Doctor of Philosophy in Chemistry, as given in this Graduate Bulletin, shall apply to applicants for admission to the Chemical Physics Option.

Graduate students in good standing in the Physics Department may apply for admission as above. Successful applicants should have some advanced chemistry course work (200-level and above) and endorsement by the chair of the Physics Department.

Degree Requirements
The applicable degree requirements for the Chemical Physics option are those of the Doctor of Philosophy in Chemistry, as stated in the Graduate Bulletin. These degree requirements consist of the following:

• complete a course of study designed in consultation with an advisor or advisory committee, consisting of at least 90 credits beyond the baccalaureate degree, including 24 credits of appropriate chemistry coursework and approved physics electives;
• complete the requirements of the monthly cumulative exams, the oral exam, and the seminar;
• defend the dissertation in an oral examination;
• complete all general requirements for the Doctor of Philosophy degree.

Students entering with the endorsement of the Physics Department must choose an advisor in the Physics Department holding a joint appointment in Chemistry; other students must select as research advisor a participating faculty member in the Chemistry Department. Students entering the program with principle preparation in physics may be required to audit certain undergraduate prerequisites for chemistry graduate courses, and visa versa for students whose principle preparation is in chemistry.

Doctor of Philosophy in Integrated Bioscience

The Departments of Biology, Theoretical and Applied Mathematics, Biomedical Engineering, Chemical and Biomolecular Engineering, Chemistry, Civil Engineering, Computer Science, Geology, Physics, and Polymer Science and Polymer Engineering offer a joint PhD program in Integrated Bioscience. Students admitted to the program take three core courses in Integrated Bioscience and then take a mixture of courses from the various participating departments. Students are required to incorporate an integrative aspect to their biologically-based research project that will necessitate using information and data that are inter-disciplinary. They will also need to have advisors on their committees that include faculty from two or more of the participating departments.

This program is designed to train students to understand modern biology in the context of integrated biological systems. This program will combine modern biology, bioengineering, bioinformatics, biochemistry, and biopolymers with the central unifying theme of connection across levels of biological organization. The program is composed of six areas of excellence: (1) molecular cell biology and genetics; (2) physiology and organismal biology; (3) ecology and evolutionary biology; (4) biochemistry and biopolymers; (5) bioinformatics and computational biology; and (6) integrative information drawn from these areas of excellence will provide students with high-demand, specific skills as well as allow them to develop integrative thinking and problem-solving expertise that will be critical for progressing in the ever expanding realm of biosciences.

Admission Requirements
The applicant must meet the University admission requirements and have an undergraduate degree from an accredited institution. Applicants must submit GRE scores, although not required it is highly recommended that applicants also submit subject GRE in the field of undergraduate degree, three letters of recommendation, a statement of career goals and research interests, and note up to five faculty (rank-ordered) which they would be interested in having as their faculty advisor(s).

Applicants are encouraged to contact their prospective Ph.D. advisors prior to submitting their formal applications. International students should contact The University of Akron Graduate School for specific admission requirements. Applications will be ranked according to:

• Strong academic background as evidenced by grade point average of at least 3.0
• GRE scores

Graduate Studies 29
Doctor of Philosophy in Counseling Psychology
The University of Akron offers a doctoral program in Counseling Psychology. The Collaborative Program in Counseling Psychology allows the student a choice of entry points through the Department of the Buchtel College of Arts and Sciences or through the Counseling Department of the College of Education. The Collaborative Program in Counseling Psychology is accredited by the American Psychological Association [http://www.apa.org/ed/accreditation/homepage.html]. Students in both departments are expected to attain a level of broad scientific competence in the core areas of psychology, the biological, social, cognitive-affective, and individual bases of human behavior. Practicum and internship experiences are also required of all students and range from skill building in basic psychological assessment and counseling, to actual work with clients, to a year-long, full-time internship in an applied service setting. Pertinent information regarding the emphasis, orientation, and coursework for the Psychology Department entry point is included below. Students receive exposure to both colleges through shared coursework and faculty involvement with exams and dissertations.

The Department of Psychology offers a five-year Counseling Psychology program leading to a doctoral degree and, in general, is geared toward students who hold a B.A. in psychology. Program emphasis is strongly placed on a scientist-practitioner model of training. Beyond the basic core areas of psychology, students are expected to establish specific competencies in the areas of theory, research, and practice of Counseling Psychology. Academic preparation includes theories of psychotherapy, supervision, diversity issues in counseling psychology, vocational psychology, testing theory and practice, research and statistics, and professional issues. Research and publication are greatly encouraged. Graduates typically seek out academic teaching, research and training positions, as well as positions in counseling centers and other mental health agencies.

Admission to the Collaborative Program in Counseling Psychology is handled through the department associated with the student’s chosen entry point. Students must fulfill both Departmental and Graduate School admission requirements. Departures from the described program for Psychology Department entry may be made only with the approval of the counseling psychology program faculty.

Requirements
The curriculum reflects the interdepartmental blend of the Collaborative Program in Counseling Psychology. Electives and other classes are to be planned along with the student’s advisor.

Credits

- Psychology core courses (630, 620, 630, 640, 650) 10
- Counseling psychology core courses:
  - (707, 709, 710, 711, 712, 713, 715, 717) 33
- Practicum sequence (672 [2+2+2+2], 673 [2+2+2+2], 795 [4-4], 796 [4-4]) 32
- History, measurement, and developmental coursework (718, 727, 750) 8
- Electives (minimum) 6
- Statistics (601, 602) 8
- A statistics sequence that may be substituted for the doctoral language requirement 8
- Thesis credits (minimum) 1
- Dissertation credits (minimum) 12

A thesis or thesis waiver completed as specified in the Graduate Student Manual of the Department of Psychology.

The comprehensive written examination is prepared, administered and graded by program faculty. At least one faculty member from each department participates in the oral portion of the comprehensive examination.

Dissertation – at least one faculty member from each department is required on the student’s dissertation committee.

Internship – 2,000 hours postmaster’s over no more than two years. The internship site must be approved in advance by the Collaborative Program Internship Committee.

Students must maintain a 3.50 GPA in their content courses each year in the Department of Psychology.

Doctor of Philosophy in History
The Doctor of Philosophy in History is granted primarily for high scholarly achievement in four fields of study selected by the student and for demonstrated ability to pursue independent research. Each student must:

- Fulfill admission requirements of the Graduate School.

The Graduate Committee of the History Department will consider an applicant for admission if a person has a Master's degree or the equivalent and a grade-point average of 3.5 or better at the M.A. level from an accredited institution. Those hold-

- Strong letters of recommendation
- Willingness of one or more potential advisors to take student on as an advisee

Doctor of Philosophy in Counseling Psychology
The University of Akron offers a doctoral program in Counseling Psychology. The Collaborative Program in Counseling Psychology allows the student a choice of entry points through the Psychology Department of the Buchtel College of Arts and Sciences or through the Counseling Department of the College of Education. The Collaborative Program in Counseling Psychology is accredited by the American Psychological Association [http://www.apa.org/ed/accreditation/homepage.html]. Students in both departments are expected to attain a level of broad scientific competence in the core areas of psychology, the biological, social, cognitive-affective, and individual bases of human behavior. Practicum and internship experiences are also required of all students and range from skill building in basic psychological assessment and counseling, to actual work with clients, to a year-long, full-time internship in an applied service setting. Pertinent information regarding the emphasis, orientation, and coursework for the Psychology Department entry point is included below. Students receive exposure to both colleges through shared coursework and faculty involvement with exams and dissertations.

The Department of Psychology offers a five-year Counseling Psychology program leading to a doctoral degree and, in general, is geared toward students who hold a B.A. in psychology. Program emphasis is strongly placed on a scientist-practitioner model of training. Beyond the basic core areas of psychology, students are expected to establish specific competencies in the areas of theory, research, and practice of Counseling Psychology. Academic preparation includes theories of psychotherapy, supervision, diversity issues in counseling psychology, vocational psychology, testing theory and practice, research and statistics, and professional issues. Research and publication are greatly encouraged. Graduates typically seek out academic teaching, research and training positions, as well as positions in counseling centers and other mental health agencies.

Admission to the Collaborative Program in Counseling Psychology is handled through the department associated with the student’s chosen entry point. Students must fulfill both Departmental and Graduate School admission requirements. Departures from the described program for Psychology Department entry may be made only with the approval of the counseling psychology program faculty.

Requirements
The curriculum reflects the interdepartmental blend of the Collaborative Program in Counseling Psychology. Electives and other classes are to be planned along with the student’s advisor.

Credits

- Psychology core courses (630, 620, 630, 640, 650) 10
- Counseling psychology core courses:
  - (707, 709, 710, 711, 712, 713, 715, 717) 33
- Practicum sequence (672 [2+2+2+2], 673 [2+2+2+2], 795 [4-4], 796 [4-4]) 32
- History, measurement, and developmental coursework (718, 727, 750) 8
- Electives (minimum) 6
- Statistics (601, 602) 8
- A statistics sequence that may be substituted for the doctoral language requirement 8
- Thesis credits (minimum) 1
- Dissertation credits (minimum) 12

A thesis or thesis waiver completed as specified in the Graduate Student Manual of the Department of Psychology.

The comprehensive written examination is prepared, administered and graded by program faculty. At least one faculty member from each department participates in the oral portion of the comprehensive examination.

Dissertation – at least one faculty member from each department is required on the student’s dissertation committee.

Internship – 2,000 hours postmaster’s over no more than two years. The internship site must be approved in advance by the Collaborative Program Internship Committee.

Students must maintain at a 3.5 GPA in their content courses each year in the Department of Psychology.

Doctor of Philosophy in History
The Department of Psychology offers a doctoral degree in psychology with specialization in either industrial/organizational psychology or adult development and aging.

A degree will be awarded to a student who, besides fulfilling the general requirements, has met the following specific requirements:

- Fulfill admission requirements of the Graduate School and department requirements as follows:
  - completion of master’s degree including 30 graduate credits;
  - attainment of a graduate grade-point average (GPA) of 3.25;
  - completion of Graduate Record Examination Aptitude and Advanced Psychology Test;
  - securing of three letters of recommendation;
- Major field:
  - a minimum of 90 graduate credits including a 30-credit master's program. A student may be required to complete additional credits beyond the 94 minimum credit requirement;
  - completion of Ph.D. core courses in the student’s specialty area: industrial/organizational or adult development and aging. Core courses are specified in the Department of Psychology Graduate Student Manual. The student is required to maintain at least a 3.5 GPA in core courses and overall courses;
  - completion of additional required and elective courses to be planned in conjunction with the student’s faculty advisor and subject to approval by the industrial/organizational or adult development and aging committees.
- Written comprehensive examinations:
  - satisfactory performance on written and oral comprehensive examinations;
- Major field:
  - a writing sample, preferably a seminar paper or other comparable scholarly work;
- scores on the Graduate Record Examination, General Aptitude Test;
- evidence of a reading knowledge of one foreign language or knowledge of an acceptable cognate field. Those whose native language is not English must demonstrate proficiency in English.

The History Department does not encourage applications for the doctoral program from students who have received both B.A. and M.A. degrees from The University of Akron. Special circumstances may warrant consideration, however, and the Graduate Committee reserves the right to judge applications on their own merit.

- Complete studies selected by the student in consultation with an advisory committee, including:
  - completion of 60 credits beyond master’s degree requirements, including dissertation credit. Courses at the 500-level in the student’s major and dissertation fields will not be counted toward the degree, and only 9 hours of 500-level courses in the student’s secondary fields will be counted;
  - demonstration of competency in four fields of study selected from the following areas in which the student will be expected to pass written and oral comprehensive exams: ancient, medieval, early modern Europe to 1789, modern Europe since 1750, America to 1877, United States since 1877, Latin America, Far East, Africa, Middle East, South Asia, and History of Science. These four fields must include at least one each in American, European, and non-western history. The student’s dissertation will fall within one of the four chosen fields;
  - satisfactory performance in written and oral comprehensive examinations;
  - defense of the dissertation in an oral examination.

- A reading knowledge of two languages will be required. With the approval of the student’s doctoral committee and the Graduate Committee, the student may substitute a cognate field for one of the two required languages when it seems appropriate for the student’s general program.

- Complete all general requirements for the Doctor of Philosophy degree.
Doctor of Philosophy in Sociology
Akron-Kent Joint Ph.D. Program

The University of Akron and Kent State University departments of sociology offer a joint program leading to the Ph.D. degree. Faculty and students engaged in the joint doctoral program are for all intents and purposes involved in a single graduate program. Course work is offered at both campuses and faculty and students interchange freely.

Admission to the Program

A student may apply with a completed master's degree or equivalent or after at least one year of full-time coursework or equivalent (18 credits) in the sociology master of arts program at The University of Akron. The coursework must include the master of arts core sequence. Scores from the general exam of the Graduate Record Examination (GRE) are required as part of the doctoral application. Admission is based upon students whose records clearly indicate both scholarly and research potential. Applicants whose native language is not English must also score at least 577 (paper-based) or 233 (computer-based) on the Test of English as a Foreign Language (TOEFL).

Degree Requirements (for a student admitted with the master's degree or equivalent)

In addition to meeting the general requirements of the Graduate School, a student working toward the Doctor of Philosophy in Sociology must meet the following requirements:

• Take the following courses:
  3850:700 College Teaching of Sociology

• Take one doctoral-level course in theory. This course to be selected from the predetermined group of courses (see Department of Sociology graduate student handbook).

• Complete a doctoral-level course in statistics from the predetermined group of courses. (see the department's graduate student handbook).

• Complete a specialty of 9 to 12 credits, depending on the specialty chosen.

• Complete a minimum total of 30 credits in coursework.

Other requirements:

• Refer to the department's graduate student manual for other requirements or guidelines;

• Complete and fulfill general doctoral degree requirements of the Graduate School.

Degree language requirements or appropriate alternative research skills and techniques may be prescribed by the student's advisory committee, depending upon the career plans of the student and upon the academic and/or scientific requirements of the dissertation.

The Psychology departments at The University of Akron and Cleveland State University offer a joint doctoral program in the Psychology of Adult Development and Aging. Students admitted to the program are required to take approximately equal amounts of coursework at each institution. The coursework covers the areas of research methods/design, foundation courses in adult biobehavioral functioning, adult psychosocial functioning, and advanced research seminars. The doctoral degree will require a minimum of 94 credit hours of coursework comprised of 78 classroom hours from the following:

3750:601 Psychological Research Using Quantitative and Computer Methods I
3750:602 Psychological Research Using Quantitative and Computer Methods II
3750:640 Core IV. Biopsychology
3750:727 Psychology of Adulthood and Aging
3750:740 Industrial Gerontology
3750:754 Research Methods in Psychology
3750:780 Graduate Seminar in Psychology: Additional Research Methods Courses (Multivariate Methods, Factor Analysis, Structural Equation Modeling)
3750:731 Perception, Attention, and Aging
3750:732 Cognition and Aging
3750:736 Psychopharmacology in Adulthood
3750:728 Social Aging

Cleveland State University Courses:

PSY 549 Mental Health and Aging (4)
PSY 561 Learning, Motivation, and Emotion (4)
PSY 653 Health Psychology (4)
PSY 655 Motor and Cognitive Disorders of Aging (4)
PSY 656 Sensation and Motor Functions
PSY 660 Ethical and Legal Issues (4)
PSY 663 Neuropsychology (4)
In addition, students will complete four thesis waiver credit hours, six dissertation credit hours, and six thesis/dissertation independent study credit hours (for a minimum total of 94 credit hours). An individual student's point of entry into the program is at one of the two partner institutions.

Doctor of Philosophy in Urban Studies and Public Affairs

The Department of Public Administration and Urban Studies offers a program leading to the Ph.D. in Urban Studies and Public Affairs. This is a joint program with Cleveland State University Levin School of Urban Studies. Students admitted to the program may take courses at either campus and all doctoral committees contain members from both universities.

The program is designed to educate scholars interested in university or professional careers in the fields of public administration and urban affairs with particular emphases on public administration, urban policy, and policy analysis and evaluation.

Admission

Admission to the Ph.D. program involves faculty consideration of all of the following criteria which, taken together, present evidence of the likelihood of success in advanced study:

• Completion of a master's degree.

• Grade Point Average GPA) from master's degree above 3.5. However, having a GPA above 3.5 is not in itself sufficient for admission.

• Submission of official test results on the verbal and quantitative portion of the Graduate Record Examination General Test. Official results from other, equivalent standardized tests used for graduate admissions may be substituted.

• Three letters of recommendation from persons familiar with the applicant's recent performance and abilities.

• A sample of the student's academic work. This should be a thesis or final project paper from the master's degree program.

• A personal statement from the applicant detailing the intended area of specialization and career aspirations. An applicant will be admitted only if faculty resources are available in the area of specialization detailed by the applicant.

• Those applicants for whom English is not their native tongue must demonstrate proficiency in the English language by scoring a minimum of 570 on the Test of English as a Foreign Language (TOEFL), submitting an acceptable score on the Test of Written English (TWE) and by scoring a minimum of 220 on the Test of Spoken English (TSE).

Degree Requirements

A minimum of 64 credit hours are required to complete this degree. A required core of methods and foundational courses totaling 25 credit hours, a field study or specialization area of 27 credit hours, and six thesis/dissertation independent study credit hours (for a minimum total of 94 credit hours). An individual student's point of entry into the program is at one of the two partner institutions.

• Comprehensive Examination in specialty area.

• Full residency requirement of the Graduate School.

• Register for a minimum of 30 credits of dissertation credit, complete a dissertation and successfully defend it in an oral examination.

Degree Requirements (for a student admitted without the master's degree)

In addition to meeting the requirements for a student admitted with the master's degree, the student must meet the following requirements:

• Completion of the M.A. core coursework.

• Completion of a research practicum (three credits). This may be waived for the student who already has sufficient research experience.

• Completion of a minimum of 60 credits of graduate-level (600 or higher) coursework beyond the bachelor's degree.

MASTER’S DEGREES

Programs of advanced study leading to the master's degree are offered by the departments of biology, chemistry, computer science, economics, English, geography and planning, geology (earth science), history, mathematics, modern languages (Spanish), physics, political science, psychology, sociology, statistics and public administration and urban studies. Before undertaking such a program, the student must show that the general requirements for admission to the Graduate School have been met, and the standard requirements for an undergraduate major
in the area of the proposed graduate specialty have been met or that the student has performed work which the department approves as equivalent to an undergraduate major.

**Biology**

**Admission Requirements**
- A minimum grade point average of 3.00 (4.00=A) and 3.00 average in Biology (minimum 32 semester hours or equivalent)
- Competence in Chemistry and Mathematics is expected
- Entering students must provide scores from any one or more of the following standardized tests: General GRE, Biology-specific GRE, or MCAT. Students are expected to score above the 25th percentile to be competitive for admission (provisional or full). Full admission is required for a teaching assistantship or tuition waiver.
- A letter of interest indicating the proposed area of specialization and possible advisors in the Biology department is required
- Foreign students, in addition to the above requirements, must have a score of 220 or more on the TOEFL and one of the following: a) >=23 on the “S” portion of the TOEFL, b) >=50 on the Test of Spoken English (TSE), or c) a passing score on the U-Adept test

**Master of Science**

**Thesis Option I**
The program is primarily for the student who will pursue a research career, including the student who intends to enter a doctoral program in the biological sciences.
- Course work in addition to the master’s research and seminars (must be approved by the student’s advisory committee) – 24 credits.
- Research and thesis – minimum of 12 credits.
- Participation in seminars – a maximum of four credits.
A minor may be taken in approved graduate courses including education. Summer study at a biological station is available.

**Thesis Option II**
This program is intended for Medical Doctors and Doctors of Osteopathic Medicine who have graduated from an accredited U.S. medical school.
- Course work in addition to the master’s research and seminars (must be approved by the graduate advisor) – 16 credits (no transfer credits are allowed for this option).
- Research and thesis – minimum of 12 credits.
- Participation in seminars – a maximum of two credits.

**Required Courses for Both Options:**
At least two courses of the following six listed below are required:

- 3100:616 Graduate Evolutionary Biology
- 3100:617 Advanced Ecology
- 3100:625 Basic DNA Techniques
- 3100:626 Techniques in Molecular Biology
- 3100:673 Integrative Stress Physiology
- 3100:676 Integrative Physiology

**Nonthesis Option**
This program is designed exclusively for secondary school teachers for whom the M.S. probably will be a terminal degree and who do not need research experience.
- The program is open only to applicants possessing a teaching certificate or those coregistering with the College of Education and showing normal progress towards qualifying for a certificate.
- The requirements are the same as the research option except that no thesis and research is undertaken, but a total of 40 credits of approved coursework (including a maximum of four credits for seminar participation) is required.

For additional details concerning admission standards, degree requirements and selection of options, refer to the Department of Biology Graduate Student Guide.

**Chemistry**

**Master of Science**
- Chemistry coursework – with the approval of the advisor, up to 12 credits may be taken in related areas – 24 credits.
- Research and thesis – six credits.
- Participation in departmental seminars.

**Computer Science**

**Master of Science – Computer Science**

**Admission Requirements**
All applicants for admission to the graduate program in computer science must meet the university requirements for graduate admission as published in Section 3 of the Graduate Bulletin. In addition to these requirements, the applicant must also:
- submit 3 letters of recommendation from individuals capable of evaluating the applicant’s potential for success in the program;
- have earned a baccalaureate degree in computer science or a related discipline from an accredited college or university with a GPA of 3.00 or higher in computer science and related courses;
- demonstrate proficiency in the areas of differential and integral calculus, probability and statistics, discrete mathematics, and knowledge of at least one high-level, general purpose programming language; and,
- demonstrate proficiency in the areas of data structures, assembly language, computer organization, operating systems, and the theory of programming languages.

A student deficient in one or more of these areas may be granted provisional admission.

The Aptitude Test of the Graduate Record Examination is required, and the GRE Advanced Computer Science Test is recommended.

**Degree Requirements**
The curriculum has been designed to follow the guidelines and recommendations of the Association for Computing Machinery for Master’s Programs in Computer Science. Most full-time degree candidates admitted into the program will complete the degree requirements in two years. The thesis option requires 30 semester hours of graduate work while the nonthesis option requires 39. With prior consent, up to 8 credits of approved graduate-level coursework outside the department may be substituted for elective courses in both the thesis and non-thesis options.

- **Core Courses (required of all students):**
  - 3460:598 Research Methodology
  - 3460:535 Analysis of Algorithms
  - 3460:635 Advanced Algorithms and Complexity Theory

In addition, each student must complete at least one course from each of the following three areas:
- C. Applications: 3460:698, 660, 676.

**Thesis Option** (30 credits of graduate work)
24 credits in approved coursework, at least 15 credits of which must be taken at the 600 level. In addition, 3 credits in 3460:698 Master’s Research and 3 credits in 3460:699 Master’s Thesis. The thesis must be of publishable quality and must be successfully presented at a public defense moderated by three full time Graduate Faculty (two of which must be from Computer Science).

**Non-thesis Option** (39 credits of graduate work)
39 credits in approved coursework, at least 21 credits of which must be taken at the 600 level.

**Cooperative Education Program in Computer Science**

**Admission**
Arrangements for student entry into the program are on an individual basis, and must be initiated by the student. The Cooperative Education Program is an optional program available only to full-time Computer Science students at The University of Akron who have satisfactorily met the following requirements:
- completion of at least 18 credits in computer science applicable to the master’s degree with a grade point average of at least 3.0 out of 4.0;
- acceptance by a cooperative education coordinator or director following interviews;
- a transfer student must have completed at least 9 credits in computer science at The University of Akron with a grade point average of at least 3.0 out of 4.0.

A student who desires to participate in the program will fill out an application and submit it to the cooperative education office. 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 Student Agreement 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 during the time period specified by the Student Agreement.
At least one course in four of the following five categories is required:

- must be in literature or literary theory.

A minimum of 36 credits is required, of which 24 must be at the 600 level and 24

Nonthesis Option

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.

Economics

Master of Arts

Admission Requirements

For full admission students require Intermediate Microeconomics, Intermediate Macroeconomics, Calculus I, and Statistics. The academic background of each applicant will be reviewed by the Director of Graduate Studies to determine whether background deficiencies exist for his/her planned program of study. Exceptional departures from these requirements may be approved with the permission of the Director of Graduate Studies and Department Chair.

Thesis Option

A minimum of 30 credits of coursework including a thesis equivalent to six credits is required. At least 21 credits must be at the 600 level in economics. Thesis must be written in an area of specialization in which the individual has at least two courses.

Nonthesis Option

A minimum of 30 credits of coursework is required. At least 21 credits must be at the 600 level in economics. Required Courses for both options:

- 3250:620 Applications of Mathematical Models to Economics 3
- 3250:621 Econometrics 3
- 3250:627 Microeconomic Theory I 3
- 3250:628 Statistics for Econometrics 3
- 3250:665 Modern Linguistics† 3
- 3250:689 Literature and Composition 3
- 3250:690 Research Methodologies in Composition 3

Courses taken outside the department must be approved (in writing) by the student’s advisor prior to enrollment.

English

Master of Arts – Literature Track

Thesis Option

A minimum of 33 credits is required (27 credits of coursework and 6 credits of thesis). Of the 27 credits of coursework, 18 must be at the 600 level and 12 must be in literature or literary theory.

Graduation Requirement: Candidates for graduation must see the Department of English Graduate Coordinator to complete the departmental Graduate Student Survey.

Nonthesis Option

A minimum of 36 credits is required, of which 24 must be at the 600 level and 24 must be in literature or literary theory.

Required Courses for both Options

- 3300:506 Chaucer I 3
- 3300:615 Shakespearean Drama† 3
- 3300:666 Literary Criticism 3
- 3300:670 History of the English Language† or
- 3300:670 Modern Linguistics† 3

At least one course in four of the following five categories is required:

British

- Up to 1660
- 1660-1900
- 1900-present

American

- Up to 1865
- 1865-present

Graduation Requirement: Candidates for graduation must see the Department of English Graduate Coordinator to complete the departmental Graduate Student Survey.

Master of Arts – Composition Track

The Composition Track is intended for students interested in teaching English in secondary schools, two-year colleges, and four-year colleges. The degree is also appropriate for those planning to enter a doctoral program in composition and rhetoric. The program does not lead to state certification for teaching; students should consult the Department of Curricular and Instructional Studies for requirements for state certification to teach in the public schools.

Thesis Option

A minimum of 33 credits is required (27 credits of coursework and 6 hours of thesis). Of the 27 credits of coursework, 18 must be in composition studies (including courses in composition, rhetoric, and linguistics). Of the 27 credits of coursework, 15 must be at the 600 level.

Graduation Requirement: Candidates for graduation must see the Department of English Graduate Coordinator to complete the departmental Graduate Student Survey.

Nonthesis Option

A minimum of 36 credits is required, only 6 of which may be individual reading. At least 24 credits required in composition studies (including courses in composition, rhetoric, and linguistics). Of the 36 credits of coursework, 21 must be at the 600 level.

Required courses for both options:

- 3300:650 The New Rhetorics 3
- 3300:673 Theories of Composition 3
- 3300:674 Research Methodologies in Composition 3

Students must also choose one of the following two courses:

- 3300:589 Grammatical Structures of Modern English 3
- 3300:670 Modern Linguistics 3

And one of the following three courses:

- 3300:579 Management Reports 3
- 3300:625 Autobiographical Writing 3
- 3300:679 Scholarly Writing 3

Optional courses:

- 3300:660 Cultural Studies: Theory and Practice 3
- 3300:689 Contemporary Reading Theory 3
- 3300:689 Composition and Rhetoric 3
- 3300:689 Literature and Composition 3

Graduation Requirement: Candidates for graduation must see the Department of English Graduate Coordinator to complete the departmental Graduate Student Survey.

Master of Fine Arts in Creative Writing

The University of Akron, Cleveland State University, Kent State University, and Youngstown State University offer jointly the MFA in Creative Writing. This degree provides students with opportunities to develop their skills in writing fiction, poetry, drama, and creative non-fiction. It is the terminal degree. Through extensive practice in workshops and craft and theory courses, students will develop their creative writing abilities while also studying literature and completing a relevant internship.

Admission Requirements

Students must be accepted by the Graduate School at The University of Akron or one of the other three participating universities. They must also submit three letters of recommendation, transcripts, and a writing portfolio. The portfolio will be reviewed by an admissions committee of members from all four universities.

Degree Requirements

Students must complete the following courses among the participating universities by taking classes restricted to graduate students only, except as noted below:

- Writing Workshops - 15 credits
- Craft and Theory Courses - 6 credits
- Literature Courses - 6 credits
- Internship - 6 credits
- Thesis - 6 credits
- Electives - 9 credits, up to six of which may be from advisor-approved courses not solely restricted to graduate students

A total of 48 credit hours is required for the MFA in Creative Writing.

Up to nine credits from previously uncompleted graduate degrees may be accepted for transfer credit in the NEOMFA program.
Master of Arts in Geography

**Thesis Option**

- Core Requirements (21 credits)
  - 3350:505 Geographic Information Systems
  - 3350:581 Research Methods in Geography and Planning
  - 3350:583 Spatial Analysis
  - 3350:596 Field Research Methods
  - 3350:687 History of Geographic Thought

- Geography and Planning Electives (24 credits)

**Nonthesis Option**

- Core Requirements (21 credits)
  - 3350:505 Geographic Information Systems
  - 3350:581 Research Methods in Geography and Planning
  - 3350:583 Spatial Analysis
  - 3350:596 Field Research Methods
  - 3350:687 History of Geographic Thought

- Geography and Planning Electives (24 credits)

Master of Science in Geography/Geographic Information Sciences

**Thesis Option**

- Core Requirements (18 credits)
  - 3350:581 Research Methods in Geography and Planning
  - 3350:583 Spatial Analysis
  - 3350:596 Field Research Methods
  - 3350:687 History of Geographic Thought
  - 3350:600, 601 Seminar (6 credits)

- Geotechniques Requirements (9 credits)
  - 3350:505 Geographic Information Systems

- Geotechniques Electives (9 credits)

- Geography and Planning Electives (9 credits)

- Geography and Planning Electives (24 credits)

**Nonthesis Option**

- Core Requirements (18 credits)
  - 3350:581 Research Methods in Geography and Planning
  - 3350:583 Spatial Analysis
  - 3350:596 Field Research Methods
  - 3350:687 History of Geographic Thought
  - 3350:600, 601 Seminar (6 credits)

- Geotechniques Requirements (9 credits)

- Geotechniques Electives (9 credits)

Geotechniques Electives (9 credits)

- 3350:507 Advanced Geographic Information Systems
- 3350:541 Global Positioning Systems (GPS)
- 3350:542 Cartographic Theory and Design
- 3350:544 Applications in Cartography and GIS
- 3350:545 GIS Database Design
- 3350:546 GIS Programming and Customization
- 3350:549 Advanced Remote Sensing

- Geography and Planning Electives (9 credits)

Graduate courses from the Department of Geography and Planning

Any course taken outside the department must be approved in advance by the student’s graduate advisor or department chair

No more than three credits of 3350:698 Independent Reading and Research

Master of Arts (Geography/Urban Planning)

**Thesis Option**

- Core Requirements (30 credits)
  - 3350:505 Geographic Information Systems
  - 3350:532 Land Use Planning Law
  - 3350:537 Planning Analysis and Project Methods
  - 3350:539 History of Urban Design and Planning

- Geography and Planning Electives (15 credits)

**Nonthesis Option**

- Core Requirements (30 credits)
  - 3350:505 Geographic Information Systems
  - 3350:532 Land Use Planning Law
  - 3350:537 Planning Analysis and Project Methods
  - 3350:539 History of Urban Design and Planning

- Geography and Planning Electives (15 credits)

Graduate courses from the Department of Geography and Planning

Any course taken outside the department must be approved in advance by the student’s graduate advisor or department chair

No more than three credits of 3350:698 Independent Reading and Research

Master of Science

- Complete a minimum of 30 credits of which at least 10 credits shall be at the 600 level and no more than two in research problems and six in thesis research.

- In all geology M.S. degree programs except Engineering Geology, at least 22 graduate credits shall be geology courses.

- A proficiency exam is taken during the student’s first semester in the M.S. program. Students who demonstrate a lack of knowledge in areas related to their thesis topics may be required to take additional or remedial courses as suggested by the examining committee. Students may not begin formal thesis work until the proficiency exam has been completed. (Formal thesis work includes the thesis proposal and/or thesis research credits) Field camp can be taken for graduate credit; however, it will not count toward the 30 credits for the M.S. in the geology and geophysics specializations.

- Core Requirements:
  - 3370:680 Seminar in Geology
  - 3370:699 Master’s Thesis

- Oral presentation and defense of thesis.
Degree Specialization
The program of each individual will be adapted to his/her career objectives.

Geology
The minimal background for admission without deficiency should include a six-credit geology field camp course and equivalents to courses in mineralogy, petrology, structural geology, sedimentology/stratigraphy, and any two upper level geology courses.

Students should have completed the equivalent of a minimum of six semester courses in introductory chemistry, physics, biology, calculus or equivalents; including at least one semester of calculus, physics and chemistry. All courses should be taught for science/mathematics/engineering majors.

The academic background of each incoming graduate student will be reviewed during the student’s first semester by the graduate advisor, thesis advisor, and department chair to determine whether background deficiencies exist for his/her planned program of study.

Earth Science
Equivalents of the current geology courses for the University’s B.A. in geology are required. Course program will be selected to provide the student with a well-rounded background in lithosphere, hydrosphere and atmosphere. Those who will be teachers must take 5500:780 Seminar in Curricular and Instructional Studies: Earth Science, or equivalent.

Geophysics
Equivalents of the geology, cognate science and mathematics requirements for the University’s B.S. in geophysics are required.

Engineering Geology
This program is for the graduate engineer and geologist who wishes to broaden expertise in the other field. The entering student who has some deficiencies in either engineering or geology may have to satisfy one or more of the following requirements while proceeding with graduate studies. A committee of engineering geology faculty will determine appropriate coursework on an individual basis.

Environmental Geology
Equivalents of the University’s B.S. degree in natural science (biology, chemistry, geology, mathematics, or physics) or engineering, plus the equivalent of the University’s minor in geology and Geology Field Camp I and II are required. As many as eight credits may be selected from engineering, biology and/or geography with the approval of a geology advisor.

History

Master of Arts
- Students applying for admission to the M.A. program must have a minimum undergraduate grade-point average of 3.0. The applicant’s average in history courses should be substantially higher. Applicants must also have completed at least 24 semester or 36 quarter hours in history courses at the undergraduate level. An application to the M.A. program consists of the following:
  - an application form;
  - a letter of intent, stating the applicant's reasons for wishing to pursue graduate work and the fields of history which the applicant intends to study;
  - scores on the Graduate Record Examination, General Aptitude Test;
  - a writing sample, preferably a research paper from a history class;
  - three letters of recommendation, preferably from faculty who know the applicant well.
- Applicants whose native language is not English must also score at least 580 on the Test of English as a Written Language (TOEFL), at least 240 on the Test of English as a Spoken Language (TSE), and take the Test of Written English (TWE).
- Degree requirements include:
  - Satisfactory completion of a minimum of 30 credits of graduate study in history, of which only six may be in individual reading.
  - Concentrated study of three fields, two of which must be chosen from the following:
    - Ancient
    - Medieval
    - Europe, Renaissance to 1750
    - America to 1877
    - United States Since 1877
    - Latin America

Physics

Master of Science
- Complete a minimum of 30 graduate credits of approved courses in physics. Up to six credits of graduate-level electives outside the department may be included in the program. There is no foreign language requirement for this degree.
- A cumulative grade-point average of 3.00 or better for all graduate-level credits applicable toward the degree.
- Complete an approved program of courses which includes the following required courses:
  - 3650:551 Advanced Laboratory I 3
  - 3650:615 Electromagnetic Theory I 3
  - 3650:625 Quantum Mechanics I 3
  - 3650:641 Lagrangian Mechanics 3
  - 3650:661 Statistical Mechanics 3
  - 3650:685 Solid State Physics I 3
- A student preparing for further graduate work in a physical science or for academic or industrial employment should include the following courses in the graduate program:
  - 3650:581,2 Methods of Mathematical Physics I, II 6
  - 3650:616 Electromagnetic Theory II 3
  - 3650:626 Quantum Mechanics II 3
  - 3650:552 Advanced Laboratory II 3
- A student must complete at least one of the following two options:
  Option A: A formal report, based on an original research project, submitted in a form suitable for publication and approved by a physics faculty committee.
  Option B: A master’s thesis.
- Graduate research participation is strongly encouraged. Up to five credits may be earned in 3650:697 Graduate Research, upon the completion of a graduate research project. One additional credit may, upon approval by the department, be permitted in 3650:699 Master’s Thesis for the completion of a master’s thesis based on such research. A successful thesis may thus account for up to six of the total of 30 graduate credits required.

Interdisciplinary Option: Chemical Physics
The faculties in the Departments of Physics and Chemistry offer a cooperative option leading to the Ph.D. in chemistry for those graduate students wishing to specialize in the interdisciplinary field of chemical physics.

Admission Requirements
Applicants may be admitted with either a baccalaureate or a master’s degree in either chemistry or physics. Students pursuing this option are subject to all admission and degree requirements for the Ph.D. in chemistry, as outlined in page 25 of this Graduate Bulletin. The Chemical Physics option is described in detail on page 28.

Students entering the Chemistry Ph.D. program under the auspices of the Physics Department will be expected to have taken some advanced undergraduate chemistry course work (200-level and above), and must be recommended by the chair of the Physics Department. These students must select as research advisor a faculty member in the Physics Department holding a joint appointment in Chemistry. Students with principle preparation in physics may be required to audit certain undergraduate prerequisites for graduate chemistry courses.


Political Science

Master of Arts

Admission

Admission is open to students who have completed a four-year undergraduate degree and who fulfill the admission requirements of the Graduate School. Three letters of recommendation (at least one from a faculty member who has worked with the student in the past two years, if applicable) and a personal statement outlining the expected fit between the student's skills and objectives and the department's programs and resources are required. The Graduate Record Examination (GRE) is recommended, but not required.

The Master of Arts in Political Science allows students to focus their study in one of five concentrations: American Government Institutions, American Linkage Institutions, The Politics of Criminal Justice, International Politics, or Comparative Politics.

Students may also work toward certificates in Applied Politics in conjunction with their graduate studies in Political Science.

Degree Requirements

- Complete 30 credits of graduate work, including 18 credits at the 600 level, as follows:
  - Two required core courses:
    - 3700:600 Scope and Theory of Political Science 3
    - 3700:601 Research Methods in Political Science 3
  - Three additional departmental seminars, 9 credits (neither independent research, thesis, nor internship is considered a graduate seminar).
  - Six credits of Topics in Master's Research (3700:696).
  - Nine additional credits at the graduate level.
  - Pass a comprehensive written examination covering one concentration: American Government Institutions, American Linkage Institutions, The Politics of Criminal Justice, International Politics, or Comparative Politics.
  - Complete the following writing requirement:
    - An Essay of Distinction is a single, article-length, scholarly essay. This writing requirement will encourage our students to learn how to participate in the debates central to our discipline and complete the program with a superb writing sample that can serve as a foundation for continued graduate work, a conference presentation, a published article, or a deliverable policy analysis.
    - To complete an Essay of Distinction, students shall take six credit hours of Topics in Master’s Research. Those credits must be completed in the form of two consecutive three-credit courses (3700:696) taken in the student’s third and fourth semesters. The student’s Faculty Advisory Committee must approve the topic and completed essay.

Master of Applied Politics

The Master of Applied Politics, in cooperation with the Ray C. Bliss Institute of Applied Politics, is one of the few programs in the United States focusing on practical politics. It is designed for students interested in efforts to influence political decisions. This includes activities to capture elective public office in partisan contests, influencing legislation, and political organization.

Admission

Admission is open to students who have completed a four-year undergraduate degree and who fulfill the admission requirements of the Graduate School. Three letters of recommendation (at least one from a faculty member who has worked with the student in the past two years, if applicable) and a personal statement outlining the expected fit between the student’s skills and objectives and the department’s programs and resources are required. No specific field of undergraduate major is required for admission. The Graduate Record Examination (GRE) is not required. The program is designed to accommodate students taking course work on a part-time basis.

Degree Requirements

- Complete 39 credits of graduate work, including the following:
  - Core courses - 18 credits:
    - 3700:570 Campaign Management I 3
    - 3700:571 Campaign Management II 3
    - 3700:600 Scope and Theory of Political Science 3
    - 3700:601 Research Methods in Political Science 3
    - 3700:672 Seminar: Political Influence and Organizations 3
    - 3700:695 Internship in Government and Politics 3
  - * Three credits required: additional credits will be counted toward elective credit.
  - Elective courses - 21 credits (6 credits must be at the 600-level)
    - Six credits from the following:
      - 3700:540 Survey Research Methods 3
      - 3700:572 Campaign Finance 3
      - 3700:574 Political Opinion, Behavior, and Electoral Politics 3
      - 3700:577 Lobbying 3
      - 3700:655 Campaign and Election Law 3

  - Complete the following writing requirement:
    - Pass a comprehensive written examination covering one concentration: American Government Institutions, American Linkage Institutions, The Politics of Criminal Justice, International Politics, or Comparative Politics.
    - Prepare an applied politics portfolio containing:
      - At least two major papers prepared for required courses.
      - An applied politics capstone project assigned by the student’s advisor.
      - An oral defense of the applied politics portfolio.

J.D./Master of Applied Politics

This joint J.D./Master of Applied Politics degree combines the two degrees while allowing students to complete requirements with fewer credits than taking the degrees separately. To be accepted into the program, a student must meet the admission requirements of the School of Law, the Graduate School, and the Department of Political Science.

Degree Requirements

Students must complete the following:

- J.D. required courses - 44 credits
  - MAP Electives - 6 credits

  Choose two from the following courses:
  - 3700:502 Politics and the Media 3
  - 3700:540 Survey Research Methods 3
  - 3700:572 Campaign Finance 3
  - 3700:574 Political Opinion, Behavior, and Electoral Politics 3
  - 3700:577 Lobbying 3
  - 3700:620 Seminar in Comparative Politics 3
  - 3700:630 Seminar in National Politics 3
  - 3700:688 Seminar in Public Policy Agendas and Decisions 3
  - 3700:690 Special Topics in Political Science (Applied Politics focus) 3
  - 3700:695 Internship in Government and Politics 3
  - 7600:575 Political Communication 3

- MAP required courses - 24 credits (18 credits core courses; 6 credits required electives)
  - Joint Law School/Political Science Course - 3 credits
    - 3700:655/9200:655 Campaign Management I 3
  - J.D. Elective Courses - 32 credits
    - At least three credits from the following courses:
      - 9200:623 Administrative Law 3
      - 9200:642 Alternative Dispute Resolution 3
      - 9200:644 First Amendment Law 3
      - 9200:645 Non-Profit Tax Entities 3
      - 9200:659 Negotiation 3
      - 9200:662 Media Law 3
      - 9200:664 Local Government Law 3
      - 9200:690 Selected Legal Problems 3 or 4
      - 9200:698 Individual Studies and Research 2-3

- J.D. required courses - 24 credits

  - At least three credits from the following courses:
    - 3700:502 Politics and the Media 3
    - 3700:540 Survey Research Methods 3
    - 3700:572 Campaign Finance 3
    - 3700:574 Political Opinion, Behavior, and Electoral Politics 3
    - 3700:577 Lobbying 3
    - 3700:620 Seminar in Comparative Politics 3
    - 3700:630 Seminar in National Politics 3
    - 3700:688 Seminar in Public Policy Agendas and Decisions 3
    - 3700:690 Special Topics in Political Science (Applied Politics focus) 3
    - 3700:695 Internship in Government and Politics 3
    - 7600:575 Political Communication 3

- Prepare an applied politics portfolio containing:
  - At least two major papers prepared for required courses.
  - An applied politics capstone project assigned by the student’s advisor.
  - An oral defense of the applied politics portfolio.

Psychology

Master of Arts

- Fulfill admission requirements of the Graduate School and the following departmental requirements:
  - psychology major or minimally the equivalent of psychology undergraduate minor including a general or introductory course, statistics course, and experimental psychology course;
  - GPA of 3.00 in psychology courses;
  - Graduate Record Examination Aptitude and Advanced Psychology Test;
  - three letters of recommendation.

Course requirements:

- completion of graduate psychology courses, including the M.A. core courses or equivalents, specialty area required courses, and electives as specified in the department’s graduate student manual;
- a student is required to maintain at least a 3.0 grade-point average in M.A. content courses as well as overall.

Other requirements:

- refer to the Department of Psychology Graduate Student Manual for additional guidelines;
– complete and fulfill general master’s degree requirements of the Graduate School.

**Thesis Option**
Completion of a minimum number of credits of graduate work, including thesis, as follows: Industrial/Organizational program, 39 credits.

**Nonthesis Option**
Completion of coursework, practicum and examinations (no thesis required), with a minimum number of credits of graduate work for each program as follows: Applied Development and Aging program, 37 credits; Counseling program, 44 credits; and Industrial/Organizational program, 41 credits.

**Public Administration and Urban Studies**

**Master of Arts in Urban Studies**
The master’s degree focus is on applied policy. Students receive a contextual grounding of analysis methods and organization implementation methodology for areas of specialization.

**Admission**
Admission is open to students who have completed an undergraduate (bachelor’s) degree. No specific field of undergraduate major is required for admission. The GPA requirements for consideration for full admission is an overall bachelor GPA of 2.8 or greater, or 3.05 for the last 60 credit hours. Provisional admission may be granted for those with an overall GPA between 2.5 and 2.79. Additionally, applicants must submit the following:
- For students who have an overall GPA below 3.0 a standardized test score from the GRE, GMAT, or LSAT.
- A copy of their current resume (especially important for in-service students to ascertain their professional experience).
- A personal essay explaining why they study and completion of a MA degree will help them with their personal or professional goals.

Admission decisions are made by the department committees as explained in the PAUS Master’s Handbook.

**Degree Requirements**
Satisfactory completion of a minimum of 33 credit hours of graduate study, including 18 credit hours of core classes and 15 credit hours in an approved specialization.

**Required Core (18 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3980:600</td>
<td>Basic Quantitative Research</td>
<td>3</td>
</tr>
<tr>
<td>3980:601</td>
<td>Advanced Research and Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>3980:615</td>
<td>Personnel Management in the Public Sector</td>
<td>3</td>
</tr>
<tr>
<td>3980:640</td>
<td>Fiscal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>3980:643</td>
<td>Public Budgeting</td>
<td>3</td>
</tr>
<tr>
<td>3980:671</td>
<td>Program Evaluation in Urban Studies</td>
<td>3</td>
</tr>
<tr>
<td>3980:675</td>
<td>Advanced Techniques in Policy Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specializations:** Specializations represent career and/or academic fields of interest. Specializations for the MA are listed in the PAUS Master’s Handbook. Some specializations represent the inclusion of certificate programs on campus; some students may work with their advisors to craft a specialization that fits their needs and interests. Students should contact the department office to get a copy of the student handbook.

**Thesis:** Students are encouraged to consider the option of a thesis. A maximum of six credit hours of thesis course work can be applied to a specialization.

Other: Credit/Non-Credit courses do not count toward the minimum number of credit hours required for graduation.

**Master of Public Administration (MPA)**
The Master of Public Administration (MPA) program has been accredited by the National Association of Schools of Public Affairs and Administration (NASPAA) through the 2009-2010 academic year. The MPA program is designed to prepare students for their public service careers in public management and administration, as well as the management of non-profit organizations.

**Admission**
Admission is open to students who have completed an undergraduate (bachelor’s) degree. No specific field or undergraduate major is required for admission. The GPA requirements for consideration for full admission is an overall bachelor GPA of 2.8 or greater or 3.05 for the last 60 credit hours. Provisional admission may be granted for those with an overall GPA between 2.5 and 2.79. Additionally, applicants must submit the following:
- For students who have an overall GPA below 3.0 a standardized test score from the GRE, GMAT, or LSAT, or MAT.
- A copy of their current resume (especially important for in-service students to ascertain their professional experience).

**Thesis Option**
A personal essay explaining why the study and completion of a MPA degree will help them with their personal or professional goals.

Admission decisions are made by the department committee as explained in the department handbook.

**Degree Requirements**
Satisfactory completion of a minimum 48 credit hours of graduate study, including 30 credit hours of core classes, 15 credit hours of specialization courses, and three credit hours of internship (3980:699). Students with sufficient professional work experience may petition for a waiver of the internship course, and those students that are granted an internship waiver have a minimum of 45 credit hours for the degree. Procedures for an internship waiver are included in the PAUS Master’s handbook.

**Core requirements (33 credit hours):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3980:600</td>
<td>Basic Quantitative Research</td>
<td>3</td>
</tr>
<tr>
<td>3980:601</td>
<td>Advanced Research and Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>3980:610</td>
<td>Legal Foundations of Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>3980:611</td>
<td>Introduction to the Profession of Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>3980:614</td>
<td>Ethics and Public Service (capstone class)</td>
<td>3</td>
</tr>
<tr>
<td>3980:615</td>
<td>Public Organization Theory</td>
<td>3</td>
</tr>
<tr>
<td>3980:616</td>
<td>Personnel Management in the Public Sector</td>
<td>3</td>
</tr>
<tr>
<td>3980:640</td>
<td>Fiscal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>3980:642</td>
<td>Public Budgeting</td>
<td>3</td>
</tr>
<tr>
<td>3980:643</td>
<td>Introduction to Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>3980:695</td>
<td>Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specializations:** Specializations represent career and/or academic fields of interest. Specializations for the MPA are listed in the Master’s handbook. Some specializations represent the inclusion of certificate programs on campus; some students may work with their advisors to craft a specialization that fits their needs and interests. Students should contact the department office to get a copy of the handbook.

**Thesis:** Students are encouraged to consider the option of a thesis. A maximum of six credit hours of thesis course work can be applied to a specialization.

Other: Credit/Non-Credit courses do not count toward the minimum number of credit hours required for graduation.

**J.D./Master of Public Administration**
The University offers a joint J.D. and Public Administration program. The title is J.D./M.PA. To be accepted into the program, a student must meet the admission requirement of the School of Law, the Graduate School, and the Department of Public Administration and Urban Studies.

**Degree Requirements**
Seventy-six credits in law and 30 credits in public administration. Under this program a student must take 43 credits of required law courses, 32 credits of law electives, and 30 credits of required public administration courses plus an internship of three credits. (Internship is required of any student without professional administrative experience.)

This program reduces the total existing credit hours of the School of Law and Public Administration by nine credit hours (from 85 to 76), while public administration requirements are reduced by 12 credit hours (from 42 to 30).

**Public Health**
The Consortium of Eastern Ohio Master of Public Health (CEOMPH) program is a partnership between The University of Akron, Cleveland State University, Kent State University, Northeastern Ohio Universities College of Medicine and Pharmacy, Ohio University, and Youngstown State University. This nontraditional program is geared toward the working professional who would like to broaden his or her role in improving community health, enhance current job skills, or seek career advancement. Students are encouraged to move through the program as a cohort with core courses being taught on Saturday by interactive videoconferencing from one of our distance learning sites. Unique features of this program include the use of distance learning for all core courses, including interactive videoconferencing and web-enhanced teaching. Elective courses may be taken at any of the partner universities. Core courses are taught on Saturday to accommodate working students. CEOMPH is accredited by the Council on Education and Public Health.

**Mission Statement**
The mission of the Consortium of Eastern Ohio Master of Public Health program is to provide accredited public health education designed for the working professional. It does this through a collaborative learning community, drawing on the collective resources of its six member institutions and partnering community agencies. The program strives to produce respected and competent professionals able to improve public health practice, especially in eastern Ohio.

**Values**
- Improving, preserving, and enhancing the health and well-being of the entire community.
- Engaging in collaborative behavior that models as well as educates.
• Achieving student excellence, including leadership, accountability, and ethical behavior.
• Protecting the environment, recognizing and reducing environmental health risks, and using resources prudently in our personal and professional lives.
• Promoting diversity in the public health workforce.
• Demonstrating cultural competence.
• Commitment to lifelong learning.

Goals
• Provide graduates with a foundation of public health skills and knowledge, including community assessment methods, analytic skills, research strategies, program implementation, evaluation, and policy development within an ethical and culturally sensitive perspective.
• Provide an MPH program that produces competent practitioners through collaboration among academicians, researchers, public health practitioners, and students from each member institution and the eastern Ohio community.
• Provide students with the knowledge and opportunities to apply public health concepts and skills to assess and improve the health status of residents of Ohio through research and service.
• Foster ongoing professional development of faculty and students and public health practitioners for the advancement of practice in the community.
• Assure at least an annual evaluation of overall program activity so that it continues to meet the needs of both students and the eastern Ohio community and is based on the most current concepts and skills in public health research and practice.

Admission

All application materials must be sent to Consortium of Eastern Ohio Master of Public Health office, 4209 State Route 44, PO. Box 95, Rootstown, Ohio 44272-0095.

Students must meet the following admission requirements:
• Submit completed application by January 15 of the year student is seeking to enter in the fall
• Possess a bachelor’s degree from an accredited college or university
• Provide official academic records from each institution of higher education attended. If the official record is not in English, an official translation must accompany the original language document.
• Minimum undergraduate GPA of 2.75 and minimum graduate GPA of 3.0 out of a 4.0 scale
• Three letters of recommendation from individuals familiar with applicant’s academic or professional background. Individuals who have not been involved in an academic institution for two years or more may submit letters of recommendation by supervisors from his/her place of employment. The letters should include an assessment of current work quality and ability to successfully complete graduate training. Letters should be addressed to the CEOMPH Admissions Committee at the above address.
• A cover letter (no more than two pages) explaining applicant’s educational and professional history; area of interest in public health, interest and motivation for seeking a MPH degree, and professional or academic career plans upon completion of the program.
• Successful completion of a college level mathematics or statistics course and college level social or natural science course.
• GRE scores taken within the last five years (student may be exempt if he/she has a professional or academic master’s or doctoral degree).
• TOEFL scores taken within the last two years from graduates of foreign universities who are non-native English speakers. The minimum score must be 550 (paper-based) or 213 (computer-based) or 79-80 with read/speak/listen=17, write=14 (internet-based)
• Two years of work experience in a relevant field is highly recommended, but not required.
• $45 non-refundable application fee. Students with international credentials must pay a total of $90.
• International students must also complete an INTERNATIONAL STUDENT DOCUMENTATION PACKET and Declaration and Certification of Finances (DCF).

For administrative purposes, students will be enrolled at one of the five universities: UA, CSU, KSU, OU, or YSU. If accepted, the Consortium of Eastern Ohio Master of Public Health (CEOMPH) Admissions Committee will assign students an “enrollment university,” based on his/her preference. Questions may be addressed in writing to the above address or applicants may contact the MPH Program office by telephone at (330) 325-6179, fax (330) 325-5907, or e-mail at pubhlth@neoucom.edu. The Program Coordinator at The University of Akron may be reached at (330) 972-6886.

Curriculum

The MPH program contains five core areas basic to public health: social and behavioral sciences, epidemiology, biostatistics, health services administration, and environmental health sciences.

• Core courses:
  8300:601 Public Health Concepts 3
  8300:602 Social and Behavioral Sciences in Public Health 3
  8300:603 Epidemiology in Public Health 3
  8300:604 Biostatistics in Public Health 3
  8300:605 Health Services Administration in Public Health 3
  8300:606 Environmental Health Sciences in Public Health 3
  Subtotal 18

• Additional program requirements:
  8300:608 Public Health Practice and Issues (required) 3
  8300:697 Capstone Project (required) 3-6

Electives (15-18 credits):
  8300:610 Grant Writing for Public Health Practice (directed elective) 3
  8300:696 Practicum 1-3
  8300:698 Independent Study 1-3
  8300:686 Special Topics 1-5

Total 42

A portfolio and exit presentation are also required of each student for graduation.

Sociology

Master of Arts

Thesis Option

Satisfactory completion of 31 semester credits of which at least 21 must be at the 600 level or higher in sociology (excluding 3850:697, 3850:698 and 3850:699). In meeting these requirements the student must:
• Complete four required core courses with at least a 3.00 grade-point average:
  3850:601 Proseminar in Sociology 1
  3850:604 Research Design and Methods 3
  3850:706 Multivariate Techniques in Sociology 3
  3850:722 Early Sociological Thought 3

• Complete at least six hours of thesis work (3850:699). No more than six credits will count toward the degree.
• Completion of master’s thesis and successful oral defense of thesis.

Nonthesis Option

This degree is intended for the student who wants intensive substantive training in a specialized area.

Completion of 31 credits of graduate work with no more than six credits taken at the 500 level. In meeting these requirements the student must:
• Complete three required core courses with at least a 3.00 grade-point average:
  3850:601 Proseminar in Sociology 1
  3850:604 Research Design and Methods 3
  3850:722 Early Sociological Thought 3

• Completion of at least 15 credits in a contracted specialty area. This area must be defined in consultation with the student’s advisor and approved by the Graduate Studies Committee. Courses from other departments may be taken to meet the specialty requirement.
• Pass an oral examination on the specialty area.

Research Paper Option

Satisfactory completion of 31 semester credits of which at least 21 must be at the 600 level or higher in sociology (excluding 3850:697, 3850:698 and 3850:699). In meeting these requirements the student must:
• Complete four required core courses with at least a 3.00 grade-point average:
  3850:601 Proseminar in Sociology 1
  3850:604 Research Design and Methods 3
  3850:706 Multivariate Techniques in Sociology 3
  3850:722 Early Sociological Thought 3

• Complete at least six hours of Master’s Research Paper work (3850:699). No more than six credits will count toward the degree, but a student may register for more than six (8) hours.
• Completion of Master’s Research Paper and successful oral defense of paper.
Spanish

Master of Arts
- Thirty-two semester credits of graduate coursework in Spanish.
- Proficiency level in listening comprehension, speaking, reading, and writing Spanish, and cultural and literary proficiency.
- Final research paper: the candidate will be required to submit a long essay in Spanish reflecting the results of a research project, and to make an oral defense of the essay.

Statistics

Master of Science – Statistics
- Entrance into the program will require the initial completion of the following prerequisites:
  - Three semesters of calculus or equivalent
  - One semester of Linear Algebra or equivalent.
  - One semester of Applied Statistics or equivalent.
- Core curriculum:
  - 3470:580 Statistical Data Management 3
  - 3470:681 Probability and Statistics 4
  - 3470:682 Advanced Mathematical Statistics 3
  - 3470:683 Experimental Design 3
  - 3470:685 Regression 3
  - Total 16
- Statistical Computer Science option (addition to existing master’s program)
  - Other required courses:
    - 3460:501 Fundamentals of Data Structures 3
    - 3460:506 Introduction to C and UNIX 3
    - 3460:575 Database Management 3
    - 3460:676 Data Mining 3
    - Total 12
- Thesis requirements (30 credits of graduate work)
  - In addition to the core curriculum, 2-4 credits in 3470:699 Master’s Thesis and 10-12 other approved elective graduate credit hour must be completed.
  - Successful completion of the comprehensive examinations in the core curriculum.
- Nonthesis requirements (33 credits of graduate work)
  - In addition to the core curriculum, 2-4 credits in 3470:692 Statistics Masters Paper and 13-15 other approved elective graduate credit hours must be completed. The Statistical Computer Science option requirements may be applied toward the elective courses.
  - Successful completion of the comprehensive examinations in the core curriculum.

Theoretical and Applied Mathematics

Master of Science – Mathematics
Goals: The program is designed to give students a solid foundation in graduate-level mathematics, provide hands-on experience in problem-solving and the uses of technology, and to allow returning mathematics teachers to upgrade their qualifications.
Administration: Upon admission to the program, each student will undergo a review process to determine competency in undergraduate core mathematical areas and background in at least one junior-level or higher course in engineering or physics. If necessary, the appropriate course(s) will be added to the required course list for the student.
- Core Requirements:
  - 3450:510 Advanced Linear Algebra 3
  - 3450:513 Theory of Numbers 3
  - 3450:512 Abstract Algebra II 3
  - 3450:522 Advanced Calculus II 3
  - 3450:621 Real Analysis 3
  - or 3450:625 Analytic Function Theory 3
  - 3450:636 Advanced Combinatorics and Graph Theory 3
  - 3450:692 Seminar in Mathematics 3
  - A statistics course selected from:
    - 3470:550 Probability 3
    - 3470:551 Theoretical Statistics I 3
    - 3470:561 Applied Statistics I 3
    - 3470:651 Probability and Statistics 4
  - Electives: 8-9 credits

Thesis Option (minimum of 30 credits)
In addition to the placement review and core requirements, at least six credits of electives approved by the graduate advisor and three credits in 3450:699 Master's Thesis must be completed.

Nonthesis Option (minimum of 30 credits)
In addition to the placement review and core requirements, at least eight credits of electives approved by the graduate advisor must be completed. In addition, the student will generate a project or paper to complete the degree.

Master of Science – Applied Mathematics
Goals: This program is designed to train students in the formulation, analysis, and solution of mathematical models in a variety of application areas.
Administration: Upon admission to the program, each student will undergo a review process to determine competency in undergraduate core mathematical areas and background in at least one junior-level or higher course in engineering or physics. If necessary, the appropriate course(s) will be added to the required course list for the student.
- Core Requirements:
  - 3450:621 Real Analysis 3
  - 3450:627 Advanced Numerical Analysis I 3
  - 3450:633 Methods of Applied Mathematics I 3
  - 3450:692 Seminar in Mathematics 3
  - Group 1 - At least one course from this list must be taken:
    - 3450:625 Analytic Function Theory 3
    - 3450:628 Advanced Numerical Analysis II 3
    - 3450:632 Advanced Partial Differential Equations 3
  - Group 2 - At least two courses from this list must be taken:
    - 3450:634 Methods of Applied Mathematics II 3
    - 3450:635 Optimization 3
    - 3450:730 Advanced Numerical Solution of Partial Differential Equations 3
  - Electives: 6 - 9 credits

Thesis Option (minimum of 30 credits)
In addition to the placement review and core requirements, at least six credits of electives approved by the graduate advisor and three credits in 3450:699 Master’s Thesis must be completed.

Nonthesis Option (minimum of 30 credits)
In addition to the placement review and core requirements, at least nine credits of electives approved by the graduate advisor must be completed. In addition, the student will generate a project or paper to complete the degree.

Coordinated Program
Coordinated Engineering Applied Mathematics program for the Doctor of Philosophy in Engineering degree between the College of Engineering and the Department of Theoretical and Applied Mathematics
The faculty in the College of Engineering and the Department of Theoretical and Applied Mathematics have agreed to provide a coordinated program for those graduate students who elect the interdisciplinary field of Engineering Applied Mathematics.

Admission and Degree Requirements
Applicants for the Engineering Applied Mathematics Program must have their graduate application and credentials evaluated by one of the departments in the College of Engineering and the Department of Theoretical and Applied Mathematics. The Admission and Degree Requirements for the Doctor of Philosophy in Engineering, as given in the Graduate Bulletin (see page 38, College of Engineering), shall apply to all applicants for the Engineering Applied Mathematics Program.

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 advisor, 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.

Graduate coursework will include the following courses:
- 3450:510 Advanced Linear Algebra 3
- 3450:513 Theory of Numbers 3
- 3450:512 Abstract Algebra II 3
- 3450:621 Real Analysis 3
- 3450:627 Advanced Numerical Analysis I 3
College of Engineering

George Haritos, Ph.D., Dean
D. Dane Quinn, Ph.D., Associate Dean for Research
Craig C. Menzer, Ph.D., Interim Assistant Dean for Graduate Studies
Paul C. Lam, Ph.D., Associate Dean, Undergraduate Studies and Diversity Program

Mission of the College

The College of Engineering at The University of Akron is committed to excellence in undergraduate and graduate education. The College of Engineering was founded in 1914 and is the second oldest college at the University. The College embraces the departments of Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical and Computer Engineering, and Mechanical Engineering. The current research focus of the College includes: gas turbine technology, filtration technology, nanotechnology, lightweight automobile research, aero-propulsion technology, catalysis, industrial controls, computational mechanics, smart materials, composites and civil structures, and a variety of modeling and simulation issues of engineering problems. During the academic year 1989-90, the College adopted interdisciplinary procedures for the doctoral program offered by the College. The program is truly interdisciplinary in nature.

The mission of graduate education in the College of Engineering is to:
- Train engineers and scientists to solve state of the art technological issues.
- Train students to develop theory, methodology, and necessary experimental skills to investigate emerging issues in engineering and science that effect state and national interests.
- Provide excellence in presenting student findings via theses, doctoral dissertations, and research papers.
- Train students to be future educators where appropriate.
- Train students in industrial research where appropriate.
- Train students to work on interdisciplinary teams where appropriate.

As the state positions itself in the forefront of the technology, appropriately trained scientists and engineers are needed in all fields. Our graduate programs provide training that equips students with the maturity and ability to assume leadership roles in technological fields related to the field of engineering. In addition, our programs attract a variety of students from several industries and NASA Glenn Research Center in Northeast Ohio. The College is a partner of the Ohio Aerospace Institute (OAI).

DOCTOR OF PHILOSOPHY IN ENGINEERING DEGREE

The Doctor of Philosophy in Engineering is an interdisciplinary doctoral program offered on a collegiate basis.

Admission Requirements

Applicants for the Doctor of Philosophy in Engineering must hold a bachelor’s degree from a program that is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology at the time of graduation, or provide satisfactory evidence of an equivalent academic background to the Dean of the College of Engineering.

Applicants with a master of science degree must provide satisfactory evidence of an equivalent engineering baccalaureate background to the Dean of the College of Engineering.

Applicants must submit official undergraduate transcripts, undergraduate grade point average, at least two letters of recommendation, and official results of the verbal, quantitative, and analytical portions of the GRE. Personal statements or descriptions of post-baccalaureate experience that provide a rationale for the proposed graduate study may also be submitted.

The GRE minimum requirement for admission into a graduate program in the College of Engineering (both master’s and doctoral) is 1500. The GRE score is derived by using the following formula: Quantitative Score + 100 x 4/3 x Analytical Score. The GRE requirement may be waived for students holding degrees from ABET accredited programs (if the department approves).

Applicants with a bachelor’s degree must have a cumulative grade-point average of at least 3.0 (4.0). Applicants with a master’s degree must have a cumulative grade point average of at least 3.5 (4.0).

Applicants whose native language is not English must have a TOEFL score of at least 550 (paperbased) or 213 on the computer-based TOEFL, and also must submit their score on the Test of Written English. Applicants to the Department of Bio-

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 advisor, 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.

Graduate work will include the following courses:

Electives: 8-9 credits

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 instead of the five-year accelerated plan.
medical Engineering must have a TOEFL score of 590 (paper-based) or 243 (computer-based).

Applicants not satisfying the requirements for Full Admission may be classified either as a Provisional Admission or as a Deferred Admission.

Applicants with a bachelor's degree in a discipline other than engineering shall have completed undergraduate coursework in calculus, differential equations, and have one year of classical physics. These students may be required to take additional bridge-up courses depending on their background. Necessary bridge-up coursework will be determined by the admitting department/program graduate committee.

**Transfer Credits**

A student who has a master's degree from another university or from one of the departments in the College of Engineering may, upon recommendation of the Interdisciplinary Doctoral Committee, transfer up to 24 credits of course work. The course comprising the transfer credits must be identified and itemized on the Plan of Study and must be substantiated by an official transcript from the educational institution that offered the course.

A student who has completed a non-thesis master’s degree, or has graduate credits but has not completed the degree requirements for the master’s degree, can transfer a maximum of 24 credits of course work toward the doctoral course requirements.

No more than six credit hours of research or complete thesis credits can be transferred.

**Degree Requirements**

The University's Academic Requirements (See Academic Requirements in this Graduate Bulletin) for the Doctoral Degree and the following College of Engineering's academic requirements for the Doctoral Degree must be satisfied.

- An entering doctoral student will have the chair of the Interdisciplinary Doctoral Committee (IDC) in his/her home department/program.
- A student's plan of study should include 96 credit hours and be in accordance with the guidelines established by the student's admitting department/program.
- A Plan of Study will be established by the IDC satisfying guidelines established by the home department/program.
- Identify an interdisciplinary field of study, a dissertation director, and an Interdisciplinary Doctoral Committee before completion of 18 credits of coursework.
- Pass a departmental Qualifying Examination. The purpose of the qualifying examination is to determine admisssibility to the doctoral program and any technical weakness.
- Satisfy the language requirement specified by the Interdisciplinary Doctoral Committee.
- Pass a Candidacy Examination. The purpose of the candidacy examination is to test the student's ability to conduct independent research.
- Present an acceptable Dissertation Proposal that describes the proposed research to the Interdisciplinary Doctoral Committee.
- Present and successfully (no “fail” votes) defend the dissertation to the Interdisciplinary Doctoral Committee.

A copy of the Ph.D. in Engineering Program Procedures may be obtained from the office of the Dean of the College of Engineering.

**Doctoral Student's Responsibilities**

Doctoral students are completely responsible for all aspects of their graduate education. Specifically, these responsibilities include:

- Understanding, adhering to, and implementing the procedures of the Graduate School, as described in The University of Akron Graduate Bulletin, and the Interdisciplinary Doctoral Procedures of the College of Engineering.
- Selecting an interdisciplinary program, Dissertation Director, and Interdisciplinary Doctoral Committee.
- Arranging, through the Dissertation Director, all Interdisciplinary Doctoral Committee meetings.
- Initiating, through the Dissertation Director, the forms that monitor their progress toward the doctoral degree.
- Proposing and executing an accepted Plan of Study.
- Proposing a Research Proposal and executing the proposed research.
- Preparing a scientifically acceptable and comprehensive dissertation whose format meets all the accepted standards of the Interdisciplinary Doctoral Committee, the College of Engineering, and the Graduate School.

**Interdisciplinary Fields of Study**

The proposal to establish a doctoral program in the College of Engineering, which was approved by the Board of Trustees of The University of Akron and the Ohio Board of Regents in 1967-68, defines the four undergraduate departments as of 1999, a Biomedical Engineering undergraduate program was approved by the Ohio Board of Regents, Chemical, Civil, Electrical, and Mechanical, as the basic disciplines for the interdisciplinary programs in Environmental Engineering, Materials Engineering, Mechanics, Systems Engineering, and Transport Processes. The objectives of the proposal were to allow doctoral students access to the infrastructure resources of the entire college and permit the interdisciplinary programs to adapt to the changing research and funding environment. Since the approval of the proposal, the interdisciplinary areas have expanded from the original five programs to ten interdisciplinary programs. These interdisciplinary programs are broadly defined as follows.

- **Environmental Engineering** includes the study of water and air pollution, environmental health, chemical disposal, waste management, noise control, resource engineering, and appropriate fields of urban planning.
- **Mechanics** includes the theoretical and experimental study of the stresses, strains, and endurance of structures, machines and various materials, mechanics of solids, fluids, solid, and composite materials.
- **Systems Engineering** include the scientific prediction, control, and evaluation of the performance of integrated operational systems, and interaction effects among the components of engineering systems. It includes system analysis and design, operations research, linear and dynamic programming.
- **Materials Engineering** studies the materials from the physical, chemical, and engineering standpoints. Its purpose is to develop a better understanding of the composition, properties, and performance of various materials, and to develop new materials, manufacturing methods, and applications.
- **Transport Processes** include the theoretical and experimental study of the transfer of mass, energy, and power, as related to engineering systems and processes.
- **Biomedical Engineering** studies the theoretical and experimental application of engineering principles to biomedical problems. Some typical areas of interest are signal and image processing, biomechanics, and biomaterials.
- **Polymer Engineering** combines fundamental engineering principles with the structure and rheological properties of polymers to design and analyze polymer processes and equipment.
- **Engineering-Applied Mathematics** applies advanced mathematics to technologically significant engineering problems.
- **Chemical Reactions and Process Engineering** studies chemical reactions, homogeneous chemical reactions, heterogeneous chemical reactions, and catalysis as applied to process engineering.
- **Microscale Physicochemical Engineering** studies small particles, surface science, agglomeration, and separation as applied to process engineering.

The interdisciplinary doctoral program has succeeded in providing doctoral students access to the resources of the entire college while providing an economically sound administration for a program that deals with a doctoral population that is much smaller than those for undergraduate or master’s degrees.

**COORDINATED AND JOINT PROGRAMS**

**Coordinated Engineering Applied Mathematics program for the Doctor of Philosophy in Engineering degree between the College of Engineering and the Department of Theoretical and Applied Mathematics**

**Admission Requirements**

Applicants for the Engineering Applied Mathematics Program must have their graduate application and credentials evaluated by the College of Engineering Dean's Office and the applied mathematics division of the Department of Theoretical and Applied Mathematics. The Admission Requirements for the Doctor of Philosophy in Engineering, as given in the Graduate Bulletin, shall apply to all applicants for the Engineering Applied Mathematics Program.

**Degree Requirements**

The applicable Degree Requirements for the Engineering Applied Mathematics Program are those given in the Graduate Bulletin under the Section Doctor of Philosophy in Engineering. These degree requirements include passing a Qualifying Examination, identifying a Dissertation Director, establishing an Interdisciplinary Doctoral Committee, completing a formal Plan of Study, satisfying the University's language and residency requirement, passing a Candidacy Examination, presenting an acceptable Dissertation Proposal, writing a dissertation, and publicly and successfully (no “fail” votes) defending the dissertation before the Interdisciplinary Doctoral Committee.
Students in the Engineering Applied Mathematics Program must pass a departmental Qualifying Exam composed and administered by the participating faculty from the applied mathematics division of the Department of Theoretical and Applied Mathematics and the participating faculty from one of the five departments in the College of Engineering.

The Interdisciplinary Doctoral Committee shall consist of at least six members. It shall have an equal number of faculty with primary appointments in the College of Engineering and participating program faculty from the applied mathematics division of the Department of Theoretical and Applied Mathematics. The participating faculty from the Department of Theoretical and Applied Mathematics must hold joint appointments in the College of Engineering.

Graduate students who elect the Engineering Applied Mathematics Program may proceed directly from their baccalaureate degree to the doctoral degree.

Students participating in the Engineering Applied Mathematics Program must have at least 50 percent of minimum coursework from the College of Engineering and at least 50 percent of minimum coursework from the Department of Theoretical and Applied Mathematics.

Coordinated program for the Doctor of Philosophy in Engineering degree between The University of Akron and Youngstown State University.

The University of Akron and Youngstown State University are engaged in a coordinated program with the objective of facilitating graduate study by engineering students residing in proximity to Youngstown State University. This provides the opportunity and convenience of completing some of the requirements for the Doctor of Philosophy in Engineering at The University of Akron through joint counseling and enrollment at Youngstown State University.

Admission Requirements

When an engineering graduate student at Youngstown State University declares an interest in the joint doctoral program, the student shall prepare a letter of intent, with academic credentials, to the dean of engineering at Youngstown State University. The dean of engineering at Youngstown State University shall forward the letter of intent and academic credentials, together with a recommendation, to the dean of engineering at The University of Akron. The dean of engineering at The University of Akron shall have the graduate faculty in the applicant’s discipline evaluate the academic credentials and make a recommendation on the academic acceptability of the applicant. If the recommendation is favorable, the student shall be advised to apply to the Graduate School at The University of Akron for formal admission to the joint program in Engineering at The University of Akron.

Degree Requirements

The engineering student from Youngstown State University must satisfy the Degree Requirements for the Doctor of Philosophy in Engineering at The University of Akron subject to the following modifications.

One of the members of the Interdisciplinary Doctoral Committee for the joint doctoral program candidate shall be an engineering faculty member from Youngstown State University and normally would be the student’s dissertation director, although this is not necessary. The faculty member from Youngstown State University shall have adjunct status at The University of Akron and qualify for Category II graduate faculty membership.

One-half of the coursework and one-half of the research credits may be taken at Youngstown State University. The parity of courses is decided by the faculty on the Interdisciplinary Doctoral Committee when the student submits a proposed Plan of Study. At the Advancement to Candidacy, the Committee recommends official transfer of credits from Youngstown State University to The University of Akron.

Joint program for the M.D. and Ph.D. in Engineering degree between the College of Engineering at The University of Akron and the Northeastern Ohio Universities College of Medicine.

The College of Engineering and NEUCOM provide a coordinated program for those desiring both the M.D. and Ph.D. in Engineering degrees. This program integrates the knowledge and skills acquired by the student in each of the programs. Each individual coordinated program is tailored to suit the background and research interests of the student. Additional information may be obtained from The University of Akron Department of Biomedical Engineering or NEUCOM.

Admission Requirements

Applicants with a bachelor’s or master’s degree in a discipline other than engineering or in engineering will be required to meet the Admission Requirements for the Doctor of Philosophy Degree in Engineering. Applicants will be required to have completed the following courses and to have taken the MCAT prior to admission into the coordinated M.D. and Doctor of Philosophy in Engineering program:

<table>
<thead>
<tr>
<th>Degree</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.D.</td>
<td>Principles of Chemistry I and II</td>
</tr>
<tr>
<td>M.D.</td>
<td>Organic Chemistry I and II</td>
</tr>
<tr>
<td>M.D.</td>
<td>Principles of Biology I and II</td>
</tr>
<tr>
<td>M.D., Ph.D.</td>
<td>Classical Physics I and II</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Statics</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Dynamics</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Strength of Materials (or Material Science)</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Basic Electrical Engineering (or Circuits I &amp; II)</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Calculus I, II, III, and Differential Equations</td>
</tr>
</tbody>
</table>

Degree Requirements

To obtain an M.D. degree from NEUCOM and a Doctor of Philosophy Degree in Engineering, the student must satisfy NEUCOM’s degree requirements and the College of Engineering’s Doctor of Philosophy in Engineering Degree Requirements. This coordinated program does not change the degree requirements for either program.

MASTER OF SCIENCE DEGREES

The degrees of Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering, and Master of Science in Engineering are offered.

Admission Requirements

Applicants for any of these master of science programs must hold a bachelor’s degree from a program that is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology at the time of graduation, or provide evidence of an equivalent academic background to the Dean of the College of Engineering and the appropriate department chair.

Applicants must submit an official undergraduate transcript, undergraduate grade point average, at least two letters of recommendation, and official results of the verbal, quantitative, and analytical portions of the GRE. The GRE minimum requirement for admission into a graduate program in the College of Engineering (both master’s and doctoral) is 1500. The GRE score is derived by using the following formula: Quantitative Score + 100 x 4/3 x Analytical Score. The GRE requirement may be waived for students holding degrees from ABET accredited programs (if the department approves).

Applicants with a bachelor’s degree must have an overall grade-point average of 2.75 or better or 3.00 for the last two years (64 semester credits or equivalent). Applicants whose native language is not English must have a TOEFL score of at least 550 (paper-based) or 213 on the computer-based TOEFL, and also must submit a score on the Test of Written English (TWE). Applicants to the Department of Biomedical Engineering must have a TOEFL score of 590 (paper-based) or 243 (computer-based).

Applicants who do not satisfy the requirements for Full Admission may be granted Provisional Admission or Deferred Admission.

Degree Requirements

The University’s Academic Requirements (See Academic Requirements in this Graduate Bulletin), the following College of Engineering requirements and the department’s academic requirements must all be satisfied for the master of science degrees in the College of Engineering.

- Identify a three-member Advisory Committee including a major advisor before completion of 8 credit hours of coursework.
- Complete a formal Plan of Study that is acceptable to the Advisory Committee with a minimum of 24 credit hours of coursework of which not more than 6 credits are special topics courses. The formal Plan of Study may be revised upon approval of the Advisory Committee.
- Successfully complete the appropriate department’s nonthesis option requirements.

Master of Science in Chemical Engineering

Applicants with a bachelor’s degree in a discipline other than engineering shall have completed coursework in calculus, differential equations, have one year of classical physics, and must complete:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4200:200</td>
<td>Material and Energy Balances</td>
<td>4</td>
</tr>
<tr>
<td>4200:225</td>
<td>Equilibrium Thermodynamics</td>
<td>4</td>
</tr>
<tr>
<td>4200:321</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>4200:330</td>
<td>Reaction Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>
An overall GPA of 3.0 must be maintained for these courses. These undergraduate engineering courses may be taken prior to graduate admission, or concurrently if the student has Full Admission or Provisional Admission and is enrolled for at least 9 graduate credits.

**Thesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4200:600</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>4200:605</td>
<td>Chemical Reaction Engineering</td>
<td>3</td>
</tr>
<tr>
<td>4200:610</td>
<td>Classical Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering Electives*</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Approved Electives**</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Approved Mathematics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Master’s Thesis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

**Nonthesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4200:600</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>4200:605</td>
<td>Chemical Reaction Engineering</td>
<td>3</td>
</tr>
<tr>
<td>4200:610</td>
<td>Classical Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>4200:697</td>
<td>Chemical Engineering Report</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering Electives*</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Approved Electives**</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Approved Mathematics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36</td>
</tr>
</tbody>
</table>

*Chemical Engineering students in both degree options are expected to attend and to participate in the department’s seminars.

**Students without BS in Chemical Engineering are required to take 4200:535, 4200:541.**

**Five Year BS/MS Chemical Engineering Program**

The five year BS/MS program in Chemical Engineering provides superior undergraduate students with the opportunity to complete an M.S. in Chemical Engineering with one additional year of study beyond their B.S. Chemical Engineering degree at The University of Akron. The program is only available to B.S. Chemical Engineering students at The University of Akron. Applications are accepted in the Spring of the junior year.

**Master of Science in Civil Engineering**

Applicants with a bachelor’s degree in a discipline other than engineering shall have completed coursework in calculus, differential equations, have one year of classical physics, and must select and complete undergraduate coursework from one of four undergraduate disciplines. These undergraduate engineering courses may be taken prior to graduate admission, or concurrently if the student has full admission or provisional admission, and is enrolled for at least 9 graduate credits.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4300:306</td>
<td>Theory of Structures</td>
<td>3</td>
</tr>
<tr>
<td>4300:313</td>
<td>Soil Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>4600:310</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>4300:323</td>
<td>Water Supply and Wastewater Disposal</td>
<td>4</td>
</tr>
<tr>
<td>4300:341</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>4300:361</td>
<td>Transportation Engineering</td>
<td>3</td>
</tr>
<tr>
<td>4300:401</td>
<td>Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>4300:403</td>
<td>Reinforced Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25</td>
</tr>
</tbody>
</table>

Areas of study in the department include structural mechanics, geotechnical, hydraulic, transportation, and environmental engineering.

**Thesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Civil Engineering Courses</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Approved Mathematics or Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Approved Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Master’s Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

**Nonthesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Civil Engineering Courses</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Mathematics or Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Report</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>32</td>
</tr>
</tbody>
</table>

**Master of Science in Electrical Engineering**

Applicants with a bachelor’s degree in a discipline other than engineering shall have completed coursework in calculus, differential equations, have one year of classical physics, and must select and complete undergraduate coursework from one of four undergraduate disciplines. These undergraduate engineering courses may be taken prior to graduate admission, or concurrently if the student has full admission or provisional admission, and is enrolled for at least 9 graduate credits.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4400:360</td>
<td>Physical Electronics</td>
<td>3</td>
</tr>
<tr>
<td>4400:361</td>
<td>Electronic Design</td>
<td>4</td>
</tr>
<tr>
<td>4400:362</td>
<td>Switching and Logic</td>
<td>4</td>
</tr>
<tr>
<td>4400:384</td>
<td>Energy Conversion I</td>
<td>3</td>
</tr>
<tr>
<td>4400:385</td>
<td>Energy Conversion Lab</td>
<td>2</td>
</tr>
<tr>
<td>4400:446</td>
<td>Analog Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

Areas of study in the department include computer engineering, control system engineering, power system engineering, electromagnetics, and related areas.

**Thesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electrical Engineering Courses**</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Approved Mathematics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Approved Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Master’s Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

**Nonthesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Electrical Engineering Courses**</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Mathematics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Electives</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>36</td>
</tr>
</tbody>
</table>

Electrical engineering students pursuing the nonthesis option must pass a graduate level oral comprehensive examination which may be taken after 24 credits have been completed.

*The elective chemical engineering courses may not include more than three credits of 500 level courses.

**The required electrical engineering coursework of 18 credits may not include more than six credits of 500 level courses.

**Master of Science in Mechanical Engineering**

Applicants with a bachelor’s degree in a discipline other than engineering shall have completed coursework in calculus, differential equations, have one year of classical physics, and must select and complete undergraduate coursework from one of four undergraduate disciplines. These undergraduate engineering courses may be taken prior to graduate admission, or concurrently if the student has full admission or provisional admission, and is enrolled for at least 9 graduate credits.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thermodynamics I</td>
<td>4</td>
</tr>
<tr>
<td>4600:301</td>
<td>Thermodynamics II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Analysis of Mechanical Components</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Systems Dynamics and Response</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mechanical Metallurgy</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Fundamentals of Mechanical Vibrations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Control System Design</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>27</td>
</tr>
</tbody>
</table>

Main areas of graduate study in mechanical engineering include systems and controls, engineering mechanics, materials, and thermal-fluid sciences. Students in the department are encouraged to take at least one mechanical engineering course outside the main area of interest to develop some breadth in their graduate education.

**Thesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mechanical Engineering Courses</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Mathematics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master’s Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

**Nonthesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mechanical Engineering Courses</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Mathematics</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Report</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>32</td>
</tr>
</tbody>
</table>

**Master of Science in Engineering**

This program is intended for the student whose educational objectives cannot be met by the four departmental master of science programs or those who wish to specialize in biomedical engineering, polymer engineering, or engineering management.

**Admissions**

Except for students in biomedical engineering and polymer engineering, students should declare in writing to the Dean of Engineering of their intention to study toward the Master of Science in Engineering degree. Upon admission, the dean will appoint an advisory committee consisting of three faculty members who are selected from at least two different departments.

**Thesis Option**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Engineering Courses</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Mathematics or Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approved Electives</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master’s Thesis</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>
The thesis must be successfully (no “fail” votes) defended before the Advisory Committee.

**Nonthesis Option**

<table>
<thead>
<tr>
<th>Engineering Courses</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Mathematics or Science</td>
<td>3</td>
</tr>
<tr>
<td>Approved Electives</td>
<td>9</td>
</tr>
<tr>
<td>Engineering Report</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

The engineering report must receive the approval of the Advisory Committee.

**Biomedical Engineering Specialization**

| 4800:601 | Biomedical Instrumentation | 4 |
| 4800:611 | Biometry | 3 |
| 3100:695 | Physiology for Engineers and Lab | 5 |
| Approved Electives | 15 |
| Master’s Thesis | 6 |
| **Total** | **33** |

The thesis must be successfully (no “fail” votes) defended before the Advisory Committee.

**Polymer Engineering Specialization**

<table>
<thead>
<tr>
<th>Polymer Engineering Core</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer Engineering Electives</td>
<td>11</td>
</tr>
<tr>
<td>Approved Engineering and Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Thesis</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

The thesis must be successfully (no “fail” votes) defended before the Advisory Committee.

*The program is limited to not more than three 500-level courses in engineering. Not more than two of the 500-level courses can be applied to the 16 credits of mechanical engineering coursework.

**The specific courses for the Polymer Engineering Core Courses, Polymer Engineering electives, and Approved Engineering and Science Courses are listed under the College of Polymer Science and Polymer Engineering.

**Engineering Management Specialization**

This is an evening program which is intended primarily for practicing engineers who are working full-time and wish to upgrade their engineering and management skills.

<table>
<thead>
<tr>
<th>Engineering Courses</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Courses</td>
<td>15</td>
</tr>
<tr>
<td>Engineering Management Report</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
</tr>
</tbody>
</table>

**Required Courses (3 credit hours each)**

| 4100:697 | Engineering Management Report | 2 |
| 6200:601 | Financial Accounting | 1 |
| 6400:602 | Managerial Finance | 1 |
| 6500:600 | Management and Organizational Behavior | 1 |
| 6600:600 | Marketing Concepts | 1 |

**Elective**

Choose three credits of 600 level College of Business Administration courses.

---

1 Engineering courses can be taken from any engineering department with approval of engineering advisor.

2 The Engineering Management Report must be approved by the advisor and Advisory Committee. One member of the committee shall be from the College of Business Administration.

3 More advanced graduate business courses shall be required of students who have completed similar undergraduate courses. This determination shall be made by the Assistant Dean and Director of Graduate Programs, College of Business Administration.

4 6200:601 is a prerequisite for 6400:602.

---

College of Education

Mark D. Shermis, Ph.D., Dean
Sajit Zachariah, Ed.D., Associate Dean for Administration and Strategic Initiatives
Evonn N. Welton, Ph.D., Assistant Dean for Student Services

Mission Statement

The University of Akron’s College of Education is a community of professionals whose purpose is to provide leadership for community well-being through standard-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.

**Purpose**

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 and exercise science, athletic training for sports medicine, 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 those professional courses and other learning experiences which attempt to combine theory and practice.

The education program and courses presented in the 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. (330) 972-6970 or (330) 972-7750.

**DOCTOR OF PHILOSOPHY DEGREE**

The program leading to the Doctor of Philosophy degree in the Department of Curricular and Instructional Studies is offered through the College of Education.

Two degrees are offered, the Ph.D. in Elementary Education, and the Ph.D. in Secondary Education. The degree will be awarded to the student who, in addition to filling the general requirements of the Graduate School, has met the following specific requirements:

- Successful completion of all Departmental Admission Requirements.
- Completion of the Miller Analogies Test or the Graduate Record Examination (GRE).
- A minimum of 92 graduate credits including the doctoral dissertation. A student considered deficient in any area may be required to take additional courses.
- Completion of a foundation studies program designed to prepare the student before specialization.
- Successful completion of a test in a language judged not to be the student’s native tongue and excluding English:
  - a student in the Department of Curricular and Instructional Studies may elect to develop appropriate research skills prescribed by the advisor, subject to review by the department chair, in lieu of the foreign language requirement.
  (See section on Additional Research Competency.)
- Completion of a least six credits in cognate area.
- Completion of a comprehensive written and oral examination.
- Completion of a dissertation comprising not more than 20 credits. Credits beyond the 20 hours may not be applied to the degree. The oral examining committee must be constituted of at least five full-time graduate faculty members, one of whom must be from outside the College.
- Pass the general requirements for the Doctor Philosophy degree.

**Doctoral Residency Requirements**

The minimum residency requirement for a doctoral candidate in all programs is at least two consecutive semesters of full-time study and involvement in departmental activities. Full-time study is defined as 9-15 semester credits, except for graduate teaching and research assistants for whom full-time is specified by assistantship agreements. The summer session may count as one semester, provided that the candidate is enrolled for a maximum of 10 consecutive weeks of full-time study and for a minimum of six semester hours per five-week session.

**Selecting a Dissertation Chair**

The candidate’s dissertation chair must be from the Department of Curricular and
Instructonal Studies and have Category II graduate faculty status. If the candidate desires a co-chair for the dissertation, the co-chair may be from a University of Akron department or college other than Curricular and Instructional Studies and must also have Category II graduate faculty status.

Continuous Doctoral Program Enrollment
All students admitted to the doctoral program must register for a minimum of one semester hour of graduate credit as approved by their advisors during each fall and spring semester. Individual departments may exceed this minimum requirement. Doctoral students should consult their advisors about additional requirements.

Doctor of Philosophy Degree in the Department of Curricular and Instructional Studies
The Doctor of Philosophy degrees offered by the Department of Curricular and Instructional Studies are designed to meet the needs and interests of persons in pre-K, elementary, middle, secondary, postsecondary, higher education, and other institutions or agencies that might have educational/learning programs. A qualified student can, through consultation with an advisor and within the expertise and resources of the department, design a specialization to meet his/her career objectives.

Program Description
The program is predicated on the belief that an effective instructor evolves from a well-planned program containing exposure in three basic areas:
1. Common core foundational studies
2. A specialization
3. Professional education in Curricular and Instructional Studies
4. Other contributing disciplines (cognate)

With this philosophy in mind, the program provides study in a common core of study, a selected discipline, professional education, and cognate fields. Listed below and of particular significance are the two sequential steps necessary in the program:

1. Written and Oral Comprehensive

These Comprehensive Examinations should be taken after the completion of the first two-thirds of work and prior to the completion of three-fourths of the program with the approval of the student's advisor. Written comprehensive examinations are offered each semester.

2. Dissertation

The dissertation proposal must receive approval of the Dissertation Committee prior to advancement to candidacy.

Admission Requirements
Admission to the Curricular and Instructional Studies Ph.D. program is limited to a select number of students each year. More candidates apply for admission than the Department has the resources and capacity to admit. Therefore, applying for admission to the doctoral program is no guarantee of admission, and applicants to the program must recognize the possibility of denial. Criteria for admission to the Curricular and Instructional Studies Ph.D. program are as follows:

1. Graduate and undergraduate degrees from accredited universities and in programs considered to offer adequate preparation for the Ph.D. in Curricular and Instructional Studies (Ph.D., Elementary Education; Ph.D., Secondary Education)
2. Acceptable grade point averages in completed graduate work (at least a 3.50 GPA on a scale of 4.0).
3. Demonstration of doctoral level writing ability as evidenced by a Miller Analogies Test score of 399 or higher, (or a 550 on the verbal portion of the GRE), and a prescribed and evaluated writing sample.
4. Controlled departmental writing sample assignment. This requirement will be administered after the March 1 and October 1 admission deadlines. Consult the Department of Curricular and Instructional Studies Office for specific test date.
5. Completion of application to Graduate School that includes:
   a. Current vita
   b. Three letters of academic reference
   c. Official transcripts
   d. Agreement to Advise form
   e. Letter of Intent/Statement of Purpose

Conditions for Admission:
1. All doctoral applicants must take the Miller Analogies Test or Graduate Record Exam. Scores more than five years old will not be accepted for evaluation of the doctoral application.
2. After March 31 (for Fall admission) or October 31 (for Spring admission) all candidates will be asked to schedule a twenty minute interview with the Doctoral Committee of the Department of Curricular and Instructional Studies. Candidates may also be judged on depth and breadth of knowledge, poise, thinking ability, ability to communicate verbally, relevant educational work experience, uniqueness, potential success in desired field, and motivation and commitment to a position of educational leadership. The opportunity to interview is no guarantee of admission.
3. The Letter of Intent/Statement of Purpose should indicate career goals and research interest and must be compatible with departmental resources and goals.
4. Candidates are responsible for obtaining faculty sponsors to complete the Agreement to Advise form.
5. Applicants who score less than 399 on the MAT or 550 on the verbal portion of the GRE, do not successfully complete the controlled writing sample, and do not meet the GPA requirement will not be admitted to the doctoral program.
6. In certain cases an applicant may be required to take course work on the graduate level at The University of Akron before a final decision on his/her application for admission is made.
7. Candidates must have at least three years of teaching experience. (This does not apply to postsecondary/technical adult education area candidates.)

Additional Research Competency
In addition to successfully completing the approved program of courses, the Ph.D. student must display competency in one of the following areas. Course work taken to develop the competency may not be applied to the total number of hours required in the Ph.D. program.

a. Foreign Language
   A reading knowledge of one foreign language. The Department will work cooperatively with the Department of Modern Languages to determine that the student does in fact demonstrate the ability to read in a foreign language i.e., a language other than the student’s native language and excluding English.

b. Statistics/Research Methods
   Preparation of a research or position paper accepted for publication by a refereed professional journal. The student may serve as senior or co-author. The advisor must file a letter of approval of the published writing. This letter shall present the advisor’s review of the academic integrity of the published article in terms of adequacy in meeting this requirement. A letter of acceptance for publication shall be considered as published.

c. Professional Publication
   The preparation of a research or position paper accepted for publication by a refereed professional journal. The student may serve as senior or co-author. The advisor must file a letter of approval of the published writing. This letter shall present the advisor’s review of the academic integrity of the published article in terms of adequacy in meeting this requirement. A letter of acceptance for publication shall be considered as published.

Curricular and Instructional Studies Ph.D. Course Requirements
Social-Philosophical Foundations (15)
5100:600 Philosophy of Education (or 602 or 604) 3
5100:620 Psychology of Instruction for Teaching and Learning (or 624 or 5400:500) 3
5100:701 History of Education in American Society (or 703) 3
5100:705 Seminar in Social/Philosophical Foundations of Education 3
5100:723 Teaching Behavior and Instruction (or 721 or 718) 3

Research Foundations (18)
5100:640 Techniques of Research 3
5100:730 Research Design 3
5100:741 Data Collection Methods 3
5100:742 Statistics in Education 3
5100:744 Qualitative Methods I 3
5100:745 Qualitative Methods II 3
5100:801 Seminar: Exploratory/Qualitative 3
5100:801 Seminar: Empirical or Seminar II: Ethnographic/Historical or Case Study Research or Legal Research and Writing or another advisor-approved course

Curricular and Instructional Studies Core (15)
5500:800 Professional Doctoral Seminar in Curricular and Instructional Studies 3
5500:880 Seminar in Curricular and Instructional Studies 3
5500:600 Concepts of Curriculum & Instruction (or 5400:xxx) 3
5500:605 Seminar in Trends and Issues in Curriculum & Instruction (or 5400:xxx) 3

Three additional hours will be selected in the area of Curricular and Instructional Studies with advisor approval.

Area of Specialization: 18 credit hours
Cognate Area Outside of Education: 6 credit hours
Dissertation: 20 credit hours
Total Program: 92 credit hours

Additional coursework taken to develop a competency area may not be applied to the total number of hours required in the Ph.D. program.
Ph.D. in Counselor Education and Supervision

The doctoral program in Counselor Education and Supervision is designed for students who hold a master’s degree in counseling or a related field. The program has two tracks: (a) Counselor Education and Supervision, and (b) Marriage and Family Counseling/Therapy. Students in each track are expected to attain advanced level competencies in the core areas of their track, research, and internship experiences. Each track requires completion of a dissertation. With the proper selection of courses, graduates of the CES track can meet the requirements for licensure in Ohio as a Professional Clinical Counselor. With the proper selection of courses, graduates of the MFT track can meet the requirements for licensure in Ohio as a Professional Clinical Counselor, Marriage and Family Therapist, Clinical, Master’s-level Marriage and Family Therapist, or Licensed Professional Clinical Counselor.

Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600:715</td>
<td>Research Design in Counseling I</td>
<td>3</td>
</tr>
<tr>
<td>5600:717</td>
<td>Issues of Diversity in Counseling Psychology</td>
<td>4</td>
</tr>
<tr>
<td>5600:718</td>
<td>History and Systems in Psychology</td>
<td>2</td>
</tr>
<tr>
<td>5600:796</td>
<td>Counseling Psychology Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>5600:796</td>
<td>Counseling Psychology Practicum II</td>
<td>4</td>
</tr>
<tr>
<td>3750/5600</td>
<td>Required Electives</td>
<td>8</td>
</tr>
<tr>
<td>5600:899</td>
<td>Doctoral Dissertation (minimum)</td>
<td>15</td>
</tr>
<tr>
<td>5600:999</td>
<td>Language Requirement</td>
<td>8</td>
</tr>
<tr>
<td>5600:999</td>
<td>Minimum Total Credit Hours Required</td>
<td>114</td>
</tr>
</tbody>
</table>

Students register for dual listed courses (3750/5600) under their home department code.

The comprehensive written examination is prepared, administered, and graded by program faculty. At least one core Counseling Psychology faculty member from each department is required to participate in the oral portion of the comprehensive examination. At least one core Counseling Psychology faculty member from each department is required to participate on the student’s dissertation committee.

Internship sites must be approved by the Collaborative Program Internship Committee. Internships must include 2,000 post-master’s hours and be completed in less than two years.

Ph.D. in Counseling Education and Supervision

Students must have a master’s degree in counseling or a related field. The program has a choice of entry points. Students with a master’s degree in counseling, guidance and counseling, school psychology, or a related field may enter through the Counseling Department of the College of Education. Students with a baccalaureate degree may enter through the Psychology Department of the Buchtel College of Arts and Sciences. Students receive exposure to both colleges through shared coursework and faculty involvement with dissertations. Students of both backgrounds are expected to attain a level of broad scientific competence in the core areas of psychology; the biological, social, cognitive-affective, and individual bases of human behavior; Practicum and internship experiences are required of all students and range from skill building in basic psychological assessment and counseling to a year-long, full-time internship in an applied setting. The Collaborative Program in Counseling Psychology is accredited by the American Psychological Association.

The Department of Counseling offers a four-year, full-time Counseling Psychology program leading to a doctoral degree. Program emphasis is strongly placed on a scientist-practitioner model of training. Beyond the basic core areas of psychology students are expected to establish specific competencies in theory, research, and practice of Counseling Psychology. Academic preparation incorporates the study of theoretical approaches to counseling and psychotherapy, theory and practice of assessment, diversity issues in counseling psychology, supervision, vocational psychology, professional issues and ethics, statistics, and research design. Research and publication are strongly encouraged. Graduates typically seek teaching, research, and training positions in academia, as well as positions in counseling centers and other mental health agencies.

Admission to the Collaborative Program in Counseling Psychology is handled through the department associated with the student’s chosen entry point. Students must fulfill both departmental and Graduate School admission requirements.

Admission Requirements—College of Education Ph.D.

- A Graduate School application and an official transcript of all undergraduate and graduate coursework from each college or university attended must be completed and returned to the Graduate School
- A minimum combined score on the Graduate Record Examination (GRE) General Test (verbal and quantitative sections) of 1100 is recommended. All students must also complete the GRE Psychology Subject Test and have these results reported to the Graduate School. Applicants are required to submit a declaration of intent outlining their occupational goals and their interest in and commitment to the counseling psychology program.
- A grade point average of 2.75 or above earned on all completed undergraduate work or a 3.0 or above on the most recent 64 semester hours of undergraduate work is required. A grade point average of 3.25 or above on all graduate work is required.
- Applicants are required to submit a vita outlining educational and professional experiences.
- Applicants are required to submit a declaration of intent outlining their occupational goals and their interest in and commitment to the counseling psychology field.
- Applicants must submit a minimum of three letters of reference attesting to success in the field and probable academic success at the doctoral level.
- Finalists are required to interview with program faculty, either in person or via telephone.

Departures from the program may be made only with the approval of the counseling psychology program faculty. Students may be considered for admission to counseling psychology only if they have earned a master’s degree in counseling, guidance and counseling, psychology, school psychology, or a related field.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100:648</td>
<td>Individual and Family Life-Span Development</td>
<td>3</td>
</tr>
<tr>
<td>5100:742</td>
<td>Statistics in Education</td>
<td>3</td>
</tr>
<tr>
<td>5100:743</td>
<td>Advanced Educational Statistics</td>
<td>3</td>
</tr>
<tr>
<td>5600:651</td>
<td>Techniques of Counseling</td>
<td>3</td>
</tr>
<tr>
<td>5600:675/676</td>
<td>Practicum in Counseling</td>
<td>8</td>
</tr>
<tr>
<td>3750:610</td>
<td>Core I: Social Psychology</td>
<td>2</td>
</tr>
<tr>
<td>3750:620</td>
<td>Core II: Cognitive Psychology</td>
<td>2</td>
</tr>
<tr>
<td>3750:630</td>
<td>Core III: Individual Differences</td>
<td>2</td>
</tr>
<tr>
<td>3750:640</td>
<td>Core IV: Biopsychology</td>
<td>2</td>
</tr>
<tr>
<td>3750:650</td>
<td>Core V: Social-Cognitive Psychology</td>
<td>2</td>
</tr>
<tr>
<td>3750:750</td>
<td>Advanced Psychological Test and Measures</td>
<td>2</td>
</tr>
<tr>
<td>5600:702</td>
<td>Advanced Counseling Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>5600:702</td>
<td>Advanced Counseling Practicum II</td>
<td>4</td>
</tr>
<tr>
<td>5600:702</td>
<td>Supervision in Counseling Psychology</td>
<td>4</td>
</tr>
<tr>
<td>5600:709</td>
<td>Introduction to Counseling Psychology</td>
<td>2</td>
</tr>
<tr>
<td>5600:710</td>
<td>Theories of Counseling and Psychotherapy</td>
<td>4</td>
</tr>
<tr>
<td>5600:711</td>
<td>Vocational Behavior</td>
<td>4</td>
</tr>
<tr>
<td>5600:712</td>
<td>Principles and Practice of Intelligence Testing</td>
<td>4</td>
</tr>
<tr>
<td>5600:713</td>
<td>Professional, Ethical and Legal Issues in Counseling Psychology</td>
<td>4</td>
</tr>
<tr>
<td>5600:714</td>
<td>Objective Personality Evaluation</td>
<td>4</td>
</tr>
</tbody>
</table>

Minimum Total Credit Hours Required: 114
Master's Degree Coursework: Students must have completed entry-level course work in all the following areas before beginning doctoral program course work:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600:643</td>
<td>Counseling Theory (Individual)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>5600:655</td>
<td>Marriage and Family Theory and Techniques</td>
</tr>
<tr>
<td>5600:645</td>
<td>Assessment</td>
<td>4</td>
</tr>
<tr>
<td>5600:647</td>
<td>Career Counseling</td>
<td>3</td>
</tr>
<tr>
<td>5600:651</td>
<td>Techniques of Counseling</td>
<td>3</td>
</tr>
<tr>
<td>5600:653</td>
<td>Group Counseling</td>
<td>4</td>
</tr>
<tr>
<td>5100:640</td>
<td>Techniques of Research</td>
<td>3</td>
</tr>
<tr>
<td>5600:646</td>
<td>Multicultural Counseling</td>
<td>3</td>
</tr>
<tr>
<td>5600:648</td>
<td>Individual and Family Development</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>5600:664</td>
<td>DSM-IV</td>
</tr>
</tbody>
</table>

Foundation course in Community, School, or Marriage and Family Counseling

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600:675</td>
<td>Counseling Practicum (Community, School, or MFT)</td>
<td>5</td>
</tr>
<tr>
<td>5600:685</td>
<td>Counseling Internship (Community, School, or MFT)</td>
<td>3</td>
</tr>
<tr>
<td>5600:690</td>
<td>Counseling Children (Counselor Education Program only)</td>
<td>3</td>
</tr>
</tbody>
</table>

Marriage and Family Program only - Students must have completed standard curriculum approved by AAMFT

A minimum of 60 semester hours of the total 120 hours must be taken after the student is admitted into the doctoral program in Counselor Education and Supervision. For further program details and specific admission requirements, contact the Department of Counseling.

**DOCTORATE IN EDUCATIONAL LEADERSHIP**

The Department of Educational Foundations and Leadership bears a special responsibility for preparing P-16 leaders to the degree that its graduates have unique opportunities to shape organizational goals, to influence the character of educational programs, and to affect institutional performance. The department’s programs are based on the strengths of the total College and University. Professional knowledge and skills of administration are developed as they relate to larger issues of P-16 educational policy and purpose.

**Admission Requirements**

- Letter of application to include the nature of the applicant’s interest in the program and future career goals
- GRE: Total preferred score over 1000 (must have been taken within the past five years)
- Official transcripts: undergraduate, masters, certificate/licensure programs, and any previous doctoral study
- 3.25 GPA - masters
- Current curriculum vita/resume
- Three letters of reference addressing the applicant’s organizational, research, and communication skills

Applicants who make the first cut, based on review of the application package above, will be invited to campus to provide the following:
- Structured interview
- Proctored writing sample

**Program Requirements**

**Behavioral, Historical, and Social-Philosophical Studies (12)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100:701</td>
<td>History of Education in American Society</td>
<td>3</td>
</tr>
<tr>
<td>5100:703</td>
<td>History and Philosophy of Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>5100:705</td>
<td>Seminar: Social-Philosophical Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>5100:710</td>
<td>Adult Learning, Development and Motivation</td>
<td>3</td>
</tr>
<tr>
<td>5100:721</td>
<td>Learning Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Research (22)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5170:899</td>
<td>Doctoral Dissertation (student must take at least 10 semester dissertation hours but may count up to 20 toward the degree)</td>
<td>10</td>
</tr>
</tbody>
</table>

Students will select any combination of the following research courses for a minimum of 12 semester hours depending upon their research interests and career goals.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100:340</td>
<td>Research Design</td>
<td>3</td>
</tr>
<tr>
<td>5100:341</td>
<td>Data Collection Methods</td>
<td>3</td>
</tr>
<tr>
<td>5100:342</td>
<td>Statistics in Education</td>
<td>3</td>
</tr>
<tr>
<td>5100:343</td>
<td>Advanced Educational Statistics</td>
<td>3</td>
</tr>
<tr>
<td>5100:801</td>
<td>Research Seminar: Exploratory/Qualitative</td>
<td>3</td>
</tr>
<tr>
<td>5100:807</td>
<td>Research Seminar: Ethnographic/Historical</td>
<td>3</td>
</tr>
<tr>
<td>5100:808</td>
<td>Research Seminar: Case Study Research</td>
<td>3</td>
</tr>
<tr>
<td>5100:809</td>
<td>Research Seminar: Legal Research and Writing</td>
<td>3</td>
</tr>
<tr>
<td>5100:810</td>
<td>Research Seminar: Empirical Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

**Educational Administration (35)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5170:704</td>
<td>Advanced Study in Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>5170:706</td>
<td>Decision Making in Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>5170:708</td>
<td>Economics in Education</td>
<td>3</td>
</tr>
<tr>
<td>5170:716</td>
<td>Advanced Evaluation of Educational Organizations</td>
<td>3</td>
</tr>
<tr>
<td>5170:730</td>
<td>Residency Seminar</td>
<td>3</td>
</tr>
<tr>
<td>5170:732</td>
<td>Public and Media Relations in Educational Organizations</td>
<td>3</td>
</tr>
<tr>
<td>5170:735</td>
<td>Seminar: Urban Educational Issues</td>
<td>3</td>
</tr>
<tr>
<td>5170:746</td>
<td>Politics of Education</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Advanced Educational Law</td>
<td>3</td>
</tr>
<tr>
<td>5170:747</td>
<td>Topical Seminar (two enrollments of three credits each)</td>
<td>6</td>
</tr>
<tr>
<td>or</td>
<td>Doctoral Internship</td>
<td>5</td>
</tr>
</tbody>
</table>

**Cognate (12)**

(Must be graduate level coursework outside the field of education. Advisor approval required)

**General Electives (9)**

**Total Program: 90**

**MASTER’S DEGREE**

Programs leading to the degree of M.A. in education and M.S. in education.

The student who expects to earn the master’s degree for advancement in the field of teaching must meet the general requirements for admission to the Graduate School and must be qualified to hold a standard teaching license. Exceptions to this latter requirement will be made for the qualified student who does not wish to teach or perform duties in the public schools provided the student presents or acquires an appropriate background of study or experience. The student who expects to earn the master’s degree in guidance and administration also should have had successful teaching experience. A physical examination may be required if and when indicated. Any student who exhibits a deficiency in English or other skills may be required to correct it before recommendation for an advanced degree. The student must receive a pass grade on the relevant Master’s Comprehensive Exam if required.

No more than six credits of workshops or institutes can be used to satisfy degree requirements.

The student must complete a minimum of nine credits in foundation studies in education.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100:600</td>
<td>Philosophies of Education</td>
<td>3</td>
</tr>
<tr>
<td>5100:602</td>
<td>Comparative and International Education</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Topical Seminar in the Cultural Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Psychology of Instruction for Teaching and Learning</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Seminar: Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Techniques of Research</td>
<td>3</td>
</tr>
</tbody>
</table>

*Students in some counseling programs may choose other options – see advisor.

**Counseling**

Admissions to the master’s programs will be twice a year (application deadline of March 15 for summer and fall semesters and October 1 for spring semester)

The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation (CORPA), has conferred accreditation on the Community, Marriage and Family, and School Counseling programs. In addition, the Marriage and Family Counseling/Therapy program is accredited by the Commission on Accreditation for Marriage and Family Therapy Education of the American Associate of Marriage and Family Therapy.

**Classroom Guidance for Teachers**

This course of study leads to an expanded knowledge of how guidance and counseling services benefit students and others in public school settings. Note that numerous areas of concentration are available to students. This is not a licensure program. Any changes in the agreed-upon program must be approved by the student’s advisor.

- Foundations Courses (Select one course from each area)
  - Behavioral Foundations
    | Course Code | Course Title                                      | Credits |
    |-------------|--------------------------------------------------|---------|
    | 5100:620    | Psychology of Instruction for Teaching and Learning | 3       |
    | or          | Seminar: Educational Psychology                   | 3       |
    | 5100:648    | Individual and Family Development Across the Lifespan | 3       |
  - Humanistic Foundations
    | Course Code | Course Title                                      | Credits |
    |-------------|--------------------------------------------------|---------|
    | 5100:600    | Philosophies of Education                         | 3       |
    | or          | Topical Seminar in the Cultural Foundations of Education | 3       |
    | or          | Multicultural Counseling                          | 3       |
  - Research
    | Course Code | Course Title                                      | Credits |
    |-------------|--------------------------------------------------|---------|
    | 5100:640    | Techniques of Research                           | 3       |
  - Minimum Foundation Hours Required
    | Course Code | Course Title                                      | Credits |
    |-------------|--------------------------------------------------|---------|
    Minimum Foundation Hours Required | 9 |

**Graduate Studies**

47
Community Counseling

The course of study leads to eventual employment in community mental health centers and a wide variety of other community mental health settings. Note that a counselor license is usually required by most agencies. (Check counselor license elsewhere in this handbook.) Any changes in the agreed upon program must be approved by the student’s advisor.

- **Foundations Courses**
  - 5600:648 Individual and Family Development 3
  - 5600:646 Multicultural Counseling 3
  - 5610:640 Techniques of Research 3
  - Subtotal 9

- **Required Counseling Core Courses**
  - 5600:600 Seminar in Counseling 1
  - 5600:635 Community Counseling 3
  - 5600:643 Counseling Skills & Philosophy 3
  - 5600:647 Career Development and Counseling Across the Lifespan 3
  - 5600:645 Tests and Appraisal in Counseling (prerequisite: 5600:640) 4
  - 5600:651 Techniques of Counseling 3
  - 5600:653 Group Counseling (prerequisites 5600:651 and 5600:643) 4
  - 5600:675 Practicum in Counseling** 5
  - 5600:685 Internship in Counseling I (prerequisite 5600:675) 6
  - Subtotal 32

- **Specialized Studies**
  - 5600:620 Issues in Sexuality for Counselors 3
  - 5600:732 Addiction Counseling I: Theory and Assessment 3

- **Clinical Counseling Component**
  - 5600:662 Personality and Abnormal Behavior 3
  - 5600:714 Objective Personality Evaluation 4
  - 5600:664 DSM-V 3
  - 5600:666 Treatment in Clinical Counseling 3
  - Also, choose one of the following three courses:
    - 5600:621 Counseling Youth at Risk 3
    - 5600:622 Play Therapy 3
    - 5600:655 Marriage and Family Therapy: Theory and Techniques 3
    - 5600:660 Counseling Children 3
    - 5600:734 Addiction Counseling II: Treatment Planning and Intervention Strategies 3

 Minimum Total Hours Required for Program 60

*Must be taken during first or second semester.
†Must sign up with Secretary during first semester of enrollment.
‡Must sign up with Internship Coordinator no later than second week of term preceding internship.
§Practicum and Internship require closed class permission. You must request one from the Department prior to registering.

School Counseling

This course of study leads to eventual licensure as a school counselor in the State of Ohio. Any changes in the agreed upon program must be approved by the student’s advisor.

**Admission Requirements:**

For those with a teaching license and two years teaching experience:

- 2.75 undergraduate grade point average
minimum of 500 client contact hours must be completed to graduate from the program. Additionally, complete the following listed certification/professional course requirements:

- Professional requirements:
  - 5600:696 Field Experience 2
  - 5600:675 Practicum in Counseling* (register for MFC/T section) 5
    - (Prerequisites: 5600:623, 643, 645, 651, 653, 655, 656, 664, 667, 669, 695)
  - 5600:685 Internship 6
    - (Minimum of two semesters immediately following 5600:675, register for MFC/T section)

Minimum Hours for Marriage and Family Therapy Degree Completion 63**

*Sign up for Practicum at least one year in advance - space is limited. Sign up with Secretary.

**A minimum of 500 client contact hours must be completed to graduate from the program. Students must receive a pass grade on the Master's Comprehensive Examination. A maximum of six credits of workshop can be used to satisfy degree requirements.

School Psychologist*
(admissions temporarily suspended)

- College requirements:
  - 5100:640 Techniques of Research 3
  - 5620:694 Research Project 2
  - 5620:698 Master's Problem 2-4
  - 5620:699 Master's Thesis 4-6

- Departmental requirements:
  - 5600:643 Counseling: Theory and Philosophy 3

Program requirements:
- 3750:530 Psychological Disorders of Childhood 4
- 3750:700 Survey of Projective Techniques 4
- 3750:712 Principles and Practice of Individual Intelligence Testing 4
- 5100:604 Topical Seminar in the Cultural Foundations of Education 3
- 5100:624 Seminar in Human Learning 3
- 5100:741 Statistics in Education 3
- 5620:600 Seminar: Role and Function of School Psychology 3
- 5620:602 Behavioral Assessment 3
- 5620:610 Educational Diagnosis for the School Psychologist 4

Sixth-Year School Psychology Master's Degree and Certification Program

- Foundations requirements:
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3
  - 5100:741 Statistics in Education 3

- Professional requirements:
  - 3750:700 Survey of Projective Techniques 4
  - 3750:530 Psychological Disorders of Childhood 4
  - 3750:712 Principles and Practice of Individual Intelligence Testing 4
  - 5600:643 Counseling: Theory and Philosophy 3
  - 5620:600 Seminar: Role and Function of School Psychology 3
  - 5620:602 Behavioral Assessment 3
  - 5620:610 Educational Diagnosis for the School Psychologist 4
  - 5620:694 Research Project in Special Area 2-3
  - 5620:698 Master's Problem 2-4
  - 5620:699 Master's Thesis 4-6

The student completing the master's program who desires Ohio certification must additionally complete the following listed certification/professional course requirements, including the full academic year internship experience:

- 3750:500 Personality 4**
- 5610:543 Developmental Characteristics of Learning Disabled Individuals 3
- 6500:626 Reading Diagnosis for School Psychologists and Support Personnel 3
- 5610:540 Developmental Characteristics of Exceptional Individuals 3**
- 3750:520 Abnormal Psychology 3**

5620:603 Consultation Strategies for School Psychology 3
5620:611 Practicum in School Psychology 4

The nine-month, full-time internship, and the associated seminars entail the following registration:

- 5620:630 Internship: School Psychology 3
- 5620:631 Internship: School Psychology 3
- 5620:640 Field Seminar I: Professional Topics/Issues in School Psychology 3
- 5620:641 Field Seminar II: Low Incidence/Related Inquiries 3

The student who does not hold a valid Ohio teaching certificate must additionally complete the following course pattern:

5200:630 Elementary School Curriculum and Instruction 2
5200:690/696 Field Experience: Master's 3
5700:631 Elementary School Administration 3
5170:601 Principles of Educational Administration 3

Curricular and Instructional Studies

Elementary Education (M.A.)

This program leading to a Master of Arts in Elementary Education is for elementary school teachers. Students complete foundations courses in education and in curriculum and instruction, and an area of concentration such as reading, multicultural, middle, or elementary education.

- Educational Foundations – 9 credits
  - 5100:600 Philosophies of Education 3
  - 5100:624 Seminar in Educational Psychology 3
  - 5100:640 Techniques of Research 3

- Curricular and Instructional – 6 credits
  - 5500:600 Concepts of Curriculum and Instruction 3
  - 5500:605 Seminar in Trends and Issues in Curriculum and Instruction 3
  - 5500:66x or a course that cuts across curriculum and instruction (as approved by advisor) 3

- Area of Concentration – 15 credits (within curriculum and instruction as approved by the advisor)

- Master's Project/Thesis Options - 6 credits

  Option 1:
  - 5500:690 Master's Research 3
  - 5500:760 Action Research 3
  - 5500:666 Master's Project (with advisor’s permission) 6
  - 5500:699 Master's Thesis (with advisor’s permission) 6

A comprehensive exam is required.

Minimum credit hours required: 36

Elementary Education with Literacy Option (M.A.)

This program leading to a Master of Arts in Elementary Education is for elementary school teachers. Students complete foundations courses in education and in curriculum and instruction, and an area of concentration in literacy education.

- Educational Foundations – 9 credits
  - 5100:600 Philosophies of Education 3
  - 5100:624 Seminar in Educational Psychology 3
  - 5100:640 Techniques of Research 3

- Curricular and Instructional Studies – 6 credits
  - 5500:600 Concepts of Curriculum and Instruction 3
  - 5500:625 Contemporary Issues in Literacy Instruction and Phonics 3

Program admission is competitive, based upon state internship allocations. Selection procedures and criteria are available upon request by calling the school psychology program director in the Department of Counseling and Special Education. For recommendation for certification as a school psychologist in Ohio, the master’s student must additionally complete the program described under “Certification.”

**Required as part of Special Education master’s.

*Special cohort master’s programs may be created to reflect the immediate needs of a cohort group. Such programs will encompass a 30-36 hour requirement.
### Master's Project/Thesis Options - 6 credits

| Option 1: | 5500:690 | Master's Research | 3 |
| Option 2: | 5500:696 | Master's Project (with advisor's permission) | 6 |
| Option 3: | 5500:699 | Master's Thesis (with advisor's permission) | 6 |

Minimum credit hours required: 36-42

### Elementary Education with Licensure (M.S.) (admissions temporarily suspended)

This program is open to highly qualified students who hold the B.A. or B.S. degree in certain fields (see program advisor or department chair). All requirements for certification must be met including the field and clinical/diagnostic experience.

- **Educational Foundations – 10 credits:**
  - 5100:600 Philosophies of Education
    - or
  - 5100:604 Topical Seminar in the Cultural Foundations of Education
  - 5100:620 Psychology of Instruction for Teaching and Learning
  - 5100:642 Topical Seminar in Measurement and Evaluation
  - 5100:695 Field Experience: Master's (Section 001)

- **Curricular and Instructional Studies – 11 credits:**
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies
  - 5500:630 Field Experience (Section 011)
  - 5500:657 Instructional Technology Applications
  - 5500:618 Advanced Instructional Techniques
  - 5500:695 Field Experience (Section 021)

- **Field Experience (Student Teaching) – 11 credits:**
  - 5500:696 Field Experience: Master's (Section 005)
  - 5500:695 Field Experience: Master's (Section 031)

Total Program: 32 credits

A minimum of 29 additional undergraduate credits will be required for licensure. A comprehensive exam is required. See Department of Curricular and Instructional Studies for complete list of requirements.

### Secondary Education (M.A.)

This program leading to a Master of Arts in Secondary Education is for secondary school teachers. Students complete foundation courses in education and in curriculum and instruction, and an area of concentration in literacy education.

- **Educational Foundations – 9 credits:**
  - 5100:600 Philosophies of Education
  - 5100:624 Seminar: Educational Psychology
  - 5100:640 Techniques of Research

- **Curricular and Instructional Studies – 11 credits:**
  - 5500:600 Concepts of Curriculum and Instruction
  - 5500:601 Seminar: Trends in Curriculum and Instruction
  - 5500:6xx acourse that cuts across curriculum and instruction (as approved by advisor)

- **Area of Concentration – 15 credits** (within curriculum and instruction as approved by the advisor)

- **Master's Project/Thesis Options - 6 credits**

| Option 1: | 5500:690 | Master's Research | 3 |
| Option 2: | 5500:696 | Master's Project (with advisor's permission) | 6 |

A comprehensive exam is required.

### Secondary Education with Literacy Option (M.A.)

This program leading to a Master of Arts in Secondary Education is for secondary school teachers. Students complete foundation courses in education and in curriculum and instruction, and an area of concentration in literacy education.

- **Educational Foundations – 9 credits:**
  - 5100:600 Philosophies of Education
  - 5100:624 Seminar: Educational Psychology
  - 5100:640 Techniques of Research

- **Curricular and Instructional Studies – 10 credits:**
  - 5500:600 Concepts of Curriculum and Instruction
  - 5500:625 Contemporary Issues in Literacy Instruction and Phonics

- **Area of Concentration/Reading – 15 credits**: (Reading Endorsement requires 18 credit hours in reading and passage of Praxis II: Introduction to the Teaching of Reading (10200).

- **Curricular and Instructional Studies/Special Education core: (15 credits)**
  - 5610:601 Seminar: Trends in Curriculum and Instruction
  - 5610:6xx acourse that cuts across curriculum and instruction (as approved by advisor)

- **Field Experience (Student Teaching) – 11 credits:**
  - 5500:696 Field Experience: Master's (Section 005)
  - 5500:695 Field Experience: Master's (Section 031)

Total Program: 32 credits

A minimum of 29 additional undergraduate credits will be required for licensure. A comprehensive exam is required. See Department of Curricular and Instructional Studies for complete list of requirements.

### Special Education (M.A.)

The 30-33 hour graduate program in special education is designed for those individuals who currently hold an undergraduate degree and Intervention Specialist licensure. The program is divided into three options. The first option (Option I) is for individuals seeking only a Masters in Special Education. The second option (Option II) contains coursework providing focus on Pervasive Developmental Disabilities/Autism. The third option (Option III) provides specific coursework designed to focus on providing behavioral support in the school setting. Completion of the Master's of Arts program does not lead to licensure in special education.

- **Educational Foundations core (9 credits):**
  - 5100:600 Philosophies of Education
  - 5100:624 Seminar: Educational Psychology
  - 5100:640 Techniques of Research

- **Curricular and Instructional Studies/Special Education core: (15 credits)**
  - 5610:604 Collaboration and Consultation Skills for Special Educators
  - 5610:605 Inclusion Models and Strategies
  - 5610:611 Seminar: Legal Issues in Special Education
  - 5610:612 Seminar: Social/Ethical Issues in Special Education
  - 5610:698 Master's Project

A comprehensive exam is required.

- **Option I: Master's in Special Education (6 credits):**
  - 5610:601 Seminar in Curriculum Planning
  - 5610:602 Supervision in Special Education

Minimum Credit Hours Required: 30

- **Option II: Master's with focus on Pervasive Developmental Disabilities/Autism (9 credits):**
  - 5610:607 Characteristics and Needs of Individuals Demonstrating PDD

*Special cohort master’s programs may be created to reflect the immediate needs of a cohort group. Such programs will encompass a 30-36 hour requirement.*
Graduate Studies 51

Teacher Education Program

The central theme of The University of Akron’s Teacher Education Program is “Educator as Decision Maker.” This was chosen because the complexity of teaching is increasing and the professional knowledge base is growing. 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/NTASC (Interstate New Teacher Assessment and Support Consortium) Standards, the Ohio Standards for the Teaching Profession, Specialized Professional Association Standards, and the Praxis Pathways 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 please consult the College of Education Office of Student Services at (330) 972-6970.

Program

• Educational Foundations Courses (10 credits):
  All are required unless waived at the time of admission. Foundation courses may not be used as option or elective courses.
  5100:604 Topical Seminar in The Cultural Foundations of Education 3
  5100:620 Psychology of Instruction for Teaching and Learning 3
  5100:642 Topical Seminar in Measurement and Evaluation 3
  5100:695 Field Experience: Master’s (taken in conjunction with 5100:620) 1

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Social Studies Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Language Arts Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium (section 031) 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Mathematics Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium (section 031) 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Social Studies Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium (section 031) 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Language Arts Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium (section 031) 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Integrated Mathematics Licensure

• Educational Foundations Courses (10 credits)
• Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:629 Reading Programs in Secondary Schools 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2
• Area of Concentration (9):
  Select 9 credits at 500-level or above.
• Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Field Experience: Colloquium (section 031) 1
• A comprehensive examination is required.
  Minimum credits required for degree: 47
Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Life Sciences Licensure

- Educational Foundations Courses (10 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Curricular and Instructional Studies (19 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Area of Concentration (9 credits): Select 9 credits at 500-level or above.

- Field Experience (Student Teaching) (9 credits):
  - 5500:694 Field Experience: Classroom Instruction (section 006) (c)
  - 5500:692 Field Experience: Colloquium (section 031)

- A comprehensive examination is required.

Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Physics Licensure

- Educational Foundations Courses (10 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Curricular and Instructional Studies (19 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Area of Concentration (9 credits): Select 9 credits at 500-level or above.

- Field Experience (Student Teaching) (9 credits):
  - 5500:694 Field Experience: Classroom Instruction (section 006) (c)
  - 5500:692 Field Experience: Colloquium (section 031)

- A comprehensive examination is required.

Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Chemistry Licensure

- Educational Foundations Courses (10 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Curricular and Instructional Studies (19 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Area of Concentration (9): Select 3 credits at 500-level or above in teaching field or chemistry

- Field Experience (Student Teaching) (9 credits):
  - 5500:694 Field Experience: Classroom Instruction (section 006) (c)
  - 5500:692 Field Experience: Colloquium (section 031)

- A comprehensive examination is required.

Minimum credits required for degree: 47

Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Physical Science (Chemistry and Physics) Licensure

- Educational Foundations Courses (10 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Curricular and Instructional Studies (19 credits):
  - 5500:575 Instructional Technology Applications
  - 5500:617 Licensure Seminar in Curricular and Instructional Studies (a)
  - 5500:520 Advanced Instructional Techniques (taken in conjunction with 5500:693-021) (b)
  - 5500:693 Field Experience: Master’s with Licensure (section 021)
  - 5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011)
  - 5500:693 Field Experience: Master’s with Licensure (section 011)
  - 5500:629 Reading Programs in Secondary Schools
  - 5500:xxx Elective in curriculum or teaching practices approved by advisor

- Area of Concentration (9): Select 3 credits at 500-level or above in teaching field or physics

- Field Experience (Student Teaching) (9 credits):
  - 5500:694 Field Experience: Classroom Instruction (section 006) (c)
  - 5500:692 Field Experience: Colloquium (section 031)

- A comprehensive examination is required.

Minimum credits required for degree: 47
5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
5500:693  Field Experience: Master’s with Licensure (section 021)  (c) 1
5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
5500:693  Field Experience: Master’s with Licensure (section 011)  1
5500:629  Reading Programs in Secondary Schools  3
5500:xxx  Elective in curriculum or teaching practices approved by advisor  2

- **Area of Concentration (9):**
  - Select 9 credits at 500-level or above.
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 47

### Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Earth Science Licensure

- **Educational Foundations Courses (10 credits):**
- **Curricular and Instructional Studies (19 credits):**
  - 5500:575  Instructional Technology Applications  3
  - 5500:617  Licensure Seminar in Curricular and Instructional Studies (a)  3
  - 5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
  - 5500:693  Field Experience: Master’s with Licensure (section 021)  1
  - 5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
  - 5500:693  Field Experience: Master’s with Licensure (section 011)  1
  - 5500:629  Reading Programs in Secondary Schools  3
  - 5500:xxx  Elective in curriculum or teaching practices approved by advisor  2
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 47

### Option in Adolescent to Young Adult (AYA) Education (grades 7-12): Earth Science and Chemistry Licensure

- **Educational Foundations Courses (10 credits):**
- **Curricular and Instructional Studies (19 credits):**
  - 5500:575  Instructional Technology Applications  3
  - 5500:617  Licensure Seminar in Curricular and Instructional Studies (a)  3
  - 5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
  - 5500:693  Field Experience: Master’s with Licensure (section 021)  1
  - 5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
  - 5500:693  Field Experience: Master’s with Licensure (section 011)  1
  - 5500:629  Reading Programs in Secondary Schools  3
  - 5500:xxx  Elective in curriculum or teaching practices approved by advisor  2
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 47

### Option in Multi-Age (grades P-12) Education: Foreign Language Spanish Licensure

- **Educational Foundations Courses (10 credits):**
- **Curricular and Instructional Studies (19 credits):**
  - 5500:575  Instructional Technology Applications  3
  - 5500:617  Licensure Seminar in Curricular and Instructional Studies (a)  3
  - 5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
  - 5500:693  Field Experience: Master’s with Licensure (section 021)  1
  - 5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
  - 5500:693  Field Experience: Master’s with Licensure (section 011)  1
  - 5500:629  Reading Programs in Secondary Schools  3
  - 5500:xxx  Elective in curriculum or teaching practices approved by advisor  2
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 50

### Option in Multi-Age (grades P-12) Education: Visual Arts Licensure

- **Educational Foundations Courses (10 credits):**
- **Curricular and Instructional Studies (19 credits):**
  - 5500:575  Instructional Technology Applications  3
  - 5500:617  Licensure Seminar in Curricular and Instructional Studies (a)  3
  - 5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
  - 5500:693  Field Experience: Master’s with Licensure (section 021)  1
  - 5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
  - 5500:693  Field Experience: Master’s with Licensure (section 011)  1
  - 5500:629  Reading Programs in Secondary Schools  3
  - 5500:xxx  Elective in curriculum or teaching practices approved by advisor  2
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 53

### Option in Multi-Age (grades P-12) Education: Foreign Language French Licensure

- **Educational Foundations Courses (10 credits):**
- **Curricular and Instructional Studies (19 credits):**
  - 5500:575  Instructional Technology Applications  3
  - 5500:617  Licensure Seminar in Curricular and Instructional Studies (a)  3
  - 5500:520  Advanced Instructional Techniques (taken in conjunction with 5500:693-021)  (b) 3
  - 5500:693  Field Experience: Master’s with Licensure (section 021)  1
  - 5500:619  Instructional and Management Practices (taken in conjunction with 5500:693-011)  3
  - 5500:693  Field Experience: Master’s with Licensure (section 011)  1
  - 5500:629  Reading Programs in Secondary Schools  3
  - 5500:xxx  Elective in curriculum or teaching practices approved by advisor  2
  - **Field Experience (Student Teaching) (9 credits):**
    - 5500:694  Field Experience: Classroom Instruction (section 006)  (c) 8
    - 5500:692  Field Experience: Colloquium (section 031)  1
  - A comprehensive examination is required.
  - Minimum credits required for degree: 50
Option in Career-Technical Education: Family and Consumer Sciences Licensure (Grades 4-12)

Contact Program Coordinator in Family and Consumer Sciences, Shrank Hall South 215

- Educational Foundations Courses (10 credits)
- Curricular and Instructional Studies (19 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 3
  5500:555 Literacy for Multilanguage License 3
  3400:591 Career-Tech FCS Instructional Strategies (taken in conjunction with 5500:693-021) 3
  5500:693 Field Experience: Master’s with Licensure (section 021) 1
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2

- Area of Concentration (9):
  Select 9 credits with advisor approval

- Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 008) (c) 8
  3400:598 Student Teaching Seminar 1

- A comprehensive examination is required.
  Minimum credits required for degree: 47

Option in Multi-Age (P-12) Education: Drama Licensure

Contact Program Coordinator in Theatre Arts, Guzzetta South 247

- Educational Foundations Courses (10 credits)
- Curricular and Instructional Studies (21 credits):
  5500:575 Instructional Technology Applications 3
  5500:617 Licensure Seminar in Curricular and Instructional Studies (a) 3
  7800:572 Methods of Teaching Elementary Theatre Arts 3
  7800:573 Methods of Teaching Secondary Theatre Arts 3
  5500:619 Instructional and Management Practices (taken in conjunction with 5500:693-011) 3
  5500:693 Field Experience: Master’s with Licensure (section 011) 1
  5500:555 Literacy for Multilanguage License 3
  5500:xxx Elective in curriculum or teaching practices approved by advisor 2

- Area of Concentration (9):
  Select 9 credits with advisor approval

- Field Experience (Student Teaching) (9 credits):
  5500:694 Field Experience: Classroom Instruction (section 006) (c) 8
  5500:692 Student Teaching Colloquium 1

- A comprehensive examination is required.
  Minimum credits required for degree: 49

Option in Special Education: Mild/Moderate Intervention Specialist Licensure

- Educational Foundations Courses (10 credits)
- Curricular and Instructional Studies (3 credits):
  5500:575 Instructional Technology Applications 3

- Area of Concentration (26 credits):
  5610:540 Individuals with Exceptionalities: Educational and Societal Issues 3
  5610:547 Developmental Characteristics of Mild/Moderate Educational Needs 4
  5610:567 Management Strategies 3
  5610:604 Collaboration and Consultation 3
  5610:563 Assessment in Special Education 3
  5610:552 Special Education Programming: Secondary/Transition 3
  5610:551 Special Education Programming: Mild/Moderate I 3
  5610:575 Special Education Programming: Mild/Moderate II 3

- Field Experience: Student Teaching and Practicum (14 credits) or Master’s Project and Practicum (6 credits):
  5610:690 Student Teaching: Special Education 11
  5610:570 Practicum 3
  5610:694 Master’s Project 3
  5610:570 Practicum 3

- A comprehensive examination is required.
  Minimum credits required for degree (d): 42-45

Option in Special Education: Moderate/Intensive Intervention Specialist Licensure

- Educational Foundations Courses (10 credits)
- Curricular and Instructional Studies (3 credits):
  5500:575 Instructional Technology Applications 3

- Area of Concentration (27 credits):
  5610:540 Individuals with Exceptionalities: Educational and Societal Issues 3
  5610:547 Developmental Characteristics of Moderate/Intensive Educational Needs 4
  5610:567 Management Strategies 3
  5610:604 Collaboration and Consultation Skills for Special Educators 3
  5610:563 Assessment in Special Education 3
  5610:552 Special Education Programming: Secondary/Transition 3
  5610:553 Special Education Programming: Moderate/Intensive I 4
  5610:554 Special Education Programming: Moderate/Intensive II 4

- Field Experience: Student Teaching and Practicum (14 credits) or Master’s Project and Practicum (6 credits):
  5610:690 Student Teaching: Special Education 11
  5610:570 Practicum 3
  5610:694 Master’s Project 3
  5610:570 Practicum 3

- A comprehensive examination is required.
  Minimum credits required for degree (d): 43-45

Option in Special Education: Early Childhood Intervention Specialist Licensure

- Educational Foundations Courses (10 credits)
- Curricular and Instructional Studies (3 credits):
  5500:575 Instructional Technology Applications 3

- Area of Concentration (27 credits):
  5610:540 Individuals with Exceptionalities: Educational and Societal Issues 3
  5610:547 Developmental Characteristics of Moderate/Intensive Educational Needs 4
  5610:567 Management Strategies 3
  5610:604 Collaboration and Consultation Skills for Special Educators 3
  5610:563 Assessment and Evaluation in Early Childhood Special Education 3
  5610:550 Special Education Programming: Early Childhood 3
  5610:553 Special Education Programming: Moderate/Intensive I 4
  5610:561 Special Education Programming: Early Childhood Moderate/Intensive 3

- Field Experience: Student Teaching and Practicum (14 credits) or Master’s Project and Practicum (6 credits):
  5610:690 Student Teaching: Special Education 11
  5610:570 Practicum 3
  5610:694 Master’s Project 3
  5610:570 Practicum 3

- A comprehensive examination is required.
  Minimum credits required for degree (d): 42-45

(a) Prerequisite: Admission to the Master’s with Licensure program and teacher education program
(b) Prerequisite: Admission to the Master’s with Licensure program and teacher education program and
5500:617
(c) Prerequisite: Approval of Student Teaching Committee, considered based upon approved applica-
tion to student teaching, passing PRAXIS II subject test, and approved portfolio
(d) If content courses are waived the program will be no less than 41 credit hours in length

Teaching Field Requirements

Candidates in the Master’s with Licensure program must also meet teaching field requirements as established by departmental faculty and approved by the appropriate learned societies and the Ohio Department of Education. For additional information about specific program requirements please consult the Office of Student Affairs at (330) 972-6970.

Student Portfolio

Students admitted to their College of Education program and beginning their professional education coursework Fall 2005 and thereafter will complete a student portfolio. Specific portfolio requirements 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 also be submitted for acceptance before student teaching and again prior to program completion.

Clinical and Field-Based Experiences

All teacher education candidates, including those in the master’s with licensure programs, are required to participate satisfactorily in clinical and field-based experiences prior to recommendation for licensure. These integrated and developmental clinical and field-based experiences are designed to provide teacher education students with opportunities to apply theory and skills related to their areas of licensure. Field-based experiences are planned in diverse settings and provide comprehensive early and ongoing field-based opportunities in which candidates may observe, assist, tutor, instruct, and/or conduct research. Field experiences may occur in off-campus settings such as schools, community centers, or homeless shelters.

Student teaching is a full-time experience that provides candidates with an intensive and extensive culminating activity in an approved public or private school for either eleven weeks (adolescent to young adult) or sixteen weeks (intervention specialist, multi-age, or vocational family and consumer science licensure). Candidates are immersed in the learning community and are provided opportunities to...
develop and demonstrate competence in the professional roles for which they are preparing. Placements are made in appropriate sites at the discretion of the Extended Educational Experiences Office in consultation with program faculty. All students must have approval of the Student Teaching Committee to be placed for student teaching. Committee approval requires that the student submit an approved application for student teaching, evidence of a passing score or scores on the appropriate PRAXIS II subject area test or tests, and evidence of approval of his/her portfolio.

### Educational Foundations and Leadership

#### Educational Administration

The Department of Educational Foundations and Leadership offers a master’s degree program in general administration which is not directed toward a particular administrative license. With the help of an advisor and approval of the Graduate School, courses may be substituted and/or waived to create specialized options. Requirements of the standard program and examples of two such specialized programs are listed below:

**General Administration (Standard Program)**

(Admissions to General Administration currently suspended)

- **Foundation – 12 credits:**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 School Culture and Governance 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:636 Topical Seminar in Educational Technology 3

- **Educational Administration – 15:**
  - 5170:601 Organizational Leadership 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:613 Student Services and Interagency Collaboration 3

- **Curriculum and Supervision – 6:**
  - 5170:609 Principles of Curriculum Development 3
  - 5170:610 Supervision of Instruction 3

Total: 33 credits

The student will be required to pass a portfolio assessment by a three-member full-time faculty panel in order to qualify for graduation.

#### The Principalship

The Department of Educational Foundations and Leadership offers a 30 hour Master’s Degree Program in the Principalship. With the help of an advisor and approval of the Graduate School, courses may be substituted and/or waived to create specialized options. Requirements of the Principalship Master’s Degree Program in Educational Administration are listed below.

**Master’s Degree in Educational Administration**

- **Foundation – 12 credits:**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 School Culture and Governance 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- **Post-Master’s Requirements – 16 credits:**
  - 5170:601 Organizational Leadership 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:613 Student Services and Interagency Collaboration 3

Total: 30 credits

The candidate will be required to pass a portfolio assessment by a three-member full-time faculty panel in order to qualify for graduation.

### Administrative Specialists

The Department of Educational Foundations and Leadership offers programs leading to Educational Administrative Specialist licenses granted by the Ohio Department of Education.

Each of these specialist licensure programs consists of a general administration master’s degree and a post-master’s block of required courses.

#### Administrative Specialist: Educational Research

(Admissions to Educational Research currently suspended)

- **Foundation Studies – 18 credits:**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 School Culture and Governance 3
  - 5100:634 Seminar: Educational Psychology 3
  - 5100:636 Topical Seminar in Educational Technology 3
  - 5100:640 Techniques of Research 3
  - 5100:642 Topical Seminar in Measurement and Evaluation 3
  - 5100:781 Statistics in Education 3

- **Educational Administration – 15 credits:**
  - 5170:601 Organizational Leadership 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:608 School Finance and Economics 3

- **Post-Master’s Requirements – 16 credits:**
  - 5170:704 Advanced Organizational Leadership 3
  - 5170:707 The Superintendency 3
  - 5170:708 Advanced Educational Statistics 3
  - 5170:795/796 Internship* 4
  - 5170:801 Research Seminar 3

*Students admitted to Educational Administration Internship Coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.

#### Administrative Specialist: Educational Staff Personnel Administration

(Admissions to Educational Staff Personnel Administration currently suspended)

- **Foundation Studies – 12 credits:**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 School Culture and Governance 3
  - 5100:634 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3
  - 5170:601 Organizational Leadership 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:608 School Finance and Economics 3
  - 5170:610 Supervision of Instruction 3

- **Educational Administration – 21 credits:**
  - 5170:601 Organizational Leadership 3
  - 5170:603 Management of Human Resources 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:608 School Finance and Economics 3
  - 5170:610 Supervision of Instruction 3

- **Post-Master’s Requirements – 14 credits:**
  - 5170:704 Advanced Organizational Leadership 3
  - 5170:705 Decision Making in Educational Administration 3
  - 5170:707 The Superintendency 3
  - 5170:795/796 Internship* 4
  - 6500:654 Industrial Relations 3

*Students admitted to Educational Administration Internship Coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.

#### Administrative Specialist: Instructional Services

(Curriculum, Instruction, and Professional Development)

(Admissions to Instructional Services currently suspended)

- **Foundation Studies – 12 credits:**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 School Culture and Governance 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:636 Topical Seminar in Educational Technology 3
  - 5100:640 Techniques of Research 3

- **Educational Administration – 21 credits:**
  - 5170:601 Organizational Leadership 3
  - 5170:603 Management of Human Resources 3
  - 5170:604 School-Community Relations 3
  - 5170:606 Evaluation in Educational Organizations 3
  - 5170:607 School Law 3
  - 5170:608 School Finance and Economics 3
  - 5170:610 Supervision of Instruction 3

- **Post-Master’s Requirements – 14 credits:**
  - 5170:704 Advanced Organizational Leadership 3
  - 5170:705 Decision Making in Educational Administration 3
  - 5170:707 The Superintendency 3
  - 5170:795/796 Internship* 4
  - 6500:654 Industrial Relations 3

*Students admitted to Educational Administration Internship Coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.
5170:606 Evaluation in Educational Organizations 3
5170:607 School Law 3
5170:608 School Finance and Economics 3
5170:707 The Superintendency 3

• Post-Master’s Requirements – 13 credits:
  5170:609 Principles of Curriculum Development 3
  5170:610 Supervision of Instruction 3
  5170:613 Student Services and Interagency Collaboration 3
  5170:795/6 Internship* 4

*Students admitted to Educational Administration Internship coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.

Administrative Specialist:
Pupil Personnel Administration
(Admissions to Pupil Personnel Administration currently suspended)

• Foundation Studies – 12 credits:
  5100:600 Philosophies of Education 3
  5100:604 Topical Seminar in the Cultural Foundations of Education 3
  5100:620 School Culture and Governance 3
  5100:624 Seminar: Educational Psychology 3
  5100:636 Topical Seminar in Educational Technology 3
  5100:640 Techniques of Research 3

• Educational Administration – 21 credits:
  5170:601 Organizational Leadership 3
  5170:603 Management of Human Resources 3
  5170:606 Evaluation in Educational Organizations 3
  5170:607 School Law 3
  5170:608 School Finance and Economics 3
  5170:613 Student Services and Interagency Collaboration 3
  5170:707 The Superintendency 3

• Post-Master’s Requirements – 16 credits:
  5600:631 Elementary/Secondary School Counseling 3
  5600:653 Group Counseling 3
  5600:659 Organization and Administration of Guidance Services 3
  5170:704 Advanced Organizational Leadership 3
  5170:795/6 Internship* 4

*Students admitted to Educational Administration Internship coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.

Administrative Specialist:
School and Community Relations
(Admissions to School and Community Relations currently suspended)

• Foundation Studies – 12 credits:
  5100:600 Philosophies of Education 3
  5100:604 Topical Seminar in the Cultural Foundations of Education 3
  5100:620 Psychology of Instruction for Teaching and Learning 3
  5100:624 Seminar: Educational Psychology 3
  5100:636 Topical Seminar in Educational Technology 3
  5100:640 Techniques of Research 3

• Educational Administration – 21 credits:
  5170:601 Organizational Leadership 3
  5170:603 Management of Human Resources 3
  5170:606 Evaluation in Educational Organizations 3
  5170:607 School Law 3
  5170:608 School Finance and Economics 3
  5170:620 The Principalship 3
  5170:707 The Superintendency 3

• Post-Master’s Requirements – 16 credits:
  5170:604 School/Community Relations 3
  5170:704 Advanced Organizational Leadership 3
  7600:625 Theories of Mass Communication 3
  7600:628 Contemporary Public Relations Theory 3
  5170:795/6 Internship* 4

*Students admitted to Educational Administration Internship coursework following Spring of 2004 will be required to pass the state licensure exam prior to enrollment in 5170:795/796.

Superintendent Program
(Admissions to the Superintendent Program currently suspended)

The Department of Educational Foundations and Leadership offers a Superintendent Licensure-only program. The license builds from the Principalship Master’s

Degree and the Principalship Licensure programs. Requirements for the Superintendent License are listed below:

5170:608 School Finance and Economics 3
5170:704 Advanced Organizational Leadership 3
5170:707 The Superintendency 3
5170:732 Public and Media Relations in Educational Organizations 3
5170:795/796 Superintendent Internship 3 credits each

To obtain a license to practice the work of a school superintendent in the State of Ohio, through the College of Education, the candidate will have a total of 60 post-baccalaureate hours, a master’s degree, three years of experience practicing under a valid principal license, completion of a supervised two semester internship, successful passage of the state licensing examination, and good moral character.

Higher Education Administration

Specialized Option

All applicants to the program should have previously earned a bachelor's degree. Special admission for concurrent studies toward a master’s degree and the higher education certificate may be allowed for persons currently employed in higher education. Persons wishing to pursue a master’s degree in Educational Administration-Higher Education Option must, however, also apply to the Graduate School for admission to the program. Applicants wishing to pursue only the certificate program must apply to the Graduate School for admission as a non-degree student.

• Foundation courses (9 credits):
  5100:620 Psychology of Instruction for Teaching and Learning 3
  5100:646 Multicultural Counseling 3
  5100:640 Techniques of Research 3
  5100:703 Seminar: History and Philosophy of Higher Education 3

• Required courses (27 credits):
  5190:515 Administration in Higher Education 3
  5190:521 Law and Higher Education 3
  5190:526 Student Services and Higher Education 3
  5190:527 The American College Student 3
  5190:530 Higher Education Curriculum and Program Planning 3
  5190:600 Advanced Administrative Colloquium in Higher Education 3
  5190:601 Internship in Higher Education 2
  5190:602 Internship in Higher Education Seminar 1
  5190:620 Finance and Higher Education 3
  5190:626 Policy, Assessment, and Accountability in Higher Education 3

Total Hours Required: 36

• Electives (9 to 12 credits):
  5190:525 Topical Seminar 3
  5190:590 Workshop 3-6
  5190:635 Instructional Strategies and Techniques for the College Instructor 3

Students must successfully complete a master’s comprehensive examination for the Educational Administration-Higher Education Option.

Educational Foundations (M.A.)

Specialized Options:

• Instructional Technology
• Educational Psychology (admissions suspended)
• Social/Philosophical Foundations of Education
• Research Methodology and Evaluation (admissions suspended)

This Master’s degree program area is designed for either the student interested in improving present educational skills or the student interested in educational or instructional positions in business, industry, and social services. The student’s program of study will be determined jointly by the student and advisor. The program consists of:

• College Core Foundation Studies (nine credits)
• Program Requirements for the specialization selected above (minimum of 15 credits)
• Outside Department (minimum of six credits except for Instructional Technology option)
• Master’s Comprehensive Examination (electronic portfolio for Instructional Technology)

• Election of master’s thesis (5100:699), or master’s problem (5100:698), or an additional six semester credits of coursework. Students choosing to do a master’s thesis or master’s problem require 30 semester credits to graduate. Students choosing to do only coursework require 36 semester credits to graduate.
**Instructional Technology Option (30 credits)**

The graduate program in Educational Foundations emphasizing Instructional Technology has been designed to assist its students in becoming competent, employable professionals, capable of making a significant contribution to the field. The graduate curriculum provides its students with exposure to a wide range of emerging technologies, while still ensuring the basic competencies required of all practitioners. In this way, the program directly addresses the rapidly accelerating changes in the field of interactive and distance learning technologies while still recognizing its roots in instructional design, media, and computer-mediated education.

Master’s degree graduates of the Instructional Technology program have found employment as technology coordinators in school districts, technology resource personnel in K-16 educational institutions, training specialists and instructional designers in business, education, and government, as well as multimedia developers and specialists.

- **Foundation Studies (9 credits)**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:637 Philosophies of Educational Technology 3
  - 5100:620 Psychology of Instruction for Teaching and Learning 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- **Required Courses (15 credits)**
  - 5100:614 Planning for Technology 3
  - 5100:631 Instructional Design 3
  - 5100:632 Hypermedia 3
  - 5100:638 Integrating and Implementing Technology 3
  - 5100:696 Field Experience: Master’s 3

- **Electives (choose 6 credits)**
  - 5100:610 Workshop: Instructional Technology 3
  - 5100:632 Web-Based Learning Systems 3
  - 5100:639 Strategies for Online Learning 3
  - 5100:696 Master’s Technology Project 3

**Graduate K-12 Computer Technology Endorsement**

This endorsement is only available to teachers or teacher candidates who have obtained or who are simultaneously getting an initial Ohio license/certificate (e.g. in early childhood, middle level, adolescent/young adult, special education, etc.) Individual school districts, not the State of Ohio or the University of Akron, determine the extent to which the endorsement is applicable to their needs and requirements.

For further information on this endorsement contact the Department of Educational Foundations and Leadership.

**Educational Psychology Option (30-36 credits)** *(admissions suspended)*

The cognitive theory and research underlie much of the reform movement in education and the allied professions. The graduate program in Educational Foundations emphasizing Educational Psychology emphasizes a strong understanding of cognitive, motivation, teaching, learning, and individual differences and is designed to assist students to become more competent practitioners in a wide range of contexts in education and allied professions.

- **Foundation Studies (9 credits)**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 Psychology of Instruction for Teaching and Learning 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- **Electives (15-21 hours)**
  - 5100:624 Seminar: Educational Psychology 3 *(may be repeated for up to 6 credits)*
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 Psychology of Instruction for Teaching and Learning 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:801* Research Seminar: Path Analysis, Multivariate Statistical Techniques 3
  - 5100:801* Research Seminar: Qualitative Analysis Procedures 3
  - 5100:801* Research Seminar: Path Analysis, Multivariate Statistical Techniques 3
  - 5100:801* Research Seminar: Multiple Regression, Model Building Data Analysis Procedures 3

- **Outside Department Requirements (6 hours)**
  - 5610:540 Developmental Characteristics of Exceptional Individuals 3
  - 5500:780 Seminar in Curricular and Instructional Studies (Cooperative Learning) 3

**Social/Philosophical Foundations of Education Option (30-36 credits)**

This interdisciplinary graduate program is designed to facilitate professional educators’ developing critical, interpretative, and normative perspectives of the interrelations between educational institutions and society. This program includes the academic disciplines of anthropology of education, comparative/international education, cultural studies in education, history of education, philosophy of education, and sociology of education. Students collaborate with their advisers in selecting one or more of the above disciplines to create a graduate program tailored to their needs, interests, and professional aspirations. Students may be either encouraged or required to study with faculty in other departments or institutions to develop interdisciplinary programs and perspectives.

Graduates of the program can earn a Master of Arts in Education degree in preparation for careers in both traditional and non-traditional educational settings and for further doctoral study in anthropology of education, comparative/international education, cultural studies in education, history of education, philosophy of education, and sociology of education. Graduates are more employable in positions that require in-depth understanding of the broader social contexts of educational policy.

- **Foundation Studies (9 credits)**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 Psychology of Instruction for Teaching and Learning 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- **Electives (15-21 hours)**
  - 5100:622 Comparative and International Education 3
  - 5100:624 Seminar in the Cultural Foundations of Education 3
  - 5100:637 Philosophies of Educational Technology 3
  - 5100:701 History of Education in American Society 3
  - 5100:703 Seminar: History and Philosophy of Higher Education 3
  - 5100:705 Seminar: Social/Philosophical Foundations of Education 3

- **Outside Department Requirements (6 hours)**
  - 5100:697 Independent Study: Master’s 3
  - 5100:698 Master’s Problem 3
  - 5100:699 Master’s Thesis 3

**Research Methodology and Evaluation Option (30 credits)** *(Admissions to Research Methodology and Evaluation currently suspended)*

The graduate program in Educational Foundations emphasizing Research Methodology and Evaluation prepares students for careers in research methodology and evaluation. Employment is typically available in government, military, industry and education. These career positions may involve teaching, conducting evaluative research and consulting in a variety of fields.

- **Foundation Studies (9 credits)**
  - 5100:600 Philosophies of Education 3
  - 5100:604 Topical Seminar in the Cultural Foundations of Education 3
  - 5100:620 Psychology of Instruction for Teaching and Learning 3
  - 5100:624 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- **Electives (15 hours)**
  - 5100:642 Topical Seminar in Measurement and Evaluation 3
  - 5100:699 Master’s Thesis 3
  - 5100:740 Research Design 3
  - 5100:741 Data Collection Methods 3
  - 5100:742 Statistics in Education 3
  - 5100:743 Advanced Educational Statistics 3
  - 5100:798 Research Projects in Special Areas: Advanced Psychometric Techniques and Measurement 3
  - 5100:801* Research Seminar: Multiple Regression, Model Building Data Analysis Procedures 3
  - 5100:801* Research Seminar: Path Analysis, Multivariate Statistical Techniques 3
  - 5100:801* Research Seminar: Qualitative 3
  - 5100:801* Research Seminar: SAS or SPSS 3
  - 5100:801* Research Seminar: Case Studies 3
  - 5100:697 Independent Study 3

* Note: Doctoral Research Seminar may be repeated for up to 9 semester hours.

- **Outside Department Requirements (6 hours)**
  - 5500:696 Master’s Project 6
  - 5500:699 Master’s Thesis 6

- **36 total hours are required.**

- **A comprehensive exam is required.**

**Postsecondary Technical Education**

The major objective of the postsecondary technical education program is to prepare the instructor and other educational personnel for postsecondary educational institutions, industry, and public and private agencies engaged in the education and training of technicians and middle-level workers. All courses are also available fully online.
Admission Requirements
• Full Admission:
  2.75 grade point average on a completed Bachelor’s degree (or 3.0 for last 60 credit hours)
• Provisional Admission:
  2.5 (or higher) grade point average on a completed Bachelor’s degree

Required Foundation Courses:
- Required Foundation Courses: 6 credits:
  5100:604 Topical Seminar in Cultural Foundations 3
  5100:640 Techniques of Research 3
  5400:580 Diverse Postsecondary Learners 3

Professional Technical Education Courses – 21 credits:
- Professional Technical Education Courses – 21 credits:
  5100:639 Strategies for Online Learning 3
  5400:620 The Two-Year College 3
  5400:625 Advanced System Design: Needs Assessment and Evaluation 3
  5400:625 Postsecondary Teacher Leadership 3
  5400:660 Postsecondary Distance Learning 3
  5400:698 Master’s Problem 3
  5400:699 Master’s Thesis 3
  Total: 30 credits

Required Clinical Experience (2 credits minimum):

Sport Science and Wellness Education
The student who expects to earn a master’s degree in the Department of Sport Science and Wellness Education is expected to meet the criteria for admission of the Graduate School.

Outdoor Education
(Admissions to Outdoor Education currently suspended)
The outdoor education program, requiring 32 credits, is designed for those students having an undergraduate background in elementary or secondary education, biology, environmental studies, health, physical education or recreation. Students may become involved with existing outdoor education programs in the public schools, metropolitan, state and national park programs, or private and public agencies which conduct outdoor/environmental education programs.

- Foundation Studies – nine credits.
- Required Foundation Courses:
  5100:640 Techniques of Research 3
  Remaining six (6) credits to be chosen, with approval of advisor, from 5100:5xx or 5100:6xx course offerings or 5550:606 Statistics: Qualitative and Quantitative Methods.
- Required courses:
  5560:650 Application of Outdoor Education to the School Curriculum 4
  5560:552 Resources and Resource Management for the Teaching of Outdoor Education 4
  5560:556 Outdoor Pursuits 4
  5560:605 Outdoor Education: Special Topics 2-4
  5560:600 Outdoor Education: Rural Influences 3

Physical Education
(Admissions to Physical Education option currently suspended)
The graduate program in physical education, requiring 33 credits, is designed for post-baccalaureate and in-service physical educators. Training received in this program comes from two (2) areas: the foundations (6 cr.) and the program studies area of physical education (25 cr.). The emphasis in this curriculum is to provide answers to the questions “what I can learn about teaching and what decisions do I face as a professional educator?” Students will be assigned an advisor with whom they should consult on a regular basis. In fact, advisor approval is required on certain course work.

- Required Foundation Courses:
  5100:600 Philosophies of Education 3
  5100:604 Topical Seminar in Cultural Foundations of Education 3
  5100:620 Psychology of Instruction for Teaching and Learning 3
  5100:624 Seminar: Educational Psychology 3
  5100:640 Techniques of Research 3
  Subtotal 6

- Required Department Courses:
  5550:536 Foundations and Elements of Adapted Physical Education 3
  5550:601 Sports Administration and Supervision 3
  5550:602 Motor Behavior Applied to Sports 3
  5550:604 Current Issues in Physical Education 3
  5550:603 Tactics and Strategies in the Science of Coaching 3
  5550:605 Physiology of Muscular Activity and Exercise 3
  5550:606 Statistics: Qualitative and Quantitative Methods 3
  5550:609 Motivational Aspects of Physical Activity 3
  5550:521 Comprehensive School Health 4
  5550:695 Field Experience: Master’s 2 (minimum)
  5550:696 Field Experience: Master’s 2 (minimum)
  5550:698 Master’s Problem 2 (minimum)
  5550:699 Master’s Thesis 2 (minimum)
  Total Program 33

Option: Exercise Physiology/Adult Fitness
This graduate program, requiring a minimum of 34 credits, is designed to prepare students for advanced study in exercise physiology and future employment in adult fitness, corporate fitness and cardiac rehabilitation programs. Special attention is also given to knowledge and practical skills necessary for students preparing for American College of Sports Medicine certifications.

- Required Foundation Courses (6 credits):
  5100:620 Psychology of Instruction for Teaching and Learning 3
  5100:624 Seminar: Educational Psychology 3
  5100:640 Techniques of Research 3
  Subtotal 6

- Required Department Courses (21-24 credits):
  5550:500 Musculoskeletal Anatomy I 3
  5550:600 Biomechanics Applied to Sports and Physical Activity 4
  5550:518 Cardiorespiratory Function 3
  5550:501 Musculoskeletal Anatomy II 3
  3100:655 Advanced Cardiovascular Physiology 3
  5550:606 Physiology of Muscular Activity and Exercise 3
  5550:606 Statistics: Qualitative and Quantitative Methods 3
  5550:620 Laboratory Instrumentation Techniques in Exercise Physiology 3
  5550:626 Nutrition in Sports 3

- Required Clinical Experience (2 credits minimum):
  5560:695 Field Experience: Master’s 3
  5560:698 Master’s Problem 3
  5560:699 Master’s Thesis 4

With the approval of an advisor, the student may select additional courses and/or workshops related to the graduate program.
Electives: Select at least one (1) course from among the following and have advisor approval.

- 5100:520 Introduction to Instructional Computing 3
- 5100:741 Statistics in Education 3
- 5100:743 Advanced Education Statistics 3
- 5550:601 Sports Administration and Supervision 3
- 5550:609 Motivational Aspects of Physical Activity 3
- 5950:510 Introduction to Sports Sociology 3
- 5950:522 Sports Planning and Promotion 3
- 5550:524 Sports Leadership 3
- 5550:538 Cardiac Rehab Principles 3
- 5550:540 Injury Management for Teachers and Coaches 2
- 5550:562 Legal Aspects of Physical Activity 2
- 5550:680 Special Topics in Physical Education 3

Option: Sport Science/Coaching

This sport science/coaching graduate program option has been designed to meet the needs of physical education teachers and practicing/prospective coaches. This program meets published NASPE National Standards.

Required Foundation Courses:

- 5100:620 Psychology of Instruction for Teaching and Learning 3
  or
- 5550:604 Current Issues in Physical Education 3
  and
- 5100:640 Techniques of Research 3

Subtotal 6

Required Courses:

- 5550:540 Injury Management for Teachers and Coaches 2
  or
- 5550:541 Advanced Athletic Injury Management: Upper Extremity 4
- 5550:553 Principles of Coaching 3
- 5550:562 Legal/Ethical Issues in Physical and Leisure Activity 2
- 5550:601 Sports Administration and Supervision 3
- 5550:602 Motor Behavior Applied to Sports 3
- 5550:603 Tactics and Strategies in the Science of Teaching and Coaching 3
- 5550:605 Physiology of Muscular Activity and Exercise 3
- 5550:609 Motivational Aspects of Physical Activity 3
- 7400:587 Sports Nutrition 3

Subtotal 25-27

- At least two (2) credits from among the following:
  - 5550:685 Field Experience: Master’s 1-5
  - 5550:698 Master’s Problem 1-5
  - 5550:699 Master’s Thesis 1-5

- Electives: The following courses are relevant to this degree. The student may select additional courses and/or workshops related to the graduate program:
  - 5550:590 Workshop (e.g., Issues of Student Athletes) 1-5
  - 5550:606 Statistics: Qualitative and Quantitative Methods 3
  - 5550:680 Special Topics (e.g., Coaching Youth Sports) 1-5
  - 5570:521 Comprehensive School Health 4

Total Program 35

--

School Nurse License Program

(Admission to School Nurse License Program currently suspended)

Admission Requirements—Sequence 2

- R.N. License
- B.S.N. Degree
- Admittance to Graduate School
- Admittance to College of Education (Graduate Studies)
- Admittance to College of Nursing (Special/Non-Degree status)
- Selected coursework in College of Education and College of Nursing
- Supervised School Nurse experience
- Course work distributed over the following areas:
  - Community health; family counseling; mental and emotional health; current topics in health education; methods of teaching/instructional design; learner and learning process; evaluation and measurement of learning; principles, comprehensive school health; advanced pediatric/adolescent assessment; advanced nursing research.

To satisfy the above requirements, an applicant must complete at least the following 12 graduate credits or their equivalents of College of Education core courses listed below:

- 5570:520 Community Health 2
- 5570:521 Comprehensive School Health 4
- 5570:523 Methods and Materials of Teaching Health Education 3
- 5100:742 Statistics in Education 3

Subtotal 12

Admission Requirements—Sequence 3

- Admittance to the College of Nursing MSN Program—Child and Adolescent Track
- Admittance to College of Education (Special/Non-Degree status)
- Completion of the MSN Program in the Child and Adolescent Track
- Plus 12 graduate credits of College of Education core courses:
  - 5570:520 Community Health 2
  - 5570:521 Comprehensive School Health 4
  - 5570:523 Methods and Materials of Teaching Health Education 3
  - Elective within College of Education 3

Total 11-16

- The school nurse practicum is contained in the MSN program in 8200:651 and 655 which fulfill the requirements of 8200:553 and 554.

Master’s degree plus licensure.
College of Business Administration
Ravi Krovi, Ph.D., Acting Dean
James J. Divoky, D.B.A., Assistant Dean and Director of Graduate Programs

Mission Statement
The MBA program is the principle graduate program of UA’s College of Business Administration. The objective of the MBA program is to provide a diverse group of men and women with the skills, leadership, vision, and innovative spirit needed to rise to positions of organizational leadership in a global business environment characterized by intense competition and rapid rates of technological change. Graduates of UA’s MBA program should possess:
- The analytical and conceptual abilities needed to identify and cope successfully with ambiguous and unstructured business problems;
- A solid grounding in the basic business functions, with an emphasis on the integration of those functions and an understanding of how those functions are linked in the formulation and execution of business strategy;
- A strong ethical perspective, an appreciation of cultural diversity, and an ability to communicate in an effective, persuasive manner;
- An understanding of the legal, political, regulatory, economic and technological environment; and,
- An awareness of the global economy in which business operates and an understanding of the forces that shape competitiveness in that economy.

In order to accomplish these goals, the graduate faculty of the College of Business Administration commits itself to providing a quality graduate business experience. That experience will have a strong professional focus, characterized by team work among students. The faculty is dedicated to creating an intense and stimulating environment that emphasizes the application of theory to real managerial problems and that is permeated by the basic concepts of globalization, ethics, leadership, and planned change.

We recognize that there are many skills students need to acquire in their MBA program in addition to technical competencies in their field of concentration. These include communication and interpersonal skills, analytical reasoning and leadership skills. Eight of these “expanded” competencies to be intertwined throughout the program are as follows:

**Communication**
1. Ability to present views and concepts clearly in writing;
2. Ability to read, critique, and judge the value of written work;
3. Ability to present views and concepts clearly through oral communication.

**Group work and people skills**
4. Ability to understand group dynamics and work effectively with people from diverse backgrounds;
5. Ability to manage conflict;
6. Ability to organize and delegate tasks.

**Critical thinking and creative and effective problem solving**
7. Ability to solve diverse, structured and unstructured problems;
8. Ability to deal effectively with imposed pressures and deadlines.

The basics for most of these skills may be taught in prior bachelor degree programs and are taught in the foundation core courses. Experiences are provided to students throughout the program in a variety of ways to develop these skills. A student’s progress is to be documented and evaluated by self evaluation; peer evaluation; and faculty evaluation.

**MASTER’S DEGREE**
The College of Business Administration (CBA) offers graduate programs which lead to the degrees of Master of Business Administration, Master of Science in Management, Master of Taxation, and Master of Science in Accountancy. The University has offered programs of study in business since 1919, initially through the Department of Commerce and since 1953 through the College of Business Administration. In 1958, graduate studies in business were begun. Both the undergraduate and master’s programs are accredited by the Association to Advance Collegiate Schools of Business (AACSB).

During its long tradition, the college has sought to fulfill the educational and professional needs of its 450 graduate students, the community and regional business organizations. To meet its urban objectives, the college offers most graduate courses only between 5:20 p.m. and 10:40 p.m. The master’s programs are designed to serve those who work full-time and wish to pursue a master’s program on a part-time basis. However, many students enroll full-time to complete the master’s program in a shorter period.

**Admission Policy**
The applicant must meet one (1) of the following eligibility requirements which are in conformity with the Graduate School and the college’s accrediting agency (AACSB).

- Hold a domestic baccalaureate degree from a regionally accredited college or university and have a total index score of 1,050 or more points based on the overall undergraduate grade-point average (GPA) of 4.0 times 200 plus the Graduate Management Admissions Test (GMAT) score.
- Hold a domestic baccalaureate degree from a regionally accredited college or university and have a total index score of 1100 or more points based on the junior-senior (i.e., last 64 semester or 96 quarter credits) GPA (A=4.0) times 200 plus the GMAT score.
- Hold a degree from outside the United States and have an academic standing of first or high second class, satisfactory evidence of competence in English (e.g., TOEFL score of 550 or above) and a score of at least 500 on the GMAT.

Students who are admitted on a provisional basis must achieve a composite index of 1,150 based on foundation course GPA times 200 plus GMAT score. Even though an applicant is eligible for consideration, an offer of admission is not guaranteed. Since staff, facilities, and resources are limited, a determination must be made as to the number of applicants who can be adequately served among those eligible. As a result, offers of admission may be limited to only the most qualified of the eligible applicants as determined by the CBA Graduate Admissions Committee. This committee will consider the following in making decisions: the difficulty of the applicant’s undergraduate program; the length of time and activities since graduation; and the percentile ranking on the GMAT. For example, students admitted into the graduate business programs last year had an average GMAT of 570 and an average point index of 1,200.

In rare instances, the applicant who has taken the GMAT but does not meet requirements may be considered for admission. Also, those who have previously been denied admission may, upon presentation of new information, be reconsidered. In either case, the applicant must petition, in writing, the CBA Graduate Admissions Committee giving those reasons relevant to the situation which demonstrate the likelihood of success – the burden of proof is on the applicant.

Under the regulations of the Graduate School, eligible applicants who have been extended an offer of admission by the CBA Graduate Admissions Committee are recommended to the dean of the Graduate School for either “full” or “provisional” graduate status. Those admitted with the classification “provisional status” who have not attained an overall 3.00 GPA upon the completion of 12 graduate credits will be dismissed from the program. Students admitted as special non-degree are restricted to enrolling in a maximum of nine credits foundation courses only.

**Procedure**
GMAT scores should be sent to the Director of Graduate Programs in Business, College of Business Administration, The University of Akron, Akron OH 44325-4805 (institution code 1829). The GMAT test is administered world-wide and the applicant should register for it sufficiently in advance to the filing of the graduate application. So evaluation for admission will not be delayed. GMAT registration bulletins can be obtained from the Graduate Programs in Business Office or the Educational Testing Service, Box 966-R, Princeton, NJ 08540. Those who have taken the GMAT more than five years ago are normally required to retake it. All applications and accompanying documentation are evaluated simultaneously by the Graduate Admissions Committee (GAC). The GAC meets monthly and the applicant will be informed in writing of the GAC’s decision within one week of the meeting.

**Requirements**
To be awarded any master’s degree from the College of Business Administration, a student must:

- Meet the time and grade-point requirements of the Graduate School.
- Complete the minimum credits in each of the degree descriptions.
- Complete all course requirements of applicable master’s program.

Questions regarding these Policies, Procedures, and Requirements may be sent via e-mail to gradcba@uakron.edu. Further information may be found at the College of Business Administration website: http://www.uakron.edu/cba/grad.

**Transfer Policy**
The College of Business Administration will permit nine credits of comparable graduate credits to be transferred into any of the graduate business programs (10 law school credits into the J.D./M.Taxation program). These credits must be pre-
approved by the director of graduate programs in the C.B.A. This nine credit policy also applies to second degree applicants.

**Second Degree**

For a student who has already obtained one master’s degree in business, it is possible to pursue another degree in the college provided that: (1) no second M.B.A. is to be obtained, (2) the degree sought is not in the same functional discipline; (3) the desired program (degree curriculum) is specifically approved in advance by the director of graduate programs in business; and (4) not fewer than 21 new credits are earned for the second degree.

**Master of Business Administration**

The Master of Business Administration program is designed to give the student a general knowledge of the functional areas of business and permit the concentration of study in one of the 13 following areas: accounting, electronic business, entrepreneurship, finance, global sales management, health care management, international business, international finance, management, management of technology and innovation, strategic marketing, or supply chain management. The program consists of 58 graduate credits. Foundation courses may be waived for those who have had recent study in the areas. Foundation and advanced courses can be taken concurrently provided that all prerequisites have been met. Beginning with the Fall 1999 semester, some foundation level courses are available over the World Wide Web. Students should contact the graduate programs office for more information about web-based courses.

- **Foundation Courses:**
  - All are required unless waived at the time of admission. Foundation courses may not be used as concentration or elective courses.
  - 3250:600 Foundation of Economic Analysis 3
  - 6200:601 Financial Accounting 3
  - 6400:602 Managerial Finance 3
  - 6400:655 Government and Business 3
  - 6500:602 Management and Organizational Behavior 3
  - 6500:601 Quantitative Decision Making 3
  - 6500:602 Computer Techniques for Management 3
  - 6800:600 Marketing Concepts 3

- **Concentration (12 credits):**
  - The student must select 12 credits in a field of concentration (accounting, electronic business, entrepreneurship, finance, global sales management, health care management, international business, international finance, management, management of technology and innovation, strategic marketing, or supply chain management).

- **Free Electives (3 credits):**
  - The student must select 3 credits of free electives outside the area of concentration. 500-level courses may be used but the student may not count more than 6 credits of 500-level courses in total toward the fulfillment of degree requirements. Accounting students may take only 3 credits of 500-level coursework. Approval of Director is required.

- **Integrative (3 credits):**
  - 6500:696 Business Strategy and Policy: Domestic and International 3

- **Program Summary**
  - Foundation Core 24
  - Functional Core 16
  - Concentration 12
  - Free Electives 3
  - Integrative 3
  - Total Program 68

If the Foundation Core Courses are all waived, the program is 34 credits in length.

**Concentration in Accounting**

Beginning Fall 2006 no new students will be accepted to the MBA (Accounting Concentration) until further notice. The MBA (Accounting Concentration) consists of 12 graduate credit hours of accounting course work. The School of Accountancy recommends that students select courses that allow them to focus on their concentration in one of the three broad areas of accounting-financial reporting, taxation, or accounting information systems.

**Concentration in Electronic Business (E-Business)**

- **Required:**
  - 6600:608 Entrepreneurship 3
  - 6600:644 Knowledge Management and Business Intelligence 3
  - 6600:635 E-Business Marketing Strategies and Tactics 3

- **Choose 3 credits from the following:**
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6500:665 Management of Technology 3
  - 6600:645 Innovative Marketing Strategies 3

**Concentration in Entrepreneurship**

Students work with entrepreneurs and venture capitalists in the formulation of business plans based on new products that will be presented at international business plan competitions. Students learn entrepreneurial skills related to starting or buying a small business, working for a fast growth business or corporation, family business, and franchising.

- **Required:**
  - 6300:640 Financing the Entrepreneurial Venture 3
  - 6300:670 Managing Entrepreneurial Growth 3
  - 6500:608 Entrepreneurship 3
  - 6500:663 Database Analysis for Managers 3

**Concentration in Direct Integrated Marketing**

- **Required (9 credits)**
  - 6600:615 Database Marketing 3
  - 6600:630 Customer Relationship Management 3
  - 6600:655 Integrated Marketing Communications 3

- **Choose three credits from the following:**
  - 6600:640 Business Research Methods 3
  - 6600:645 Innovative Marketing Strategies 3

**Concentration in Finance**

The MBA Finance Concentration provides the student with the decision tools and analytical skills needed for the successful financial management of the firm.

- **Required (9 credits)**
  - 6400:631 Financial Markets and Institutions 3
  - 6400:645 Investment Analysis 3
  - 6400:678 Capital Budgeting 3

- **Choose three credits from the following:**
  - 6400:538 International Banking 3
  - 6400:650 Techniques of Financial Modeling 3
  - 6400:681 Multinational Corporate Finance 3
  - 6400:690 Selected Topics in Finance 3
  - 6400:691 International Markets and Investments 3
  - 6400:697 Independent Study in Finance 3
  - 6400:698 Independent Study: Business Law 3

**Concentration in Health Care Management**

- **Required:**
  - 6500:580 Introduction to Health Care Management 3
  - 6500:663 Data Analysis for Managers 3
  - 6500:683 Health Services Systems Management 3

- **Choose three credits from the following:**
  - 6500:582 Health Services Operations Management 3
  - 6500:585 Special Topics in Health Services Administration 1-3
  - 6500:686 Health Services Research Project 3
  - 6500:688 Independent Study in Health Services Administration 1-3
  - 3305:680 Interdisciplinary Seminar in Long-Term Development and Gerontology 3
  - 3250:540 Special Topics: Economics (Medical) 3
  - 3800:615 Epidemiologic Methods in Health Research 3
  - 3850:656 Sociology of Health Care 3
  - 3880:622 Urban Planning and Health Care 3
  - 4800:630 Biomedical Computing 3
  - 8200:632 Fiscal Management in Nursing Administration 3
  - or three graduate credits approved by the Director.

No more than six credits at the 500-level permitted.

**Concentration in International Business**

- **Required (choose one of the following courses):**
  - 6400:650 Techniques of Financial Modeling 3
  - 6500:662 Supply Chain Analysis 3
  - 6500:663 Data Analysis for Managers 3
  - 6600:640 Business Research Methods 3

- **Plus any 9 credits in International Business:**
  - 6800:630 International Marketing Policies 3
  - 6800:685 Multinational Corporations 3
  - 6800:690 Seminar in International Business 3
  - 6800:697 Independent Study in International Business 1-3
  - 6200:680 International Accounting 3
  - 6400:538 International Banking 3
  - 6400:681 Multinational Corporate Finance 3
  - 6400:691 International Markets and Investments 3
  - 6500:656 Management of Global Supply Chain and Operations 3
  - 6500:659 International Human Resource Management 3
  - 6500:661 Comparative Systems of Employee and Labor Relations 3

**Graduate Studies**

61
International Business students must ALSO select one of the following options:

1. Foreign Language Option: demonstrate reading and conversational proficiency in a language other than English.

2. Cross-Cultural Option: select one course (3 credits) from the following courses:*
   - 3250:550 Comparative Economic Systems
   - 3250:560 Economics of Developing Countries
   - 3250:670 International Monetary Economics
   - 3250:671 International Trade
   - 3350:550 Development Planning
   - 3350:551 Comparative Planning
   - 3400:516 Modern India
   - 3400:573 Latin America: The Twentieth Century
   - 3400:575 Mexico
   - 3700:505 Politics in the Middle East
   - 3700:512 Global Environment Politics

*Cross-cultural courses may be used for free elective credits.

Concentration in International Business for International Executives

- Required: choose one of the following courses:
  - 6200:664 Research and Quantitative Methods in Accounting
  - 6400:650 Techniques of Financial Modeling
  - 6500:662 Applied Operations Research
  - 6600:660 Business Research Methods
  - Plus any 9 credits in International Business:
    - 6800:630 International Marketing Policies
    - 6800:685 Multinational Corporations
    - 6800:690 Seminar in International Business
    - 6800:697 Independent Study in International Business or
    - 6200:680 International Accounting
    - 6400:681 Multinational Corporate Finance
    - 6400:691 International Markets and Investments
    - 6500:656 Management of International Operations
    - 6500:659 International Human Resource Management
    - 6500:661 Comparative Systems of Employee and Labor Relations

International Business students must ALSO select one of the following options:

1. Foreign Language Option: demonstrate reading and conversational proficiency in a language other than English.

2. Cross-Cultural Option: select one course (3 credits) from the following courses:*
   - 3250:550 Comparative Economic Systems
   - 3250:560 Economics of Developing Countries
   - 3250:670 International Monetary Economics
   - 3250:671 International Trade
   - 3350:550 Development Planning
   - 3350:551 Comparative Planning
   - 3400:516 Modern India
   - 3400:573 Latin America: The Twentieth Century
   - 3400:575 Mexico
   - 3700:505 Politics in the Middle East
   - 3700:512 Global Environment Politics

*Cross-cultural courses may be used for free elective credits.

Concentration in International Finance

This program prepares students for careers in international finance with emphasis in corporate banking or investment areas. With the globalization of business, international finance has emerged as a major program for students interested in international business operations.

- Required (9 credits):
  - 6400:681 Multinational Corporate Finance
  - 6400:691 International Markets and Investments
  - 6400:538 International Banking
  - Choose three credits from the following:
    - 6400:630 Financial Markets and Institutions
    - 6400:645 Investment Analysis
    - 6400:650 Techniques of Financial Modeling
    - 6400:678 Capital Budgeting
    - 6400:690 Selected Topics in Finance
    - 6400:697 Independent Study in Finance
    - 6400:698 Independent Study: Business Law

Master of Science in Accountancy

The Master of Science in Accountancy is an advanced professional degree that offers students the opportunity to develop substantive knowledge, skills, and abilities in accounting. The program offers students flexibility to combine their accounting backgrounds with coursework in information systems and finance. It also allows students without undergraduate degrees in accounting to combine their diverse backgrounds with a graduate degree in accounting. Students may pursue a professional accounting option or an accounting information systems option.

Program Learning Goals

Consistent with the School's mission, students in the program will:

- Develop advanced knowledge and understanding of accounting concepts, the regulatory environment, and professional practice issues and challenges;
- Enhance their critical thinking skills and develop the ability to apply advanced knowledge of accounting concepts, principles and practices in innovative ways;
- Develop the ability to research accounting issues and write research reports that incorporate qualitative and quantitative data analysis and integrate information from multiple sources;
- Demonstrate effective written and oral communication skills;
- Understand and appreciate the role of information technology in contemporary accounting, research, and decision-making; and
- Understand and appreciate the significance of ethics, professionalism, and social responsibility in accounting.

Admission Requirements

The MSA curriculum consists of 30 semester credits. Admission to the program is open to the following individuals:

1. Individuals with undergraduate degrees in accounting from a regionally accredited institution or international equivalent.
2. Individuals with a non-accounting undergraduate degree from a regionally accredited institution or international equivalent.
3. Individuals with a non-business undergraduate degree from a regionally accredited institution or international equivalent.

All students must earn a satisfactory score on the GMAT in order to be accepted into the program.

The Program

Individuals with a non-accounting undergraduate business degree from a regionally accredited institution or international equivalent or individuals with a non-busi-
ness degree from a regionally accredited institution or international equivalent must complete all pre-MSA foundation courses and Pre-MSA financial reporting courses listed below. Students who have completed similar courses at the undergraduate or graduate level may apply for waivers. Applications for waivers will be reviewed on a case-by-case basis, considering such factors as the student’s background and work experience, institution, grades earned, and date when similar courses were taken. Documented guidance on sequencing MSA courses available through the School of Accountancy.

- Pre-MSA Foundation Courses (12 credits):
  All foundation courses must be taken prior to courses in the MSA program. An exception to this policy may be made by the chair of the School of Accountancy for students who have received waivers from foundation courses.

  - 6200:603 Accounting Decision Support Systems 3
  - 6400:602 Managerial Finance 3
  - 6400:623 Legal Aspects of Business Transactions 3
  - 6500:601 Quantitative Decision Making 3

- Pre-MSA Financial Reporting Courses (12 credits):
  All Pre-MSA Financial Reporting Courses with the exception of 6200:540 Auditing must be completed prior to taking courses in the MSA program.

  - 6200:621 Corporate Accounting and Financial Reporting I 3
  - 6200:622 Corporate Accounting and Financial Reporting II or 6200:531 Taxation II 3
  - 6200:631 Corporate Taxation I 3
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6200:660 Accounting and Assurance Project (capstone course) 3
  - 6200:520 Advanced Accounting* 3

  *All courses in this group are required, except for 6200:520, which is not required for students in the AIS option. Students who have completed a similar advanced accounting course at the undergraduate level must take a different course.

- Group B: Taxation Core (3 - 6 credits):
  Students in the MSA must complete a total of 30 credits from the courses of groups courses listed below. At least 21 credits must be at the 600-level; a minimum of 15 credits must be graduate accounting (6200) courses, and at least 12 credits must be 600-level accounting (6200) courses. Students completing the MSA AIS option must have a minimum of 12 credit hours of accounting information systems or management information systems classes.

  - 6200:615 ERP and Financial Data Communications 3
  - 6200:637 Contemporary Accounting Issues 3
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6200:660 Accounting and Assurance Project (capstone course) 3
  - 6200:520 Advanced Accounting* 3

*All courses in this group are required except for 6200:520, which is not required for students in the AIS option. Students who have completed a similar advanced accounting course at the undergraduate level must take a different course.

- Group C: Accounting Electives (0 - 6 credits):

  - 6200:627 Survey of Federal Taxation 3
  - 6200:531 Taxation II 3
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6200:631 Corporate Taxation I 3

  *Students are required to take a different taxation course if they have completed the equivalent of 6200:637 or 6200:531. Students are required to complete at least one course but no more than two courses in the taxation core.

- Group D: Information Systems Electives (0 - 12 credits):

  - 6500:643 Analysis and Design of Business Systems 3
  - 6500:641 Business Database Systems 3
  - 6500:646 Management of Telecommunications 3
  - 6500:678 Project Management 3

  The Chair of the School of Accountancy may approve or substitute other relevant information systems courses not listed in Group D above. Students pursuing the Accounting Information Systems Option must complete a minimum of 12 credits of information systems courses (i.e., Group D and accounting information systems courses from Group C).

- Group E: Finance Electives (0 - 15 credits):

  - 6400:631 Financial Markets and Institutions 3
  - 6400:645 Investment Analysis 3
  - 6400:671 Strategic Financial Decision Making 3
  - 6400:681 Multinational Corporate Finance 3
  - 6400:691 International Markets and Investments 3

  The Chair of the School of Accountancy may approve or substitute other relevant finance courses not listed in Group E above.

Accelerated BS/MS Accounting

The Accelerated BS/MS Accounting (BS/MSA) program allows honors students and other outstanding accounting majors to complete the 150 credits of pre-CPA certification education required by the Accountancy Board of the State of Ohio and earn both a bachelor’s and masters degree in accounting. Honors and other outstanding students will be targeted as soon as they identify accounting as a major and will be officially accepted into the accelerated program by the start of their senior year.

To receive official acceptance into the program, students must satisfy the following requirements:

- Provide two letters of recommendation from CBA faculty
- Earn a 3.0 or higher GPA in accounting courses, in business courses, and in all University of Akron courses
- Apply to be and be accepted into Graduate School by the start of their senior year

BS/MSA students will be monitored closely and be given professional accounting advice through the School of Accountancy. Students must earn and maintain a 3.0 or better GPA, business, accounting, and overall to stay in the program. Students who are not able to do so will complete the regular bachelor’s program instead of the accelerated BS/MSA program.

All students in the program will complete 30 credits of graduate courses to fulfill the requirements for the masters degree. They will complete nine credits of 500-level graduate courses during their fourth (senior) year and the remaining 21 credits of 600-level graduate courses during their fifth year. The nine credits of 500-level graduate courses will count toward both their graduate and undergraduate degree programs. A total of 150 credits of graduate and undergraduate courses are required to complete the Accelerated BS/MSA program.

BS/MSA students may be eligible for graduate assistantships during their fourth and fifth years of the program only if they are registered for at least nine graduate credits in each semester. Honors students may be eligible for funding from the Honors College during the fourth year and receive a graduate assistantship during the fifth year.

BS/MSA students must complete a total of 30 graduate credits from the following groups of courses listed below. No more than nine credits can be 500-level (6200:6xx) courses. At least 12 credits must be 600-level accounting (6200:6xx) courses.

- Group A: Accounting and Assurance Core (12 - 15 credits):
  - 6200:615 ERP and Financial Data Communications 3
  - 6200:637 Contemporary Accounting Issues 3
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6200:660 Accounting and Assurance Project (capstone course) 3
  - 6200:520 Advanced Accounting* 3

*All courses in this group are required except for 6200:520, which is not required for students in the AIS option. Students who have completed a similar advanced accounting course at the undergraduate level must take a different course.

- Group B: Taxation Core (3 - 6 credits):
  - 6200:627 Survey of Federal Taxation 3
  - 6200:531 Taxation II 3
  - 6200:658 Enterprise Risk Assessment and Assurance 3
  - 6200:631 Corporate Taxation I 3

*Students are required to take a different taxation course if they have completed the equivalent of 6200:637 or 6200:531. Students are required to complete at least one course but no more than two courses in the taxation core.

- Group C: Accounting Electives (0 - 6 credits):

  - 6200:554 Information Systems Security 3
  - 6200:570 Government and Institutional Accounting 3
  - 6200:659 Assurance Services and Data Mining 3
  - 6200:631 Corporate Taxation I 3

  These electives are open only to students who have not previously completed similar courses.

- Group D: Information Systems Electives (0 - 12 credits):

  - 6500:643 Analysis and Design of Business Systems 3
  - 6500:641 Business Database Systems 3
  - 6500:646 Management of Telecommunications 3
  - 6500:678 Project Management 3

  The Chair of the School of Accountancy may approve or substitute other relevant information systems courses not listed in Group D above. Students pursuing the Accounting Information Systems Option must complete a minimum of 12 credits of information systems courses (i.e., Group D and accounting information systems courses from Group C).

- Group E: Finance Electives (0 - 15 credits):

  - 6400:631 Financial Markets and Institutions 3
  - 6400:645 Investment Analysis 3
  - 6400:671 Strategic Financial Decision Making 3
  - 6400:681 Multinational Corporate Finance 3
  - 6400:691 International Markets and Investments 3

  The Chair of the School of Accountancy may approve or substitute other relevant finance courses not listed in Group E above.

- Group F: Information Systems Electives (0 - 9 credits):

  - 6500:643 Analysis and Design of Business Systems 3
  - 6500:641 Business Database Systems 3
  - 6500:648 Management of Telecommunications 3
  - 6500:678 Project Management 3

  The Chair of the School of Accountancy may approve or substitute other relevant information systems courses not listed in Group D above. Students pursuing the Accounting Information Systems Option must complete a minimum of 12 credits of information systems courses (i.e., Group D and accounting information systems courses from Group C).

- Group G: Finance Electives (0 - 9 credits):

  - 6400:631 Financial Markets and Institutions 3
  - 6400:645 Investment Analysis 3
  - 6400:671 Strategic Financial Decision Making 3
  - 6400:678 Capital Budgeting 3
  - 6400:681 Multinational Corporate Finance 3
  - 6400:691 International Markets and Investments 3

  The Chair of the School of Accountancy may approve or substitute other relevant finance courses not listed in Group E above.

Graduate Studies
Master of Taxation

The Master of Taxation (MTax) Program is a professional degree designed to provide intensive training for students with an interest in developing specialized skills in the area of taxation. The program is intended for practicing accountants and attorneys who wish to further pursue a career in taxation. However, other individuals with a four-year degree in business or accounting from a regionally accredited institution of higher learning (or international equivalent) may also find the program valuable and manageable. The program offers substantive technical and professional knowledge, skills, and abilities needed to function as a taxation specialist in the United States. Students in the program will:

a. develop substantive and comprehensive knowledge of federal taxation;

b. understand the state and local taxation regimes of selected states, including the State of Ohio;

c. develop abilities to research taxation issues, identify and solve taxation problems, and plan taxation strategies;

d. develop the ability to contribute as a taxation specialist to strategic planning and decision-making in organizations;

e. demonstrate effective written and oral presentation skills; and

f. demonstrate ability to use information technology for researching and solving taxation problems.

The MTax curriculum consists of 30 semester credits. Admission to the program is open to the following individuals:

1. Certified Public Accountants and other accountants with equivalent credentials with at least a bachelor’s degree.

2. Individuals with an undergraduate degree in accounting from a regionally accredited institution or international equivalent.

3. Individuals with a JD.

4. Individuals who plan to pursue the joint JD/MTax degree (JD students must complete the first year of law school if full-time or the second year of law school if part-time before they can take courses in the MTax program).

5. Individuals with an undergraduate degree in business from a regionally accredited institution or international equivalent.

6. Other individuals who demonstrate a high potential to succeed in the MTax program (based on GMAT scores, undergraduate GPA, letters of recommendation, and prior work experience) and who have earned at least a B average in 6200:601. Financial Accounting (or equivalent) and 6200:627. Survey of Federal Taxation (or equivalent).

Students who have at least two years of work experience and have an accounting certification (i.e., CPA, CMA, CIA, etc.) or have successfully passed the bar exam do not need to take the GMAT exam to be admitted to the program. All other students must earn a satisfactory score on the GMAT (LSAT for law students) prior to being admitted to the program.

Individuals in categories 3 and 5 must complete an introduction to financial accounting course and a federal income taxation course before they begin taking MTax coursework. Individuals in categories 1 and 2 who wish to further or pursue a career in taxation. However, other individuals who know what they want to do or help them apply what they already know more effectively. For example, computer science majors may choose to concentrate in information systems while psychology majors would benefit from the human resource management option. The introductory coursework for this program is termed a foundation core and consists of 24 credits which may be waived if the student has completed prior study in the area. The remaining 33 credits of coursework consists of 12 credits of general management coursework, 18 credits of specialization courses and one 3-credit free elective. If all foundation courses are waived, the program is 33 credits in length. Students may waive the GMAT requirement if they have an acceptable GRE score and have two years of document business experience.

- Foundation Core:
  All are required unless waived at time of admission

3250:600 Foundations of Economic Analysis 3
6200:601 Financial Accounting 3
6400:602 Managerial Finance 3
6400:655 Government and Business 3
6500:600 Management and Organizational Behavior 3
6500:601 Quantitative Decision Making 3
6500:602 Computer Techniques for Management 3
6600:600 Marketing Concepts 3

Options

Choose a concentration from the following:

Information Systems Management (ISM)

- Management Core Courses (12 credits)
  6500:640 Information Systems and IT Governance 3
  6500:652 Organizational Behavior 3
  6500:663 Data Analysis for Managers 3
  6500:675 Supply Chain Management 3

- Information Systems Core (15 credits)
  6500:641 Business Database Systems 3
  6500:643 Analysis and Design of Business Systems 3
  6500:645 Software Development and Quality Assurance 3
  6500:646 Enterprise Systems Implementation 3
  6500:678 Project Management 3

- Electives - take any two of the following (6 credits)
  6500:650 Management of Organizational Behavior 3
  6500:652 Information Technology Management 3
  6500:664 Knowledge Management and Business Intelligence 3
  6500:673 Organizational Transformation 3

- Permission of Director of Graduate Business Programs

Total concentration: 21

Human Resource Option (HRM)

- Management Core Courses (12 credits)
  6500:640 Information Systems and IT Governance 3
  6500:652 Organizational Behavior 3
  6500:663 Data Analysis for Managers 3
  6500:675 Supply Chain Management 3

- Free Elective (3 credits):
  The student must select 3 credits of free electives from outside the area of concentration. A 500-level course may be used but the student may not count more than 6 credits of 500-level courses in total toward the fulfillment of degree requirements. Approval of Director is required.

- HRM Required Concentration Courses (15 credits)
  6500:650 Human Resource Systems for Managers 3
  6500:651 Management of Organizational Transformation 3
  6500:654 Management of Organizational Conflict 3
  6500:659 Strategic and Global Human Resource Management 3
  6500:660 Staffing and Employment Regulation 3

- HRM Restricted Electives (select 3 credits)
  Any 6500:6xx course

Total Concentration: 18

Not all elective classes will be offered each year. Electives will be offered based on demand and faculty resource availability. 6200:628 Tax Research must be taken in the first semester that the class is available.
Accelerated MSM - ISM Program Option

The MSM - Fast track Information Systems option has been designed for students in undergraduate information systems or related programs who are interested in pursuing graduate work with a project management emphasis. Additional requirements for students wishing to pursue this option include:

- Undergraduate degree in Information Systems (from AACSB accredited institution) or related fields with a Pre-MBA minor
- Undergraduate GPA of at least 3.0 with successful course completion in programming, database, and networking (B or better)
- Documented completion of an IS related internship (or other IS work experience) with a letter summarizing project and work scope from supervisor
- Letters of reference from undergraduate program director or faculty
- Undergraduate students who wish to count 6200:554 and 6500:520 toward their graduate degree may take these classes during their senior year and must receive a grade of B or better. These classes must be taken exclusive of students requirements toward the baccalaureate degree.
- Undergraduate degree must be completed at the most two years prior to planned date of program entry

Management Core Courses (9 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:640</td>
<td>Information Systems and IT Governance</td>
<td>3</td>
</tr>
<tr>
<td>6500:683</td>
<td>Data Analysis for Managers</td>
<td>3</td>
</tr>
<tr>
<td>6500:675</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Information Systems Core (12 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:643</td>
<td>Analysis and Design of Business Systems</td>
<td>3</td>
</tr>
<tr>
<td>6500:645</td>
<td>Software Development and Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>6500:646</td>
<td>Enterprise Systems Implementation</td>
<td>3</td>
</tr>
<tr>
<td>6500:678</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Practicum (3 credits) Choose one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:690</td>
<td>Selected Topics in Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(This course may be taken as an elective to add a Global or Study Abroad experience)</td>
<td></td>
</tr>
<tr>
<td>6700:695</td>
<td>Internship (see below for guidelines)</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (6 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:520</td>
<td>Management of Data Networks</td>
<td>3</td>
</tr>
<tr>
<td>6500:554</td>
<td>Information System Security</td>
<td>3</td>
</tr>
<tr>
<td>6500:644</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(Recommended for students with an undergraduate degree in a non-Business field)</td>
<td></td>
</tr>
<tr>
<td>6500:66x</td>
<td>Any Management course</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Concentration 18

Guidelines for receiving credit for the Information Systems Internship:

- Students are required to work at least 20 hours per week
- Internship must be approved by the Department Chair
- Internships will be approved based on the type of business and the scope of work to be done
- Interns will complete the report based on MIS faculty specifications
- The internship should be in an area directly related to any of traditional Information Systems functions related to systems planning, analysis, design, programming, implementation, networking operations and infrastructure, technical documentation, systems installation, maintenance, and IT auditing.

Joint Programs

The School of Law and the College of Business Administration (CBA) offer a joint program in legal and administrative studies (J.D./M.B.A.), a joint program in legal and taxation studies (J.D./M.Tax.i), and a joint program in legal and human resource studies (J.D./M.S.M.). These combinations are open to the student preparing for a career in such areas as corporate law, tax accounting, human resource management or legal practice in government. The amount of time required to complete a joint degree program is shorter than the time required to complete both programs independently. To pursue either one of these cooperative programs, the student must apply to and be accepted by both the School of Law and the Graduate School. The student should contact each school independently for information covering admission criteria and procedures for further information on School of Law admissions, write: Director of Admissions, School of Law, The University of Akron, Akron, OH 44325-2901. A baccalaureate degree is required.

Degree Requirements

A student is required to fulfill the requirements of the School of Law, 87 credits, which includes 9 to 10 credits transferred from the CBA. The requirements of the CBA may be met by fulfilling the requirements previously listed which include the common body of knowledge (Foundation) courses (unless waived because of prior undergraduate credits earned), and 25 credits for M.B.A. (24 for the M.S.M.-HR) of advanced courses in the CBA plus nine credits transferred from the School of Law. The Master of Taxation program consists of 21 credits of advanced courses in the CBA plus 9 credits transferred from the School of Law. The reciprocal acceptance of course credits by each school is the essence of the joint programs. All law courses used to fulfill CBA requirements must be approved by the director of Graduate Programs in Business prior to completion. To earn both degrees, a total of 98 (J.D./M.Tax.i), 102 (J.D./M.B.A.), or 101 (J.D./M.S.M.-HR) credits is required, depending on the master’s program pursued. More credits may be required for the master’s degree if Foundation courses are required.

Upon the approval of the director of Graduate Programs in Business, 9 credits of School of Law courses may be applied toward the Masters of Taxation degree. Law courses from the following list may be applied to the M.Tax program:

- 9200:641 Corporate Taxation I (3 credits)
- 9200:642 Taxation of Intellectual Property (3 credits)
- Other courses offered in the School of Law as approved by the Chair of the School of Accountancy and the M.Tax program coordinator

J.D./M.B.A. students may transfer up to nine credits of School of Law courses into the M.B.A. program. Up to six credits may be in their area of concentration and must be selected from the courses listed below. Related courses not listed under concentrations may transfer with approval of the director of graduate programs in Business Administration. Three credits of free electives may be chosen from other business-related law courses and must be approved by the director of graduate programs in Business Administration.

J.D./M.S.M.-HR students may transfer up to nine credits of School of Law courses into the M.S.M. program. Up to six credits may be in their area of concentration and must be selected from the courses listed below. Three credits of free electives may be chosen from other business-related law courses and must be approved by the director of graduate programs in Business Administration.

Law Courses to be used as MBA Concentration Courses

Choices for Concentration Electives:

Finance (choose 3 credits)

- 9200:629 Secured Transactions
- 9200:635 Bankruptcy Law
- 9200:639 Estate and Gift Taxation
- 9200:652 Land Use Planning
- 9200:671 Securities Regulation
- 9200:675 Special Problems in Estate Planning
- 9200:680 Qualified Pensions and Profit Sharing
- 9200:685 Wills, Trusts, and Estates I (3 credits)
- 9200:686 Wills, Trusts, and Estates II (3 credits)
- 9200:684 Mergers and Acquisitions (3 credits)

Other courses offered in the School of Law as approved by the Chair of the School of Accountancy, M.B.A., and M.S.M.

International Business (choose 6 credits)

- 9200:649 International Law
- 9200:676 International Trade
- 9200:691 International Investments and Commercial Transactions
- 9200:716 International Patent Law
- 9200:718 International Trademark Law

Management (choose 6 credits)

- 9200:626 Basic Business Associations
- 9200:633 Corporations
- 9200:637 Employment Discrimination
- 9200:642 Alternative Dispute Resolution
- 9200:650 Labor Law and Collective Bargaining
- 9200:651 Employment Law
- 9200:659 Negotiation

Marketing (choose 3 credits)

- 9200:611 Entertainment Law
- 9200:637 Commercial Paper
- 9200:659 Negotiation
- 9200:672 Seminar in Business Planning
- 9200:681 Sports Law
- 9200:683 Seminar in Product Liability
- 9200:701 Patent Law and Policy

Law Courses to be used as MSM-HR Concentration Courses

- 9200:626 Basic Business Associations
- 9200:633 Corporations
- 9200:637 Employment Discrimination
- 9200:642 Alternative Dispute Resolution
- 9200:650 Labor Law and Collective Bargaining
- 9200:651 Employment Law
- 9200:659 Negotiation

Human Resources Lawyer

College of Health Sciences and Human Services

James M. Lynn, Ph.D., Interim Dean

Doctor of Audiology Program (Au.D.)

The Au.D. is a four-year post-baccalaureate professional doctoral degree program. Doctors of Audiology are independent professionals who specialize in the diagnosis, management and treatment of hearing and balance disorders.

The Au.D. program, which is known as the Northeast Ohio Au.D. Consortium (NOAC), is a joint degree program administered by The University of Akron and Kent State University. NOAC is a single unified program of faculty, students, facilities, and resources. Students take classes and participate in clinic at both The University of Akron and Kent State University with half of the classes offered at each university. Students must choose to be admitted to NOAC either through The University of Akron or Kent State University and they will register for courses on the campus where they are admitted. All classes are cross-listed.

Admission Requirements:

- Bachelor’s degree from an accredited college or university
- Grade point average of 3.0 or higher
- Three letters of recommendation
- Graduate Record Examination scores
- Personal statement of purpose as to why the applicant wishes to become an audiologist

Degree Requirements - Doctor of Audiology

The Au.D. curriculum is a continuous 48 month post-baccalaureate course of study designed to integrate classroom, laboratory, and clinical experiences. All students will attend full-time and take the same courses in appropriate sequence. The emphasis of the program is on the principles and practices underlying evaluation, treatment, and provision of hearing care services. For progression and graduation, students must meet the following degree requirements:

- Maintain an overall grade point average of 3.0
- Complete a minimum of 120 semester credits
- Accrue 2000 clock hours of clinical experience
- Meet the requirements for Ohio licensure in Audiology
- Pass academic and clinical competency-based examinations
- Complete the following required courses:
  - 7700:701 Basic and Applied Acoustics in Audiology 4
  - 7700:702 Anatomy and Physiology of the Peripheral Auditory & Vestibular System 3
  - 7700:703 Auditory Phonetics 3
  - 7700:704 Critical Analysis of Research in Audiology 2
  - 7700:741 Directed Observation in Audiology I 1
  - 7700:705 Auditory Disorders 2
  - 7700:706 Anatomy and Physiology Underlying Neuro-Otology 4
  - 7700:707 Audiology in Psychopathology 3
  - 7700:708 Critical Analysis of Research in Audiology II 2
  - 7700:742 Directed Observation in Audiology II 1
  - 7700:709 Audiologic Assessment 3
  - 7700:710 Industrial and Community Noise 3
  - 7700:743 Clerkship I 1
  - 7700:711 Speech-Language Pathology for the Audiologist 3
  - 7700:712 Diagnosis of Auditory Disorders 3
  - 7700:713 Hearing Aid Technology 4
  - 7700:714 Gerontological Issues in Audiology 3
  - 7700:744 Clerkship II 1
  - 7700:715 Central Auditory Processing: Evaluation and Management 3
  - 7700:716 Adult Hearing Aid Fitting and Selection 3
  - 7700:717 Pediatric Audiology 3
  - 7700:718 Cochlear Implants 2
  - 7700:745 Internship I 2
  - 7700:719 Counseling in Audiology 3
  - 7700:720 Pediatric Amplification 3
  - 7700:746 Internship II 2
  - 7700:721 Evaluation and Management of Balance Disorders 3
  - 7700:722 Audiologic Management of the School-Aged Child 3
  - 7700:723 Audiolology in Rehabilitation of Adults 3
  - 7700:724 History of Audiology 1
  - 7700:747 Graduate Audiology I 3
  - 7700:725 Medical Management of Auditory Disorders 2
  - 7700:726 Electrophysiological Techniques in Audiology 3
  - 7700:727 Cultural Issues in Deafness 2
  - 7700:728 Seminar in Audiology 2

Lewis Center for Education: A program of study is offered leading to the Master of Arts in Family and Consumer Sciences degree, which prepares graduates to work in child and family development, child life, clothing and textiles, and food science. Students must meet the following admission requirements for acceptance in the program:

- Minimum GPA of 2.75 for four years of undergraduate study or 3.00 for the last two years of undergraduate study.
- Completion of general Graduate Record Examination within the five years preceding application, with the following score:
  - 800 combined on verbal and quantitative with at least a 4.5 on analytical writing
  - OR
  - 900 combined on verbal and quantitative with at least a 4.0 on analytical writing
- Submission of a letter of personal career goals or statement of purpose, sent to the director of graduate studies in the School of Family and Consumer Sciences.
- Three letters of recommendation must be submitted.
- The graduate faculty of the School of Family and Consumer Sciences may require an interview with any applicant.

Accepted students will be expected to comply with the following requirements:

- Complete the course of study in one of the four options, with a minimum of 40 credits. (Child Life minimum is 42 credits)
- Pass an oral examination covering the thesis or project report.
- Complete the course of study in one of the four options, with a minimum of 40 credits. (Child Life minimum is 42 credits)

Master’s Degree

Family and Consumer Sciences

A program of study is offered leading to the Master of Arts in Family and Consumer Sciences degree. This option offers options in child and family development; child life; clothing, textiles and interiors; and food science. Students must meet the following admission requirements for acceptance in the program:

- Minimum GPA of 2.75 for four years of undergraduate study or 3.00 for the last two years of undergraduate study.
- Completion of general Graduate Record Examination within the five years preceding application, with the following score:
  - 800 combined on verbal and quantitative with at least a 4.5 on analytical writing
  - OR
  - 900 combined on verbal and quantitative with at least a 4.0 on analytical writing
- Submission of a letter of personal career goals or statement of purpose, sent to the director of graduate studies in the School of Family and Consumer Sciences.
- Three letters of recommendation must be submitted.
- The graduate faculty of the School of Family and Consumer Sciences may require an interview with any applicant.

Accepted students will be expected to comply with the following requirements:

- Complete the course of study in one of the four options, with a minimum of 40 credits. (Child Life minimum is 42 credits)
- Pass the comprehensive examination over major and minor areas after the completion of at least 19 credits of graduate work.
- Complete a master’s thesis or a master’s project. The thesis option involves the design and evaluation of original research in an appropriately related area commensurate with the student’s background and area of pursuit. The project option involves the design, development, implementation, and evaluation of original and creative programs and/or resource materials. A written proposal for the thesis or project cannot be submitted until successful completion of the comprehensive examination.
- Pass an oral examination covering the thesis or project report.

Foundation Courses

- Required by all program options:
  - 7400:604 Orientation to Graduate Studies in Family and Consumer Sciences 1
  - 7400:680 Historical and Conceptual Bases of Family and Consumer Sciences 3
  - 7400:685 Research Methods in Family and Consumer Sciences 3

Child and Family Development Option

- Core Courses:
  - 7400:602 Family in Lifespan Perspective 3
  - 7500:605 Developmental Parent-Child Interactions (online) 3
  - 7400:607 Family Dynamics 3
  - 7400:610 Child Development Theories 3
  - 7400:665 Development in Infancy and Early Childhood 3

- Option Electives
  - Select 6 credits from the following courses with approval of advisor (if a course has been taken at the undergraduate level, other courses must be selected):
    - 7400:501 American Families in Poverty (online) 3
    - 7400:502 Middle Childhood and Adolescence 3
    - 7400:506 Family Financial Management 3
    - 7400:540 Family Crisis 3
    - 7400:541 Family Relationships in the Middle and Later Years 3
    - 7400:542 Human Sexuality 3
Core Courses:

- 400:548 Culture, Ethnicity, and the Family (online) 3
- 400:548 Before and After School Child Care 2
- 400:560 Organization and Supervision of Child-Care Centers 3
- 400:586 Parent Education (online) 3
- 400:688 Practicum in Family and Consumer Sciences 3

Cognate Electives

Select 7 credits with approval of advisor from within the School of Family and Consumer Sciences OR from a cognate area outside the School, OR from a combination of the two.

Thesis or Project (select one):

- 400:694 Master’s Project 5
- 400:699 Master’s Thesis 5
Total 40

Child Life Option

Core Courses:

- 300:546 Culture, Ethnicity, and the Family (online) 3
- 300:500 Nutrition Communication and Education 4
- 5600:651 Techniques of Counseling 3
- 300:551 Child in the Hospital 4
- 300:555 Practicum Experience in a Child Life Program 3
- 300:584 Hospital Settings, Children, and Families 3
- 300:552 Children, Illness, and Loss 3
- 300:595 Child Life Internship 5

Cognate:

- 5600:622 Introduction to Play Therapy and 3
Select three credits with approval of advisor from within the School of Family and Consumer Sciences OR from a cognate area outside of the School.

Thesis or Project (select one):

- 400:694 Master’s Project 5
- 400:699 Master’s Thesis 5

Nonthesis (Select nine credits from the following list; two courses must be 600-level)

- 300:501 American Families in Poverty (online) 3
- 300:504 Middle Childhood and Adolescence 3
- 300:540 Family Crisis 3
- 300:586 Seminar: FCS (Child Life Topic) 3
- 300:596 Parent Education (online) 3
- 300:605 Developmental Parent-Child Interactions (online) 3
- 300:610 Child Development Theories 3
- 300:665 Development in Infancy and Early Childhood 3
- 300:698 Internship: Advanced Programming 5
Total for Master’s Project or Master’s Thesis 42
Total for Nonthesis Option 46

Clothing, Textiles and Interiors Option

Core Courses:

- 300:634 Material Culture Studies 3
- 300:639 Theories of Fashion 3

Options Electives (select 13 credits with approval of advisor):

- 300:518 History of Interior Design I 4
- 300:519 History of Interior Design II 4
- 300:523 Professional Image Analysis 3
- 300:525 Textiles for Apparel 3
- 300:527 Global Issues in Textiles and Apparel 3
- 300:536 Textile Conservation 3
- 300:537 Historic Costume 3
- 300:538 History of Fashion 3
- 300:631 Problems in Design 1-6
- 300:688 Practicum in Family and Consumer Sciences 3
- 300:696 Individual Investigation in Family and Consumer Sciences 1-6

Cognate Electives:

Select 6 credits with approval of advisor from courses within the School of Family and Consumer Sciences OR from a cognate area outside the School OR from a combination of the two.

Thesis or Project (select one):

- 300:694 Master’s Project 5
- 300:699 Master’s Thesis 5
Total 40

Food and Consumer Science Option (admissions temporarily suspended)

Core Courses:

- 300:576 Analysis of Food 3
- 300:578 Developments in Food Science 3

7400:520 Experimental Foods (if taken at the undergraduate level, choose 3 additional credits from option electives) 3

Option Electives:

Select 9-12 credit hours with the approval of advisor from among the following (if a course has been taken at the undergraduate level, other courses must be selected):

- 3100:500 Food Plants 2
- 3250:540 Special Topics: Economics/World Food Problems 4
- 7400:574 Cultural Dimensions of Food 3
- 7400:585 Seminar in Family and Consumer Sciences (Food Science topic) 2-3
- 7400:570 The Food Industry: Analysis and Field Study 3
- 7400:503 Advanced Food Preparation 3
- 7400:524 Nutrition in the Life Cycle 3
- 7400:624 Advanced Human Nutrition I 3
- 7400:625 Advanced Human Nutrition II 3
- 7400:688 Practicum in Family and Consumer Sciences 3

Cognate Electives:

Select 5-8 credits with approval of advisor from the School of Family and Consumer Sciences OR from a cognate area outside the School OR from a combination of the two.

Thesis or Project (select one):

- 7400:694 Master’s Project 5
- 7400:699 Master’s Thesis 5
Total 40

Note: Students in all of the options who are working on a master’s thesis may elect to take the course 7400:690 Thesis Research/Reading. This course will not, however, count as part of the required 40-42 credits in the program.

Nutrition and Dietetics

A program of study is offered leading to the Master of Science in Nutrition and Dietetics. Students must meet the following admission requirements for acceptance in the program:

- Meet the minimum GPA of 2.75 for four years of undergraduate study or 3.00 for the last two years of undergraduate study.
- Completion of general Graduate Record Examination within the five years preceding application, with the following score:
  - 800 combined on verbal and quantitative with at least a 4.5 on analytical writing; OR
  - 900 combined on verbal and quantitative with at least a 4.0 on analytical writing
- Submit a letter of personal career goals.
- Three letters of recommendation must be submitted.
- The graduate faculty of the School of Family and Consumer Sciences may require an interview with any applicant.

In addition to the above, the student will be expected to comply with the following requirements:

- Complete the course of study with a minimum of 40 credits. These credits will include:
  - foundation courses to prepare the student for research in family and consumer sciences as a discipline;
  - core courses in the area of specialty;
- Electives selected from within the department or from another discipline to strengthen student’s professional goals. These courses will be selected in consultation with and approval from the student’s graduate faculty advisor.
- Pass a written comprehensive examination over major and minor areas after the completion of at least 19 credits of graduate work.
- Apply for advancement to candidacy upon successful completion of 24 credits of graduate study, the written comprehensive examination, and an approved prospectus for a thesis or project.
- Complete a thesis or a project. The thesis option involves the design and evaluation of original research in an appropriately related area commensurate with the student’s background and area of pursuit. The project option involves the design, development, implementation and evaluation of original and creative programs and/or resource materials. A written proposal for the thesis or project option cannot be submitted until the successful completion of a comprehensive examination.
- Pass an oral examination covering the thesis or project.

Foundation Courses

Required by all program options:

- 7400:634 Orientation to Graduate Studies in Family and Consumer Sciences 1
- 7400:680 Historical and Conceptual Bases of Family and Consumer Sciences 3
- 7400:685 Research Methods in Family and Consumer Sciences 3
The master's thesis is optional for students in speech-language pathology. All students must be selected from Biology (3100) or Chemistry (3150). If a nutrition course has been taken at the undergraduate level, it may not be used at the graduate level.

Applications for admission in Fall or Spring are accepted and considered only once a year. Completion of 5610:693 School-Based Externship: Speech-Language Pathology and 5610:691 School-Based Externship Seminar may be substituted for one 7700:695 registration and one 7700:696 SLP Seminar registration.

• Select with the approval of advisor from among the following or other courses that strengthen the student’s goals.

Cognate Electives (8 to 11 credits required)

Select with the approval of advisor from among the following or other courses that strengthen the student’s goals.

Electives (9 to 12 credits required)

Cognate Electives (8 to 11 credits required)

Select with the approval of advisor from among the following or other courses that strengthen the student’s goals.

Nutritional health and dietetics, which can be done at the graduate level.

Academic requirements within the school for speech-language pathology majors:

Beyond the Graduate School and the MSW Program prior to admission. The applicant must therefore complete application forms for both the Graduate School and the MSW Program. It is the applicant's responsibility to make sure that all required application materials have been received. Applications for full-time, part-time, and advanced standing close on February 15. All application materials must be received by this date. Full-time and part-time admissions are available only for the fall semester.

The applicant must submit the following to the Graduate School through the online graduate application:

The Joint MSW Program offers:

Admission Requirements:

The Joint MSW Program is committed to diversity in the student body. An applicant for admission as a degree candidate in social work (either full-time, part-time, or advanced standing) must fulfill the general admission requirements of both the Graduate School and the MSW Program prior to admission. The applicant must therefore complete application forms for both the Graduate School and the MSW Program. It is the applicant's responsibility to make sure that all required application materials have been received. Applications for full-time, part-time, and advanced standing close on February 15. All application materials must be received by this date. Full-time and part-time admissions are available only for the fall semester.

The applicant must submit the following to the Graduate School through the online graduate application:

1. Undergraduate degree in a related field.
2. A completed Application Checklist.
3. A recent resume which highlights social work or human service experience.
4. Three letters of reference/recommendation forms (including one from immediate supervisor, if employed).
5. A completed Application Checklist.
6. An official transcript from each college or university attended (must include content in human biology as well as liberal arts coursework) sent directly to the Graduate School.
7. Undergraduate degree in social work or a related field.

The M.S. in Nutrition and Dietetics is not a route to becoming a Registered Dietitian (R.D.). Students interested in becoming R.D.s should contact the School for proper course selection, some of which can be done at the graduate level.

Speech-Language Pathology and Audiology

The School of Speech-Language Pathology and Audiology offers a Master of Arts degree in Speech-Language Pathology. The program in speech-language pathology is designed to lead to professional licensure by the State of Ohio Board of Speech-Language Pathology and Audiology.

Master of Arts degree in Speech-Language Pathology Program

Admission Requirements - Speech-Language Pathology

• Hold an undergraduate major in speech-language pathology or complete undergraduate work in speech-language pathology

• Complete requirements for admission and send to Graduate School:
  1. Application with intent to major in speech-language pathology
  2. Official transcript with Fall term grades included
  3. Three letters of recommendation
  4. Graduate Record Examination scores
  5. Resume
  6. Statement of Purpose
  7. Graduate Assistantship - use Apply Online check box

Applications for admission in Fall or Spring are accepted and considered only once per year. Admission is competitive.

Applications for admission for the following academic year should be received by January 15.

Degree Requirements

• The master’s thesis is optional for students in speech-language pathology. All students will successfully complete a course of study with a minimum of 56 credits, two of which may be thesis credits for students electing the thesis option. Academic requirements within the school for speech-language pathology majors:

Social Work

The Master of Social Work Program is a joint degree program administered by The University of Akron and Cleveland State University. The Joint MSW Program began in 1995. Distance learning technology, utilizing interactive video and audio systems, links faculty and students at the two institutions. The degree program is accredited by the Council on Social Work Education. The curriculum of the Joint MSW Program is designed to prepare students for advanced level professional practice in social work. The program provides a rigorous intellectual base, an opportunity for effective skill development, and an educational perspective that views human diversity as desirable and enriching to society.

The Joint MSW Program offers:

• Preparation for the advanced practice of social work
• A degree program accredited by the Council on Social Work Education
• Part-time study
• Evening/Weekend courses
• Regional field placements
• Advanced standing program for qualifying students with a BSW

Admission Requirements:

The Joint MSW Program is committed to diversity in the student body. An applicant for admission as a degree candidate in social work (either full-time, part-time, or advanced standing) must fulfill the general admission requirements of both the Graduate School and the MSW Program prior to admission. The applicant must therefore complete application forms for both the Graduate School and the MSW Program. It is the applicant’s responsibility to make sure that all required application materials have been received. Applications for full-time, part-time, and advanced standing close on February 15. All application materials must be received by this date. Full-time and part-time admissions are available only for the fall semester.

The applicant must submit the following to the Graduate School through the online graduate application:

1. Graduate application form accompanied by the application fee
2. An essay of 3-5 typed pages explaining:
   a) why he/she wants to be a social worker;
   b) why a graduate degree is felt to be necessary to fulfill his/her personal or professional objectives;
   c) his/her views regarding diversity in society;
   d) a situation in which he/she was the recipient/provider of help, emotionally, socially, or economically, and if/how this situation impacted the desire to pursue an advanced degree in social work.

• A recent resume which highlights social work or human service experience.
• Three letters of reference/recommendation forms (including one from immediate supervisor, if employed).
• A completed Application Checklist.

In addition, applicants to the Joint MSW Program must have:

1. An official transcript from each college or university attended (must include content in human biology as well as liberal arts coursework) sent directly to the Graduate School.
2. Undergraduate degree in social work or a related field.
### Second Year Concentrations (Macro Practice):  
- **Fall Semester**  
  - 7750:603 Advanced Field Practicum 3  
  - 7750:611 Dynamics of Racism and Discrimination 3  
  - 7750:634 Community, Economic Systems and Social Policy Analysis 3  
  - 7750:672 Community Organization and Planning 3  
  - One elective 3  

- **Spring Semester**  
  - 7750:604 Advanced Field Practicum 3  
  - 7750:671 Social Work Administration 3  
  - 7750:673 Strategies of Community Organization 3  
  - 7750:675 Program Evaluation 3  
  - One elective 3

### Part-Time Program  

#### Professional Foundation:  
- **Fall Semester (First Year)**  
  - 7750:631 HBSE: Small Systems 3  
  - 7750:646 Social Welfare Policy I 3  

- **Spring Semester (First Year)**  
  - 7750:632 HBSE: Large Systems 3  
  - 7750:647 Social Welfare Policy II 3  

- **Fall Semester (Second Year)**  
  - 7750:622 Fundamentals of Research I 3  
  - 7750:605 Social Work Practice with Small Systems 3  
  - 7750:601 Foundation Field Practicum 3  

- **Spring Semester (Second Year)**  
  - 7750:623 Fundamentals of Research II 3  
  - 7750:606 Social Work Practice with Large Systems 3  
  - 7750:602 Foundation Field Practicum 3  

- **Fall Semester (Second Year)**  
  - 7750:631 HBSE: Small Systems 3  
  - 7750:646 Social Welfare Policy I 3  

- **Spring Semester (Second Year)**  
  - 7750:622 Fundamentals of Research I 3  
  - 7750:605 Social Work Practice with Small Systems 3  
  - 7750:602 Foundation Field Practicum 3  

### Concentrations (Direct Practice):  
- **Fall Semester (Third Year)**  
  - 7750:603 Advanced Field Practicum 3  
  - 7750:611 Dynamics of Racism and Discrimination 3  
  - 7750:663 Psychopathology and Social Work 3  

- **Spring Semester (Third Year)**  
  - Two electives 6  

- **Fall Semester (Fourth Year)**  
  - 7750:607 Advanced Practice with Small Systems I 3  
  - 7750:603 Advanced Field Practicum 3  
  - One elective 3  

- **Spring Semester (Fourth Year)**  
  - 7750:608 Advanced Practice with Small Systems II 3  
  - 7750:604 Advanced Field Practicum 3  
  - 7750:675 Program Evaluation 3  

### Concentrations (Macro Practice):  
- **Fall Semester (Third Year)**  
  - 7750:611 Dynamics of Racism and Discrimination 3  
  - 7750:634 Community, Economic Systems and Social Policy Analysis 3  

- **Spring Semester (Third Year)**  
  - 7750:671 Social Work Administration 3  
  - One elective 3  

- **Fall Semester (Fourth Year)**  
  - 7750:672 Community Organization and Planning 3  
  - 7750:603 Advanced Field Practicum 3  
  - One elective 3  

- **Spring Semester (Fourth Year)**  
  - 7750:673 Strategies of Community Organization 3  
  - 7750:675 Program Evaluation 3  
  - 7750:604 Advanced Field Practicum 3  

### Program Requirements:  
- Complete a minimum of 60 graduate credits of approved courses in social work with an average grade of “B” or better on all classroom courses and satisfactory grades in all field courses. Students must register only for 600-level courses.

- Complete an approved program of courses which include the following required courses:

### Full Time Program  

#### First Year Professional Foundation:  
- **Fall Semester**  
  - 7750:601 Foundation Field Practicum 3  
  - 7750:606 Social Work Practice with Small Systems 3  
  - 7750:622 Fundamentals of Research I 3  
  - 7750:631 Human Behavior and Social Environment: Small Social Systems 3  
  - 7750:646 Social Welfare Policy I 3  

- **Spring Semester**  
  - 7750:602 Foundation Field Practicum 3  
  - 7750:606 Social Work Practice with Large Systems 3  
  - 7750:647 Social Welfare Policy II 3  
  - 7750:623 Fundamentals of Research II 3  
  - 7750:632 Human Behavior and Social Environment: Large Social Systems 3  

#### Second Year Concentrations (Direct Practice):  
- **Fall Semester**  
  - 7750:603 Advanced Field Practicum 3  
  - 7750:607 Advanced Practice with Small Systems I 3  
  - 7750:611 Dynamics of Racism and Discrimination 3  
  - 7750:663 Psychopathology and Social Work 3  
  - One elective 3  

- **Spring Semester**  
  - 7750:604 Advanced Field Practicum 3  
  - 7750:608 Advanced Practice with Small Systems II 3  
  - 7750:675 Program Evaluation 3  
  - Two electives 6  

- **Spring Semester**  
  - 7750:604 Advanced Field Practicum 3  
  - 7750:671 Social Work Administration 3  
  - 7750:673 Strategies of Community Organization 3  
  - 7750:675 Program Evaluation 3  
  - 7750:604 Advanced Field Practicum 3
Advanced Standing Program

Direct Practice Concentration

- Summer Semester
  7750:650 Advanced Standing Integrative Seminar 6

- Fall Semester
  7750:611 Dynamics of Racism and Discrimination 3
  7750:663 Psychopathology and Social Work 3
  7750:607 Advanced Practice with Small Systems I 3
  7750:603 Advanced Field Practicum 3
    One elective 3

- Spring Semester
  7750:675 Program Evaluation 3
  7750:604 Advanced Practice with Small Systems II 3
  7750:604 Advanced Field Practicum 3
    Two electives 6

Macro Practice Concentration

- Summer Semester
  7750:650 Advanced Standing Integrative Seminar 6

- Fall Semester
  7750:611 Dynamics of Racism and Discrimination 3
  7750:672 Community Organization and Planning 3
  7750:674 Community, Economic Systems and Policy Analysis 3
  7750:603 Advanced Field Practicum 3
    One elective 3

- Spring Semester
  7750:671 Social Work Administration 3
  7750:673 Strategies of Community Organization 3
  7750:675 Program Evaluation 3
  7750:604 Advanced Field Practicum 3
    One elective 6

Testing Out Policy

In order to avoid duplication and redundancy of course content during the foundation year, the MSW Program allows students the opportunity to test out of the following courses:

7750:631 Human Behavior and Social Environment: Small Social Systems 3
7750:646 Social Welfare Policy 3
7750:622 Fundamentals of Research I 3

Students wishing to test out of one or more of the above courses must notify the MSW Program Director at least three weeks prior to the start of the semester in which the course is normally taught. The proficiency exam must be taken prior to classes starting in that semester. There are no fees or penalties associated with taking these exams, however, each exam may be taken only once.

Additional information about the MSW Program may be obtained from the School of Social Work.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7500:590</td>
<td>Music Workshops</td>
<td>6</td>
</tr>
<tr>
<td>7520:5—6</td>
<td>Applied Music</td>
<td>8</td>
</tr>
<tr>
<td>7510:6—</td>
<td>Ensemble</td>
<td>2</td>
</tr>
<tr>
<td>7500:5—6</td>
<td>Other music courses</td>
<td>8</td>
</tr>
<tr>
<td>5100:5—6</td>
<td>Educational Foundations and Leadership</td>
<td>4</td>
</tr>
<tr>
<td>5170:5—6</td>
<td>General Administration</td>
<td>4</td>
</tr>
<tr>
<td>55—5—6</td>
<td>Curricular and Instructional Studies</td>
<td>4</td>
</tr>
<tr>
<td>5500:780</td>
<td>Seminar in Curricular and Instructional Studies</td>
<td>1-3</td>
</tr>
<tr>
<td></td>
<td>(Maximum of 4 credits of 5500:780)</td>
<td></td>
</tr>
</tbody>
</table>

### Non-Thesis Option – 34 credits

- **Required Music Education Core Courses – 13-15 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring)

- **Additional music/education courses – select 25 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

### Music Education Option: Instrumental Emphasis

#### Thesis Option – 32 credits

- **Required Music Education Core Courses – 13-15 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring)
  - 7500:699 Master’s Thesis/Project 4-6

- **Additional music/education courses – select 23 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

#### Non-Thesis Option – 34 credits

- **Required Music Education Core Courses – 9 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring) 3

- **Additional music/education courses – select 25 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

### Music Education Option: Choral Emphasis

#### Thesis Option – 32 credits

- **Required Music Education Core Courses – 13-15 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring)

- **Additional music/education courses – select 23 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

#### Non-Thesis Option – 34 credits

- **Required Music Education Core Courses – 9 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring) 3

- **Additional music/education courses – select 25 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

### Music Education Option: General Music Emphasis

#### Thesis Option – 32 credits

- **Required Music Education Core Courses – 13-15 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring) 3

- **Additional music/education courses – select 25 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)

#### Non-Thesis Option – 34 credits

- **Required Music Education Core Courses – 9 credits**
  - 7500:611 Foundations of Music Education (summer) 3
  - 7500:612 Practices and Trends in Music Education (fall) 3
  - 7500:614 Measurement and Evaluation in Music Education (spring) 3

- **Additional music/education courses – select 25 credits with approval of music education and graduate advisors. Choices may include the following:**
  - 7500:675 Seminar in Music Education* 9
  - 7500:697 Advanced Problems in Music Education* 4
  - 7500:590 Music Workshops* 6
  - 7520:5—6  Applied Music 8
  - 7510:6—    Ensemble 2
  - 7500:5—6  Other music courses 8
  - 5100:5—6  Educational Foundations and Leadership 4
  - 5170:5—6  General Administration 4
  - 55—5—6  Curricular and Instructional Studies 4
  - 5500:780 Seminar in Curricular and Instructional Studies 1-3
  - (Maximum of 4 credits of 5500:780)
Music Education Option: Choral Conducting

- Required Music Education Core (13 credits):
  7500:611 Foundations of Music Education 3
  7500:612 Practices and Trends in Music Education 3
  7500:614 Measurement and Evaluation in Music Education 3
  7500:699 Master’s Thesis/Performance* 4

- Required Choral Options (17 credits):
  7500:556 Advanced Choral Conducting 4
  7500:573 Studies in Choral Literature (20th Century) 2
  7500:574 Integrative Conducting Workshop 2
  7502:676 Workshop in Choral Music Education 2
  7510:620/621 Choral Ensemble 3
  7500:624 Applied Voice 4

- Electives (4 credits):
  7500:570 Studies in Choral Literature I (Med/Emp) 2
  7500:571 Studies in Choral Literature II (Baroque) 2
  7500:572 Studies in Choral Literature III (Class/Rom) 2
  7500:615 Music Styles and Analysis I 2
  7500:616 Music Styles and Analysis II 2
  7500:617 Music Styles and Analysis III 3
  7500:697 Advanced Problems 1-2

Total credits: 36

*Performance option may be exercised (conducting a choral concert) along with a major research paper which focuses on the repertoire to be performed in lieu of a thesis.

Music History and Literature Option

- Music core courses – eight credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7510:616— Ensemble participation required in two ensembles 2
  7500:697 Advanced Problems in Music 4

- Major required courses – 20-22 credits:
  7500:551 Introduction to Musicology 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2
  7500:625 Graduate Bibliography and Research in Music 2
  7500:697 Advanced Problems in Music 4
  7500:699 Master’s Thesis/Project 4-6

- Additional music courses – two to four credits.
- Graduate-level (music) workshops, applied music and/or courses to be selected by the student and advisor.
- A minimum reading proficiency in German is required. If a student lacks background in any of these language requirements, completion of undergraduate courses may be necessary.
- Electives – two to four credits. To be selected by the student and advisor. Areas include graduate-level courses in other disciplines in which student obtains permission of instructor.

Degree Total: 34-36 credits.

Music Technology Option

The Master of Music, Music Technology Option is designed to give the student additional exposure to the functional areas of music plus an advanced concentration in music technology and related business. The program provides a framework of conceptual, technical and professional knowledge which will assist the student in career opportunities of fields related to music technology. Students will leave the program with a portfolio of tutorials, recorded works, and/or computer software.

- Music core courses – six credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I 2
  7500:616 Musical Styles and Analysis II 2
  7500:617 Musical Styles and Analysis III 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 25 credits:
  7500:553 Music Software Survey and Use 2
  7500:613 Instructional Programming in Music for the Microcomputer 3
  7500:618 Musical Styles and Analysis IV (20th century) 2
  7500:627 Computer Studio Design 2
  7500:653 Electronic Music 3
  7500:699 Master’s Thesis/Project 4
  7510:616— Ensemble participation in two ensembles 2
  7520:642 Composition (electronic music) 4
  7500:697 Graduate Research in Communication 3

- Electives – 2 credits. To be selected by the student and advisor.

Degree Total: 33 credits.

Performance Option in Accompanying

- Music core courses – Eight credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Straus) 2
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 23-26 credits:
  500:562 Repertoire and Pedagogy: Organ 3
  7500:633 Teaching and Literature: Piano and Harpsichord 2
  7500:640 Advanced Accompanying I 1
  7500:641 Advanced Accompanying II 1
  7500:642 Advanced Accompanying III 1
  7500:643 Advanced Accompanying IV 1
  7500:666 Advanced Song Literature 3
  7500:698 Graduate Recital (to be completed in a minimum of two performance media) 2
  7510:614 Keyboard Ensemble (participation in two ensembles required)** 2-4
  7510:618 Small Ensemble - Mixed 2
  7520:6— Applied Music (piano, organ and/or harpsichord) 8

- Additional music courses – two to three credits.
- Elective – two credits.

Areas may include graduate-level courses in other disciplines, such as theatre arts, for which the student obtains permission of instructor, or additional music courses, as determined by the student and advisor.

Degree Total: 33-36 credits

Performance Option in Winds, String Percussion

- Music core courses: eight credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Straus) 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 18-18 credits:
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7510:6— Ensemble participation in two ensembles required** 2-4
  7520:6— Applied Music (select appropriate instrument) 8

- Select one of the following as appropriate to major instrument:
  7500:630 Teaching and Literature: Brass Instruments 2
  7500:631 Teaching and Literature: Woodwind Instruments 2
  7500:632 Teaching and Literature: Percussion Instruments 2
  7500:634 Teaching and Literature: String Instruments 2
  7500:698 Graduate Recital 2

- Additional music courses – six credits.*
  Graduate-level (music) workshops, applied lessons, advanced problems and/or courses to be selected by student and advisor.
- Electives – four credits.*

Areas may include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or additional music courses, as determined by the student and advisor.

Degree Total: 34-36 credits.

Note: No more than a total of 16 credits of 7520 courses may be applied to the degree.

All candidates for this degree must accompany a minimum of three solo ensemble recitals (instrumental and vocal). These can be done as part of 7500:697

**Two semesters ensemble participation required for degrees completed in four semesters. Four semesters ensemble participation required for degrees completed in four semesters.
Performance Option in Voice

- Music core courses: eight credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 20-22 credits:
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7500:665 Vocal Pedagogy 3
  7500:666 Advanced Song Literature 3
  7500:698 Graduate Recital
  7510:6— Ensemble participation in two ensembles required** 2-4
  7520:624 Applied Voice 8

- Additional music courses – two credits (suggested minimum).
  Graduate-level (music) courses, workshops, advanced problems and/or applied lessons, to be selected by student and advisor.

- Electives – four credits.
  Areas may include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or additional music courses, as determined by the student and advisor.

Degree total: 34-36 credits.

Note: No more than a total of 16 credits of 7520 courses may be applied to the degree.

Performance Option in Keyboard

- Music core courses: eight credits (to be selected):
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 18-21 credits:
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  (Select either 7500:662 or 7500:633)
  7500:562 Repertoire and Pedagogy: Organ 3
  7500:633 Teaching and Literature: Piano and Harpsichord 2
  7500:697 Advanced Problems in Music 2
  7500:698 Graduate Recital 2
  7510:614 Keyboard Ensemble (participation in two ensembles required)** 2-4
  7520:624 Applied Music (piano, organ and/or harpsichord) 8

- Additional music courses – three to four credits.
  Graduate-level (music) courses, advanced problems, workshops and/or applied lessons, to be selected by the student and advisor.

- Electives – four credits.
  Areas may include graduate level courses in other disciplines, such as theatre arts, for which the student obtains permission of instructor, or additional music courses, as determined by the student and advisor.

Degree total: 34-36 credits.

Note: No more than a total of 16 credits of 7520 courses may be applied to the degree.

Performance Option: Choral Conducting

- Music Core Courses (8 credits)
  7500:615 Musical Styles and Analysis I 2
  7500:616 Musical Styles and Analysis II 2
  7500:617 Musical Styles and Analysis III 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:624 Music History Survey: Music Since 1900 2

- Major Required Courses (24 credits)
  7500:556 Advanced Choral Conducting 2

Graduate electives – 6 credits.
Thesis (699) or Project/Production (698) – 6 credits.
Degree total: 36 credits.

*It is recommended that each student’s graduate committee recommend the appropriate elective credits.
**Two semesters ensemble participation required for degrees completed in two semesters. Four semesters ensemble participation required for degrees completed in four semesters.

Theory Option

- Music core courses – six credits (to be selected):
  7500:553 Bibliography and Research 2
  7500:556 Advanced Conducting: Choral 2
  7500:621 Music History Survey: Middle Ages and Renaissance 2
  7500:622 Music History Survey: Baroque 2
  7500:623 Music History Survey: Classic and Romantic 2
  7500:624 Music History Survey: Music Since 1900 2

- Major required courses – 26-28 credits:
  7500:615 Musical Styles and Analysis I (Chant through Palestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7500:619 Theory and Pedagogy 2
  7500:697 Advanced Problems in Music 8
  7500:699 Master’s Thesis/Project 4-6
  7510:6— Ensemble participation in two ensembles required** 2-4
  7520:642 Applied Composition 2

- Additional music courses – zero to two credits.
  Graduate-level (music) workshops, applied music (other than composition), advanced problems, and/or courses to be selected by student and advisor.

- Electives – zero to two credits.
  To be selected by student and advisor. Areas include graduate-level courses in other disciplines in which student obtains permission of instructor or 7520:642 Applied Composition.

Degree total: 34-36 credits.

Communication

The School of Communication offers the master of arts degree in a coordinated program of communication arts.

Entrance requirements:
- Meet the general requirements for admission to the Graduate School.
- Possess an undergraduate major in communication, journalism or a related field; or, complete at least 15 semester credits of undergraduate communication coursework approved by the department.

Note: Even though an applicant is eligible for consideration, an offer of admission is not guaranteed.

Program requirements:
- Complete 36 credits, distributed as follows:
  School core courses – 15 credits:
  7600:600 Introduction to Graduate Study in Communication 3
  7600:602 Qualitative Methods in Communication 3
  7600:603 Quantitative Methods in Communication 3
  7600:624 Survey of Communication Theory 3
  7600:625 Theories of Mass Communication 3
  7600:670 Communication Criticism 3
  School coursework – 9 credits.
  Graduate electives – 6 credits.
  Thesis (699) or Project/Production (698) – 6 credits.

Total – 36 credits.
• Comprehensive examination required for students not pursuing a thesis, project, or production after 24 credits of coursework, including all core courses.
• Advancement to candidacy. Registration for six (6) credits of Thesis (699) or Project/Production (698).
• Presentation and defense of a thesis/project/production:
The thesis, project, or production requirement is designed to be the culmination of the student’s academic program and involves the conceptualization, design, and execution of an academic, practical, or aesthetic problem in a manner which requires a high level of substantive, methodological, technical, and written skills. These skills may be demonstrated in any of the three types of activities, depending on the student’s background and career orientation.

Theatre Arts
The School of Dance, Theatre, and Arts Administration offers a master of arts degree. The following will qualify the student in the field of theatre or arts administration.
• Complete the general requirements for admission to the Graduate School.
• Complete an undergraduate major in the area of proposed graduate work or equivalent work as approved by the coordinator of the graduate theatre program.
• Complete an oral defense of the thesis or thesis project.

Arts Administration Option
• Complete a minimum of 45 credits.
• Required theatre arts courses (30-33) credits:

7800:600 Research and Writing Techniques 3
7800:605 Colloquium in the Arts 3
7800:665 Audience Development 3
7800:666 Principles of Arts Management 3
7800:682 Fund Raising and Grantsmanship in the Arts 3
7800:691 Arts Administration Practices and Policies 3
7800:692 Legal Aspects of Arts Administration 3
7800:698 Internship 3
7800:699 Master’s Thesis 6
• Required business courses (9 credits):

6200:590 Special Topics in Accounting 3
6500:600 Management and Organizational Behavior 3
6600:600 Marketing Concepts 3
or 6600:630 Marketing of Services 3
• Electives in related fields (0-6 credits):
Options here include course work in business, computer science, urban studies, art, music, law, theatre and dance.
• Complete an oral defense of the thesis.
• General electives 0-3

Theatre Option
Complete a minimum of 36 credits distributed as follows:
• School core courses - 24 credits:

7800:600 Research and Writing Techniques 3
7800:641 Problems in Directing 3
7800:646 Seminar in Dramatic Literature 3
7800:646 Graduate Acting: Techniques 3
7800:658 History of Theatre 3
7800:662 Seminar in Scenic Design 3
7800:699 Master’s Thesis 6
• Graduate electives:
12 credits to be selected from Theatre Arts, English, Communication, Music, etc., in consultation with the student’s advisor or the graduate program coordinator.

College of Nursing

N. Margaret Wineman, Ph.D., R.N., CNS, Dean
Diana L. Biordi, Ph.D., R.N., F.A.A.N., Associate Dean, Research and Scholarship
Kathleen Ross-Alaolmolki, Ph.D., R.N., Assistant Dean, Academic Nursing Programs
Annette Mitzel, M.S.N., R.N., Director, Nursing Center for Community Health
http://www.uakron.edu/nursing/

Mission Statement
As an integral part of The University of Akron, the College of Nursing promotes the general mission of The University of Akron. 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
• Prepare generalist and advanced practice nurses who are eligible for initial licensure and for certification.
• Prepare scholars in nursing at the doctoral level, focusing on the conduct of nursing research and the dissemination of research findings with their implications for nursing practice and health care policy.
• Provide a foundation for lifelong commitment to professional development and scholarship through continued education and advanced study at the master’s and doctoral levels.
• Prepare nurses who are sensitive in caring for diverse populations in a variety of settings.
• 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 with 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 nontraditional family configurations.

Communities are groups of people with one or more common characteristics who are in relationship to one another and may or may not interact.

Health is comparative, dynamic, multidimensional and has personal meaning. It includes disease, nondisease and quality of life. People have the right to participate in decisions affecting and effecting personal health.

Environment includes all living and nonliving dimensions with which the individual, family and community have interrelationships. The dynamic environmental inter-relations 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, life-long 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 experience into the learning environment. These variables influence learning that occurs through continual construction and reconstruction of experience in relation to environmental influences.
Nursing education at the baccalaureate level synthesizes knowledge from nursing, humanities, social, cultural, physical, and natural sciences to operationalize clinical decision-making. The student is prepared to function as nurse generalist in a variety of settings. Faculty and student continually seek to refine the commitment to and understanding of the relationship between theory and practice. Students are encouraged to become self-directed, collaborative, interdependent and independent. These variables are the foundation for long-life learning and professional development.

Nursing education at the master’s level builds upon baccalaureate nursing education and provides a foundation for doctoral study. Graduate education at this level prepares advanced practice nurses with expertise in critical thinking and decision making, effective communication, and therapeutic interventions. Through a variety of learning experiences, master of science in nursing students analyze and use theoretical formulations and research findings in advanced practice.

Nursing education at the doctoral level prepares nurses for full participation in the discipline as scholars and researchers. Emphasis is placed on the development of nurses who are informed about the many dimensions of scholarship, including research, practice and teaching, and the integration of the three. Through various didactic, collaborative and research opportunities, doctoral students learn how to develop and test knowledge about health, illness and nursing care, and how to use this knowledge to enhance teaching, improve patient care, and influence health care policy.

**JOINT PROGRAM FOR THE DOCTOR OF PHILOSOPHY IN NURSING**

Kent State University and The University of Akron offer the Joint Ph.D. in Nursing (JPDN), a single doctoral program with a single, unified doctoral nursing faculty. Students are doctoral student body. Students may choose which university will grant their degree. The diploma will be issued from the student’s university of record and will recognize the Joint Doctor of Philosophy program. JPDN courses will be cross listed and scheduled at each university.

---

**Program Purpose and Description: Preparation of Scholars in Nursing**

The JPDN program is characterized by excellence through scholarship, integrity, and caring. The primary purpose of the JPDN is to produce nurse scholars. This purpose will be realized through: 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.

Graduates will be characterized by their leadership and their ability to conduct and apply research, to integrate and extend knowledge through teaching, and to develop and implement health care policy. Interdisciplinary collaboration and community outreach will be emphasized throughout the program.

**Admission, Progression, and Graduation**

Students may apply to the joint program through the Graduate Colleges or the Colleges of Nursing at either Kent State University or The University of Akron. Completed applications should be returned to the addresses indicated on the application forms. Applications will be reviewed by the JPDN admissions committee with a single set of JPDN admission criteria.

Each applicant for admission into the Ph.D. in Nursing Program must meet the following criteria:

- Evidence of successful completion of a master’s degree in nursing at an accredited program with a minimum graduate grade point average of 3.0 on a 4.0 scale.
- Evidence of current licensure, or eligibility for licensure, by the Ohio Board of Nursing.
- Official evidence of scores on the Graduate Record Examination.
- A clear and succinct statement about the applicant’s need for the doctorate and its application toward clearly defined career goals.
- A sample of written work that indicates the logic and writing skills of the applicant, for example, by an essay, term paper, thesis, published article, or professional report.
- Three (3) letters of reference from professionals or professors who can adequately evaluate the applicant and the applicant’s previous work or potential for success.
- At the request of the JPDN admission committee, successfully complete a personal interview with a graduate faculty member which will assess research interests and motivation for successful completion of doctoral study in the JPDN program.
- Register for courses within two (2) years of acceptance into the JPDN, or otherwise the acceptance is void.

Students wishing to transfer into the Ph.D. in Nursing Program must comply with the university standards for acceptance and are referred elsewhere in this catalog for that information.

International students will be considered for admission. In addition to the above admission criteria, international students must demonstrate a high level of competence in English, a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). International students must comply with university procedures for accepting international students.

Students will be assigned an academic advisor based on mentoring and mutual research interests. Advisor and student will develop an academic program plan customized to student interest, subject to advisor approval. Target dates for successfully completing the qualifying examination and the completion of the dissertation will be developed early in the program plan. Students may change advisors for academic or dissertation purposes, subject to the approval of the JPDN directors.

For progression and graduation, students must meet the following degree requirements:

- Maintain an overall grade point average of 3.0 on a four-point scale (or be liable to dismissal according to University policies);
- Adhere to criteria concerning enrollment, residency, and leaves of absence;
- Complete degree requirements within 9 years of enrollment;
- Complete 42 semester hours of required course work;
- Successfully complete the written preliminary examination after first year of full-time coursework and/or 24 credits, qualifying examination, and dissertation requirements;
- Successfully complete and orally defend a dissertation based upon original investigation and critical scholarship.

Students who do not meet the criteria for successful progression and graduation will be notified in writing.

---

**Program Description and Curriculum**

The JPDN is a post master’s degree, requiring 72 semester credit hours including the dissertation. It consists of five components, with selected customization to student interests. The nursing knowledge component examines knowledge and theory development as well as courses in selected domains of nursing knowledge related to student interest and faculty expertise. Research methods, designs, and statistics examines approaches to both qualitative and quantitative research. Students must select at least one advanced research methods course to promote their research agenda i.e., program evaluation, advanced qualitative or quantitative methods, or grantsmanship. Cognates will be chosen from courses outside nursing which support the student’s research interest. Health care policy courses focus on health care and nursing issues. These four components culminate into the fifth component, the dissertation, which follows the successful completion of the qualifying examination. The course work in each of these five components follows.

**Structure and content of nursing knowledge:**

- Five required courses (15 credits)
  - 8200:810 History and Philosophy of Nursing Science 3
  - 8200:815 Theory Construction and Development in Nursing 3
  - 8200:820 Introduction to Nursing Knowledge Domains 3
  - 8200:840 Nursing Science Seminar I 3
  - 8200:850 Nursing Science Seminar II 3

- Research methods, designs, and statistics:
  - Four required methods/design courses (12 credits)
    - 8200:824 Foundations of Scholarly Inquiry in Nursing 3
    - 8200:825 Quantitative Research Methods 3
    - 8200:830 Qualitative Research Methods 3
    - 8200:845 Advanced Methods for Research 3
    - Two required statistics courses (6 credits)
      - 8200:852 Advanced Health Care Statistics I 3
      - 8200:857 Advanced Health Care Statistics II 3

- Cognates:
  - Three required courses (6 credits)
    - Cognates 6
    - (Two courses are selected with the approval of the student’s academic advisor)

- Electives:
  - 8200:892 Field Experience in Nursing 1-12
  - 8200:895 Special Topics in Nursing 1-16
  - 8200:896 Individual Investigation in Nursing 1-13
  - 8200:898 Research in Nursing 1-15

- Health Care and nursing policy:
  - One required course (3 credits)
    - 8200:895 Nursing and Health Care Policy 3
Qualifying for Candidacy for the Doctoral Dissertation

- All students in the JPDN Program are required to successfully complete a qualifying examination before proceeding to conduct dissertation research. To be eligible for candidacy for the dissertation, students must have completed 42 hours of required courses, have maintained a minimum GPA of 3.0 on a 4.0 scale in the doctoral program, and have successfully completed the qualifying examination, and have been approved by the appropriate administrative bodies of the program.

- Dissertation Prospectus. The dissertation prospectus is a written document that includes an outline of the parameters of the projected dissertation topic with a rationale and statement of the problem to be researched; the methodology and design of the study, a preliminary review of the literature substantiating the need for the study; and the rationale and statement of the problem to be researched. Approval of the prospectus permits the student to proceed with the dissertation.

- Dissertation. The dissertation is based upon original investigation and demonstration of mature scholarship and critical judgment in the theoretical and methodological approaches to development of nursing knowledge. The dissertation is expected to be the first step in the development of a program of research and scholarly activity. A minimum of 30 dissertation credit hours are required.

- Oral defense. When the dissertation is completed a meeting will be scheduled for the student’s defense of the dissertation. The candidate is expected to respond to substantive and methodological questions related to the dissertation.

- Dissertation committee. A four person doctoral dissertation committee will guide and approve the acceptability of the dissertation. The Chair must be a member of the JPDN faculty, as must be two committee members. The remaining member must be selected from outside the program. Other qualifications of members will be consistent with the student’s area of research and with the requirements for doctoral committees as stated in the policies and general catalogs of both universities.

Innovative Curriculum Pathways to the Joint Ph.D. in Nursing Program for BSN Graduates and for Students Enrolled in MSN Option

The Innovative Pathways into the Joint Ph.D. in Nursing Program (JPDN) is an accelerated program that allows individuals with a BSN and students enrolled in the RN-MSN program direct admission into the JPDN program. Acceleration is accomplished by restructuring MSN and Ph.D. curricula to recognize the mastery of specific content, thereby facilitating graduate study. There are two pathways: one for BSN graduates and one for RN-option students. Since existing acceleration pathways differ at The University of Akron and Kent State University, individuals applying for admission to this program must apply for admission through the Graduate School of The University of Akron.

BSN Graduates:

BSN students within one semester of graduation and professional nurses with a BSN degree may apply in December prior to the fall in which admission is desired. Admission criteria include:

- Enrollment in an accredited BSN program within one semester of graduation or hold the BSN degree.
- Provide evidence of successful completion (or the potential to complete the BSN by the following fall semester) of a baccalaureate degree program in nursing at an accredited school with a minimum grade point average of 3.0 on a 4.0 scale.
- Provide evidence of current licensure, or eligibility for licensure, by the Ohio Board of Nursing.
- Provide evidence of acceptable scores on the Graduate Record Examination.
- Submit a statement about nursing career interests and goals.
- Give a sample of written work. This may include, for example, a scientific term paper, a research paper, an honor’s project, a professional report, or a published article.
- Submit three (3) letters of recommendation from professors or other professionals who can adequately evaluate previous work and potential for success in the Ph.D. program. One of the three letters must be from a Doctoral Faculty Council member who has worked closely with the student.
- Satisfactorily complete a personal interview with a Doctoral Faculty Council member.
- Register for full-time study during the fall semester after acceptance into the Ph.D. program, or otherwise the acceptance is void.

- Enroll in full-time study for four calendar years for students who are entering directly from the BSN program or full-time study for two academic years plus two calendar years for post-BSN applicants.

Students receive a maximum of 12 credit hours of bypassed credit for master’s level courses after successfully completing 12 credit hours of doctoral level courses. Bypass credit is given in accordance with applicable University of Akron policy. Upon successful completion of 8200:815, 8200:825, 8200:830, and 8200:835, students receive a maximum of 12 hours of bypassed credit for master’s level courses.

Internship: Students entering directly from the BSN program will be required to complete 10-12 weeks internships with the Co-op program paid positions.

- Internship in generalist practice during Summer Session I
- Internship in advanced nursing practice during Summer Session II

MSN-Option Students:

Currently enrolled RN-option students at The University of Akron may apply for admission following completion of the RN-option bridge courses. Admission criteria include:

- Enrollment in The University of Akron RN-option program.
- Minimum grade point average of 3.0 on a 4.0 scale for all previous coursework.
- Provide evidence of current licensure, or eligibility for licensure, by the Ohio Board of Nursing.
- Provide evidence of current malpractice insurance.
- Provide evidence of acceptable scores on the Graduate Record Examination.
- Submit a statement about nursing career interests and goals.
- Give a sample of written work. This may include, for example, a scientific term paper, a research paper, an honor’s project, a professional report, or a published article.
- Submit three (3) letters of recommendation from professors or other professionals who can adequately evaluate previous work and potential for success in the Ph.D. program. One of the three letters must be from a Doctoral Faculty Council member who has worked closely with the student.
- Satisfactorily complete a personal interview with a Doctoral Faculty Council member.
- Register for full-time study during the fall semester after acceptance into the Ph.D. program, or otherwise the acceptance is void.

Students enrolled in The University of Akron RN-Option receive a maximum or six (6) bypassed credits after successfully completing six credit hours of doctoral level courses. Bypassed credit is given for Nursing Inquiry I (8200:613) and Nursing Inquiry II (8200:618) after the student successfully completes Quantitative Research Methods (8200:825) and Qualitative Research Methods (8200:830) in accordance with applicable University of Akron policy. Students admitted to this innovative pathway are required to take the RN-BSN research course 8200:436, rather than receive bypassed credits for it.

MBA

Admission

- Baccalaureate degree in nursing from an NLNAC or CCNE accredited nursing program.**
- 3.00 GPA on a 4.0 scale for all previous college work.
Inquiry I and 8200:699 Master's Thesis or 8200:618 Nursing Inquiry II.

The Master of Science in Nursing curriculum requires from 36 to 60 credits, depending on the Advanced Practice option selected by the student. A one year experience in an area where critical care and emergencies occur is required for all students admitted to the nurse anesthesia specialty. A one year experience in care of children or in the acute care of children or adults is required for those two specialties. Applicants who are certified nurse practitioners will be evaluated and have their program planned on an individual basis.

**Admission Procedures**

The student should access the online graduate application through the Graduate School webpage or the webpage of the College of Nursing. Criteria specific for admission to the Graduate Nursing Program may be secured from the Coordinator of the Graduate Program in Nursing or the Office of Student Affairs.

A graduate admissions committee of the College of Nursing will review all applications and make recommendations to the Coordinator of the Graduate Program regarding the applicant’s status. The Coordinator will send a recommendation to the dean of the Graduate School, who will notify the student of admission status.

Applications received in the graduate office of the College of Nursing will be reviewed when the file is complete to facilitate the admission process.

*A National League for Nursing Accreditation Commission.*

**Instructional Program**

The Master of Science in Nursing curriculum includes a minimum of 36 credit hours of study depending on the specialty track. The advanced practice tracks include Adult/Gerontological Health Nursing, Psychiatric Mental Health Nursing, Child and Adolescent Health Nursing, and Nurse Anesthesia. Graduates are prepared for advanced practice as clinical nurse specialists, nurse practitioners, or nurse anesthetists, or for roles as administrators or educators. The curriculum is based on theory and research both in nursing and in related disciplines. It provides the foundation for doctoral study and for ongoing professional development.

**Nursing Core**

The curriculum consists of a core of 17 credit hours. These courses encompass advanced theory, research, computers in nursing, health policy, and pathophysiological concepts.

**Nursing Research**

All students enroll in a research core for a total of 6-7 credits: 8200:613, Nursing Inquiry I and 8200:618 Nursing Inquiry II.

**RN Sequence**

(This sequence is limited to registered nurse graduates of Associate Degree and Diploma nursing programs)

The RN program is designed for registered nurses who hold a diploma or associate degree in nursing or a baccalaureate degree in another field. It is specifically designed for RNs 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 prerequisite undergraduate coursework prior to acceptance into the sequence. The RN program consists of 32 credit hours of upper-division baccalaureate coursework. Students wishing to begin work on the Master’s degree RN/MSN option may do so while meeting the baccalaureate requirements and must apply to the graduate program in the fall or early spring prior to graduation. Additional admission requirements and a graduate research class (Inquiry II) 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.

**Advanced Practice Options**

Options are provided for advanced practice as a clinical nurse specialist, nurse practitioner, or nurse anesthetist, or for advanced roles as an administrator. Requirements for admission include at least one year of practice in the area of interest.

The Master of Science in Nursing curriculum requires from 36 to 60 credits, depending on the Advanced Practice option selected by the student.

Core courses required of all students:

8200:608 Pathophysiological Concepts of Nursing Care I (*) 3

8200:603 Theoretical Basis for Nursing 3
8200:606 Information Management in Advanced Nursing Practice 3
8200:607 Policy Issues in Nursing 3
8200:613 Nursing Inquiry I 3
8200:618 Nursing Inquiry II 3
or 8200:699 Master’s Thesis 1-6

Functional role courses selected by students based upon area of specialty.

(*) Admission students take 8200:561 and 8200:562

**Nurse Anesthesia**

The Anesthesia Track (60 credit hours) is accredited by the Council on Accreditation of Nurse Anesthesia Programs. The Nurse Anesthesia track meets certification requirements through the American Association of Nurse Anesthetists’ Council on Certification of Nurse Anesthetists (CCNA).

8200:561 Advanced Physiological Concepts in Health Care I 3
8200:562 Advanced Physiological Concepts in Health Care II 3
8200:609 Pathophysiology for Nurse Anesthetists 3
8200:637 Nurse Anesthesia Residency I 4
8200:640 Scientific Components of Nurse Anesthesia 3
8200:641 Pharmacology for Nurse Anesthesia I 3
8200:642 Introduction to Nurse Anesthesia 2
8200:643 Principles of Anesthesia I 4
8200:644 Pharmacology for Nurse Anesthesia II 3
8200:645 Principles of Anesthesia II 4
8200:646 Nurse Anesthesia Residency II 4
8200:647 Professional Role Seminar 2
8200:648 Nurse Anesthesia Residency III 4
8200:649 Nurse Anesthesia Residency IV 4

**CRNA-MSN Anesthesia Option**

8200:640 Scientific Components of Nurse Anesthesia 3
8200:641 Pharmacology for Nurse Anesthesia I 3
8200:642 Introduction to Nurse Anesthesia 2
8200:643 Principles of Anesthesia I 4
8200:644 Pharmacology for Nurse Anesthesia II 3
8200:645 Principles of Anesthesia II 4
8200:647 Professional Role Seminar 2

**Child and Adolescent Health Nurse Practitioner (Primary Care)**

The Child and Adolescent Health Nurse Practitioner track (Primary Care) 45 credit hours meets certification requirements through the American Nurses Credentialing Center (ANCC) and the Pediatric Council for Pediatric Nurse Practitioners and Nurses (PCBPN). Emphasis is on the primary health care needs of children and adolescents.

7400:585 Nutrition for Pediatric Nurse Practitioners 2
8200:650 Pediatric/Adolescent Assessment 3
8200:651 Child and Adolescent Health Nursing I 3
8200:652 Child and Adolescent Health Nursing I Practicum 2
8200:653 Child and Adolescent Health Nursing II Practicum 2
8200:654 Child and Adolescent Health Nursing III Practicum 2
8200:655 Child and Adolescent Health Nursing II 3
8200:656 Pharmacology for Child and Adolescent Health Nursing 3
8200:657 Child and Adolescent Health Nursing III 3
8200:659 Child and Adolescent Health Nursing IV Practicum 2
8200:680 Child and Adolescent Health Nursing IV 3

**Child and Adolescent Health Nurse Practitioner (Acute Care)**

The Child and Adolescent Health Nurse Practitioner track (Acute Care) 55 credit hours focuses on the integration of evidenced based knowledge and skills in primary and acute care with children with complex, acute, critical, and chronic health conditions. Emphasis is on advanced practice in emergency departments, sub-specialty clinics, acute areas of hospitals, and intensive care units with children with complex, acute, critical, and chronic health conditions.

7400:585 Nutrition for Pediatric Nurse Practitioners 2
8200:650 Pediatric/Adolescent Assessment 3
8200:651 Child and Adolescent Health Nursing I 3
8200:652 Child and Adolescent Health Nursing I Practicum 2
8200:653 Child and Adolescent Health Nursing II Practicum 2
8200:654 Child and Adolescent Health Nursing III Practicum 2
8200:655 Child and Adolescent Health Nursing II 3
8200:656 Pharmacology for Child and Adolescent Health Nursing 3
8200:657 Child and Adolescent Health Nursing III 3
8200:659 Child and Adolescent Health Nursing IV Practicum 2
8200:680 Child and Adolescent Health Nursing IV 3
8200:681 Child and Adolescent Health Nursing-Acute Care III Practicum 3
8200:682 Child and Adolescent Health Nursing-Acute Care III 3
8200:687 Child and Adolescent Health Nursing-Acute Care IV Practicum 2
8200:688 Child and Adolescent Health Nursing-Acute Care IV 3

**Psychiatric Mental Health Nursing**

Psychiatric Mental Health Nursing Track (46 credit hours and meets eligibility requirements for certification through American Nurses Credentialing Center (ANCC) as psychiatric clinical nurse specialist or psychiatric nurse practitioner).

8200:611 Advanced Mental Health Assessment 3
8200:610 Advanced Adult/Gerontological Assessment with Practice 3
8200:660 Psychiatric Mental Health, APN I Practicum 3
8200:661 Psychiatric Mental Health, APN I 3
8200:662 Clinical Psychopharmacology 3
8200:663 Psychiatric Mental Health APN Internship (elective only) 1-4
8200:664 Psychiatric Mental Health-Acute, APN II Practicum 2
The Certified Registered Nurse Anesthetist (CRNA) is designed to give practicing CRNAs the opportunity to complete additional course work that integrates their current clinical expertise within the framework of advanced practice nursing at the master’s level. This program allows CRNAs to advance their current status to be congruent with the master’s level educational mandate for all current nurse anesthesiology educational programs.

**Admission Requirements:**

- Evidence of successful completion of an accredited program of nurse anesthesiology
- Evidence of successful completion of an accredited BSN program
- Current certification/recertification as a CRNA
- Current employment as a CRNA
- Three professional recommendations
- Satisfactory completion of a graduate-level statistics course

**Curriculum**

**Professionalism Core:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:603</td>
<td>Theoretical Basis</td>
<td>3</td>
</tr>
<tr>
<td>8200:607</td>
<td>Policy Issues in Nursing</td>
<td>2</td>
</tr>
</tbody>
</table>

**Inquiry Core:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3470:689</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>8200:606</td>
<td>Information Management in Advanced Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>8200:613</td>
<td>Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>8200:618</td>
<td>Inquiry II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:612</td>
<td>Advanced Clinical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>8200:632</td>
<td>Fiscal Management in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>8200:630</td>
<td>Resource Management in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>8200:635</td>
<td>Organizational Behaviors in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>8200:xxx</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Portfolio</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

**Advanced Role Option**

- Nursing Administration (36 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:630</td>
<td>Resource Management in Nursing Settings</td>
<td>3</td>
</tr>
<tr>
<td>8200:632</td>
<td>Fiscal Management in Nursing Administration</td>
<td>3</td>
</tr>
<tr>
<td>8200:633</td>
<td>Nursing Leadership in Nursing Organizations I</td>
<td>3</td>
</tr>
<tr>
<td>8200:634</td>
<td>Nursing Leadership in Nursing Organizations II</td>
<td>3</td>
</tr>
<tr>
<td>8200:635</td>
<td>Organizational Behavior in Nursing Settings</td>
<td>3</td>
</tr>
<tr>
<td>8200:638</td>
<td>Practicum Nursing Administration I</td>
<td>2</td>
</tr>
<tr>
<td>8200:639</td>
<td>Practicum Nursing Administration II</td>
<td>2</td>
</tr>
</tbody>
</table>

1Cognate electives may be substituted for 8200:608 in the Administration option.
College of Polymer Science and Polymer Engineering

Stephen Z.D. Cheng, Ph.D., Dean
Mark D. Foster, Ph.D., Associate Dean of Programs, Policies, and Engagement

HISTORY
The University of Akron has been a focus for education and research in polymer science since 1930 when Professor Charles M. Knight began offering courses in rubber chemistry. Master’s theses treating rubber chemistry on the University library shelves date to 1920. The University began developing major laboratories in 1942 under the leadership of Professor G.S. Whitby, and the UA program played a significant role in the synthetic rubber industry of the U.S. government during World War II. An Institute of Rubber Research under the direction of Professor Maurice Morton was created in 1956, which became an Institute of Polymer Science in 1964. A Ph.D. program in Polymer Chemistry was introduced in 1956. In 1967, a Department of Polymer Science in the College of Arts and Sciences was formed which awarded M.S. and Ph.D. degrees in Polymer Science.

A Center for Polymer Engineering was created in 1983 and a Department of Polymer Engineering in the College of Engineering in January 1984 with Professor James L. White as director and department chair to give thrust to polymer processing and engineering applications. In 1988 the College of Polymer Science and Polymer Engineering was established to consolidate the administration of the two academic departments, the Institute of Polymer Science and the renamed Institute of Polymer Engineering.

MISSION STATEMENT
The mission of the College of Polymer Science and Polymer Engineering is to serve its students through a high quality educational experience, incorporating both classroom and laboratory learning, as well as a stimulating research environment. Its graduates and former research associates provide a well-trained workforce for employers throughout the world, but especially for the State of Ohio. With the generation of new knowledge from research and the application of that knowledge, the College serves society with benefits to both the economy and the environment.

- The primary purpose of the College is to educate its students in the science and engineering of polymers. Research conducted by the College is involved principally in graduate level education (M.S. and Ph.D.), its students are taught the skills of research by the faculty; occasionally assisted by visiting scientists, and post-doctoral associates.
- The involvement of the College faculty, students and associated staff in research provides a further purpose, i.e., to develop new knowledge concerning polymeric materials and processes, and to disseminate that knowledge to the broader community of researchers, technologists, and manufacturers who employ that knowledge to their own aims.
- The College provides a variety of services through its institutes and centers to aid the economic and cultural development of our society. Individual faculty members provide services as consultants to industry, government, and civic institutions, concerning the developments in knowledge and applications of polymers.
- An additional function of the College is to provide training for those individuals who wish to improve their skills and knowledge concerning various types of polymers, their properties, processes and uses. Undergraduate students from other colleges within the University participate in specialized courses taught by the polymer college faculty as they pursue their traditional degree programs. Also, a variety of non-credit offerings are presented as continuing education, intensive short courses, and seminars.

DESCRIPTION
The College of Polymer Science and Polymer Engineering carries out a program of research and education, primarily at the graduate level, and serves as a major intellectual resource for the scientific and technological development of polymers and related materials and processes. The college consists of the Department of Polymer Science, the Department of Polymer Engineering, the Maurice Morton Institute of Polymer Science and the Institute of Polymer Engineering.

The Department of Polymer Science and The Institute of Polymer Science, emphasize polymer synthesis, the physical chemistry, physics and mechanical behavior and technology of polymers, and many of their applications. The Department of Polymer Engineering and the Institute of Polymer Engineering, emphasize polymer processing (including reactive processing), solid state structure/morphology and properties of polymers as related to process history as well as engineering analysis and design. Collaborative research among the faculty in the two departments is common and provides a unique environment and capability for solving modern day problems. This provides a fertile environment for students to obtain multidisciplinary training.

ADMISSION REQUIREMENTS
Admissions to the graduate program in the college are competitive. The departmental admission committees carefully consider each applicant. Early application is suggested.

DEPARTMENT OF POLYMER SCIENCE

Students with an undergraduate degree in chemistry, physics, or engineering and a grade point average of 2.75/4.0 or better are admissible. Students holding a degree in biology or natural sciences usually need additional courses on the undergradu ate level in physics, physical and analytical chemistry. For such students, a special non-degree admission may be given for one or two semesters, followed by a full admission upon a student’s successful completion of the remedial undergraduate courses. All applications must be supported by at least one letter of recommendation from a teacher or supervisor that the candidate is able to handle independent scientific research. GRE scores are recommended with each application.

A student with a M.S. in the sciences from another university can be admitted to the Ph.D. program. Two letters of recommendation are required in such cases to be certain that the student is likely to be successful in doctoral research.

DEPARTMENT OF POLYMER ENGINEERING

Students with an undergraduate degree in engineering disciplines, materials science, or related degrees with a grade point average of 2.75/4.0 or better are admissible. Students holding a degree in the natural sciences usually need additional undergraduate engineering courses, which are required prerequisites for polymer engineering courses. For such students, depending upon their background, a special non-degree admission may be given followed by full admission upon successful completion of a series of required remedial courses. All applications must be supported with at least three letters of reference and submission of GRE general test scores is required.

A student with a M.S. in Mechanical or Chemical Engineering from another university can be admitted to the Ph.D. program. Three letters of recommendation are required as well as GRE general test scores.

DOCTOR OF PHILOSOPHY

Students must pursue the Doctor of Philosophy degree in either Polymer Science or Polymer Engineering.

Doctor of Philosophy in Polymer Science

An interdisciplinary program leading to the Doctor of Philosophy in Polymer Science is administered by the Department of Polymer Science. Graduates from the three main disciplines (chemistry, physics and engineering) are guided into the appropriate courses of study and research in that field under the supervision of a faculty member. Research facilities of the Institute of Polymer Science are available for dissertation research. Students may be admitted directly to the Ph.D. program upon screening of their qualifications and recommendation by the department chair and dean.

In addition to satisfying the general requirements of the Graduate School, a student working toward the Doctor of Philosophy in Polymer Science must meet the following requirements:

- Complete a course of study prescribed by the student’s advisory committee based on the committee’s judgment of the student's background and on the result of any special examinations it might impose. This course will consist of a minimum of, but usually more than, 36 credits in graduate courses, or their equivalent, plus sufficient Ph.D. research credits to make a total of 84 credits (exclusive of Master of Science thesis credit). Credits for participation in either Polymer Science of Polymer Engineering seminars do not apply toward the degree. At least 18 credits of graduate course work and all dissertation credits must be completed at the University.

There is a university minimum residence time requiring one year, although graduate students starting with a B.S. or B.A. typically spend 4 years in residence.
The Department of Polymer Engineering administers a graduate program in which students, with primarily engineering backgrounds, are guided through a course of study and research under the supervision of a faculty member. Students may be admitted directly to the Ph.D. program upon screening of their qualifications and recommendation by the department chair and dean.

Students in Polymer Engineering will earn the degree of Doctor of Philosophy in Polymer Engineering. Requirements in the interdisciplinary field of Polymer Engineering for this degree are as follows:

- Completion of 18 credits among the following core courses (2 credits each) in polymer science:
  - 9871:601 Polymer Concepts
  - 9871:602 Synthesis and Chemical Behavior of Polymers
  - 9871:611 Polymer Structure and Characterization
  - 9871:675 Polymer Thermodynamics
  - 9871:631 Physical Properties of Polymers I
  - 9871:632 Physical Properties of Polymers II
- 2 credits of polymer engineering and technology courses:
  - 9871:701 Polymer Technology I
  - 3 credits of polymer science laboratory:
  - 9871:613 Polymer Science Laboratory
- Completion of 18 credits of elective courses appropriate to each student's area of interest.
- Pass eight cumulative examinations which are given at monthly intervals during the academic year. The candidate is urged to begin these examinations early in the graduate program.
- Complete 9871:8078 Polymer Science Seminar I and II.
- Attendance at and participation in seminar-type discussions scheduled by the department. Credits for participation in either polymer science or polymer engineering seminars do not apply toward the degree.
- Present a public/departmental seminar on the completed research.
- Pass an oral examination upon completion of a research dissertation.
- Demonstrate competency in computer programming.
- Pass the general requirements for the Doctor of Philosophy degree.
- Satisfy the foreign language requirement for the doctoral degree by meeting the requirements of Plan A, B, or C as specified by the student's advisory committee. Appropriate research skills for Plan C are to be specified by the department on the basis of the student's area of specialization and intended research. These skills include proficiency in computer programming language, special mathematical methods, applied statistical analysis, and special literature search techniques.

Doctor of Philosophy in Polymer Engineering

The Department of Polymer Engineering administers a graduate program in which students, with primarily engineering backgrounds, are guided through a course of study and research under the supervision of a faculty member. Students may be admitted directly to the Ph.D. program upon screening of their qualifications and recommendation by the department chair and dean.

Students in Polymer Engineering will earn the degree of Doctor of Philosophy in Polymer Engineering. Requirements in the interdisciplinary field of Polymer Engineering for this degree are as follows:

- Complete courses as developed in a plan of study approved by the student's advisor and the department chair. A minimum of 96 credits of graduate work must be earned. A total of 36 credit hours of lecture courses and 60 credit hours of research must be completed. Twelve credit hours of the 60 credits must be dissertation research.
- Polymer engineering core (12 credits):
  - 9841:611 Structural Characterization of Polymers with Electromagnetic Radiation
  - 9841:621 Rheology of Polymeric Fluids
  - 9841:622 Analysis and Design of Polymer Processing Operations I
  - 9841:631 Engineering Properties of Solid Polymers
  - 9841:641 Polymeric Materials Engineering Science
- Polymer Engineering 600-level electives (9 credits):
  - 9841:650 Polymer Engineering Seminar
  - 9841:661 Polymer Engineering Laboratory
  - 9841:680 Polymer Coatings
  - 9841:651 Polymer Science Laboratory

The Committee recommends 9841:651 to be compulsory for all full-time Ph.D. students, but it may be exempted as an elective for part-time students who are currently employed in polymer and related industries. Doctoral students are also required to take 9841:601 four (4) times. While the one credit earned in this course will count only one time toward degree requirements, all grades will be counted and calculated into the student's GPA.

Mathematics electives (3 credits):
- 3450:xxx Approved Mathematics

Technical electives (2 credits):
- 3450:xxx Approved Mathematics
- 4300:681 Advanced Engineering Materials
- 4600:622 Continuum Mechanics
- 9841:xxx
- 9871:613 Polymer Science Laboratory
- 9871:674 Polymer Structure and Characterization
- 9871:675 Polymer Thermodynamics

Polymer Engineering 700-level electives (10 credits):
- 9841:7xx Electives

Electives may be taken from other departments such as polymer science, chemical engineering, mechanical engineering, physics, mathematics, computer science, or other engineering departments with the advisor's approval.

Research (60 credits):
- Students may take a combination of 9841:898 (Preliminary Research) and 9841:899 (Doctoral Dissertation) to meet this requirement, however, a minimum of 12 credits of the total 60 required must be of 9841:899.

Foreign Language Requirement:
- A minimum of 24 credits in appropriate courses in biology, chemistry, mathematics, physics, polymer science and engineering as prescribed by the advisory committee.
- Each doctoral student who entered the program in 2007 or later must (1) pass a candidacy exam and (2) must present his/her research proposal for approval by the advisory committee within 18 months of successfully completing the Ph.D. qualifying exams.
- Each doctoral student who entered the program in 2006 or later must (1) pass a candidacy exam and (2) must present his/her research proposal for approval by the advisory committee within three years of entry into the program.
- Each candidate must pass an oral examination in defense of the dissertation.
- Submit the written Doctoral Dissertation to the Graduate School by the required deadlines.
- A student receiving a Master of Science degree from The University of Akron in Polymer Engineering may use all lecture course credits toward the 36 lecture course credit requirement.
- A student entering with a master's degree or graduate credits from another institution may be given 18 credit hours toward the lecture course requirement.

MASTER’S DEGREE

Students may pursue Master of Science degrees in either Polymer Science or Polymer Engineering.

Master of Science in Polymer Science

- A minimum of 24 credits in appropriate courses in biology, chemistry, mathematics, physics, polymer science and engineering as prescribed by the advisory committee.
- Completion of 11 of credits in the following required core courses in polymer science:
  - 9871:601 Polymer Concepts
  - 613 Polymer Science Laboratory
  - 631 Physical Properties of Polymers I
  - 621 Polymer Structure and Characterization
- Completion of 13 credit hours of elective courses appropriate to each student's area of interest.
- Completion of a research project (9871:699) and the resulting 6 credits.
- Attendance at and participation in seminar-type discussions scheduled by the department. Credits for participation in either polymer science or polymer engineering seminars do not apply toward the degree.
• Demonstrated competence in computer skills.
• At least 12 credits of graduate coursework and all theses credits must be completed at the University.
• Pass one cumulative exam.

BS Natural Sciences-Polymer Chemistry/MS Polymer Science

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 program 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 his/her advisors. 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 bachelor’s degree in Natural Sciences from the Buchtel College of Arts and Sciences that is heavily weighted toward chemistry. They will be assigned an advisor in the Department of Chemistry and a co-advisor 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 Master’s of Science from the College of Polymer Science and Polymer Engineering that will require two years of courses and research. The graduate degree requirements for the master’s portion of this accelerated program are the same requirements as those for the traditional master’s program in polymer science.

Master of Science in Polymer Engineering

The major emphases of the graduate program in polymer engineering are in polymer processing, engineering performance and structural and rheological characterization of polymers.

Students in Polymer Engineering will earn the degree of Master of Science in Polymer Engineering. Requirements for the degree are as follows:

• Complete courses as developed in a plan of study approved by the student’s advisor and the department chair. A minimum of 30 credits of graduate coursework must be earned. A total of 24 credit hours of lecture courses and 6 credit hours of research must be completed.

• Polymer engineering core (12 credits):
  9841:611 Structural Characterization of Polymers with Electromagnetic Radiation 2
  9841:621 Rheology of Polymeric Fluids 3
  9841:622 Analysis and Design of Polymer Processing Operations I 3
  9841:631 Engineering Properties of Solid Polymers 2
  9841:641 Polymer Materials Engineering Science 3

• Polymer engineering 600-level electives (6 credits):
  9841:601 Polymer Engineering Seminar 1
  9841:623 Analysis and Design of Polymer Processing Operations II 3
  9841:650 Basic Engineering for Polymer Engineers 3
  9841:651 Polymer Engineering Laboratory 3
  9841:661 Polymerization Reactor Engineering 3
  9841:675 Carbon-Polymer Nanotechnology 3
  9841:680 Polymer Coatings 3

The Committee recommends 9841:651 to be compulsory for all full-time M.S. students, but it may be exempted as an elective for part-time students who are currently employed in polymer and related industries.

Master's students are also required to take 9841:601 two (2) times. While the one credit earned in this course will count only one time toward degree requirements, both grades will be counted and calculated into the student’s GPA.

• Technical electives (6 credits):
  3450.xxx Advanced Mathematics 3
  4300:681 Advanced Engineering Materials 3
  4650:622 Continuum Mechanics 3
  9841:xxx 3
  9871:613 Polymer Science Laboratory 3
  9871:676 Polymer Structure and Characterization 2
  9871:675 Polymer Thermodynamics 2

• Thesis (6 credits):
  9841:699 Master's Thesis 6

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 advisors 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.

Graduate coursework will include:

3450:539 Advanced Engineering Mathematics II 3
3450:550 Engineering Properties of Polymers* 3
9841:641 Polymer Materials Engineering Science 2
9841:650 Basic Engineering for Polymer Engineers 3
9841:661 Polymerization Reactor Engineering 3
9841:671 Seminar: Polymer Engineering** 1
9841:675 Carbon-Polymer Nanotechnology 3
9841:699 Master’s Thesis 3

**Master's students are required to take 9841:601 two times. While the one credit earned in this course will count only one time toward the degree requirement, both grades will be counted into the student's GPA.

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.
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 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.

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.

ACUTE CARE NURSE PRACTITIONER – POST-MASTER’S

The Post-Master’s Acute Care Nurse Practitioner certificate program prepares acute care nurse practitioners to provide advanced practice nursing care to acutely and/or critically ill adults. The program requires one calendar year of intense study including advanced clinical practice and theory. The program is built upon a core of advanced assessment, pathophysiology, and pharmacology. Acute Care Nurse Practitioners are prepared to conduct comprehensive physical assessments, appraise health risks and promote health behaviors, order and interpret diagnostic tests, diagnose and manage commonly occurring health problems and diseases. The program consists of 16 credits of graduate level course work and 525 hours of clinical practice.

Admission Criteria

Hold an MSN degree from a professionally accredited nursing program.

Minimum of a 3.0 GPA on a 4.0 scale for the master's degree program.

Recent acute/critical care experience (within the past three years),

A 300 word essay describing professional goals.

Completion of the following prerequisite courses: graduate level pharmacology, pathophysiology, and advanced assessment.

Completion of an interview with the selection committee.

Advanced Cardiac Life Support (ACLS) Certification.

Program of Study

Course: 8200:629 Adult/Gerontological Health Nursing NP I Practicum 2
8200:630 Adult/Gerontological Health Nursing NP II Practicum 2
8200:631 Adult/Gerontological Health Nursing NP III Practicum 2
8200:632 Adult/Gerontological Health Nursing CNS IV Practicum 3

Total credit hours required for certification.

Requirements

- Be formally admitted to The University of Akron as a degree seeking or a special non-degree graduate student.

- Make written application to the program to the Counselor Education Coordinator in the Department of Counseling and Special Education.

- Receive written notification for admission from the Counselor Education Admissions Committee.

- Consult with the Counselor Education Program Coordinator to plan for an internship in an appropriate addictions counseling setting.

ADULT/GERONTOLOGICAL HEALTH NURSING CLINICAL NURSE SPECIALIST – POST-MSN

The Post-MSN certificate program of 10-12 credit hours is designed for those nurses with a Master’s Degree in Nursing who want to complete the additional coursework required to sit for national certification as a Clinical Nurse Specialist in Medical Surgical Nursing or Gerontological Nursing. The Post-MSN Adult/Gerontological Health Nursing/CNS Certificate Program prepares nurses to assume advanced practice positions in a variety of complex health systems environments providing leadership in interdisciplinary care. Post MSN students who do not have a clinical master’s degree will be assessed on an individual basis and may be required to take additional clinical coursework to achieve competencies required to be eligible to sit for certification.

Program of Study

Prerequisite Courses:

8200:608 Pathophysiological Concepts 3
8200:610 Advanced Adult/Gerontological Assessment 3
8200:612 Advanced Clinical Pharmacology 3

Post MSN Adult/Gerontological Health Nursing CNS Certificate Program Courses:

8200:677 Adult/Gerontological Health Nursing CNS III 2
8200:678 Adult/Gerontological Health Nursing CNS III Practicum 2
8200:679 Adult/Gerontological Health Nursing CNS IV 1
8200:680 Adult/Gerontological Health Nursing CNS IV Practicum 3
8200:682 Adult/Gerontological Health Nursing CNS Residency 2-4

Total credit hours 10-12

ADULT/GERONTOLOGICAL NURSE PRACTITIONER – POST-MSN

The Post-MSN certificate program is designed to prepare Adult/Gerontological Clinical Nurse Specialists who are seeking preparation in the role of nurse practitioner as providers of primary health care to adults and older adults. Upon completion of the 18 credit program, the student is eligible to sit for Nurse Practitioner certification examination.

Admission Criteria

Ohio RN licensure.

Hold an MSN degree from a professionally accredited nursing program (clinical master’s preferred).

Have a minimum GPA of 3.0 on a 4.0 scale for MSN program.

Minimum of 2-3 years recent clinical experience in adult or gerontological health care.

Complete an application to The University of Akron Graduate School.

Submit a 300 word essay describing professional goals.

Submit a resume outlining prior education and work related experiences.

Complete the following prerequisite courses: graduate level pathophysiology, advanced assessment, advanced clinical pharmacology.

Completion of an interview with the Adult/Gerontological Health Nursing faculty.

Program of Study

Students must complete a minimum of 500 clinical hours for eligibility to sit for certification.

Required Courses:

8200:627 Adult/Gerontological Health Nursing NP I Practicum 2
8200:628 Adult/Gerontological Health Nursing NP II Practicum 2
8200:630 Adult/Gerontological Health Nursing NP III Practicum 2
8200:633 Adult/Gerontological Health Practicum NP 2

Total credit hours required for certification.
ADVANCED CERTIFICATE IN FAMILY CONFLICT AT THE CENTER FOR CONFLICT MANAGEMENT

The University of Akron 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 graduate certificate, 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 family conflict and violence.

Required Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3700:622</td>
<td>Seminar in Alternatives to Violence at Home and Abroad</td>
<td>3</td>
</tr>
<tr>
<td>3850:555</td>
<td>Family Violence</td>
<td>3</td>
</tr>
</tbody>
</table>

Skill Development Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:585-008</td>
<td>Seminar: General Mediation Training</td>
<td>3</td>
</tr>
<tr>
<td>7400:585-007</td>
<td>Seminar: Divorce Mediation Training</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses: (choose two)*:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3850:523</td>
<td>Sociology of Women</td>
<td>3</td>
</tr>
<tr>
<td>3850:528</td>
<td>Victim in Society</td>
<td>3</td>
</tr>
<tr>
<td>3700:690</td>
<td>Special Topics (conflict related)</td>
<td>1-3</td>
</tr>
<tr>
<td>9200:630</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>9200:684**</td>
<td>Alternative Dispute Resolution</td>
<td>3</td>
</tr>
</tbody>
</table>

**Law School classes are offered on a space available basis and require the permission of instructor.

Total credit hours 16

*To complete the certificate, students must submit a seminar paper from one of their courses selected from the electives list to the Director of the Center for approval as a scholarly investigation of the issues surrounding family conflict.

ADVANCED CERTIFICATE IN GLOBAL CONFLICT AT THE CENTER FOR CONFLICT MANAGEMENT

The University of Akron 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 graduate certificate, 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 global conflict and violence.

Required Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3700:622</td>
<td>Seminar in Alternatives to Violence at Home and Abroad</td>
<td>3</td>
</tr>
<tr>
<td>3850:555</td>
<td>Family Violence</td>
<td>3</td>
</tr>
</tbody>
</table>

Skill Development Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:585-008</td>
<td>Seminar: General Mediation Training</td>
<td>3</td>
</tr>
<tr>
<td>7400:585-007</td>
<td>Seminar: Divorce Mediation Training</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses: (choose three)*:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3850:521</td>
<td>Race and Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>3700:512</td>
<td>Global Environmental Politics</td>
<td>3</td>
</tr>
<tr>
<td>3700:610</td>
<td>Seminar in International Politics</td>
<td>3</td>
</tr>
<tr>
<td>3700:690</td>
<td>Special Topics (global conflict related)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Total credit hours 19

*To complete the certificate, students must submit a seminar paper from one of their courses selected from the electives list to the Director of the Center for approval as a scholarly investigation of the issues surrounding global conflict.

ADVANCED ROLE SPECIALIZATIONS IN NURSING MANAGEMENT AND BUSINESS

This certificate program is open to all current master’s and doctoral students in the College of Nursing, post-baccalaureate students, post-MSN students, and post-doctoral nurses who are currently in advanced practice.

Admission:

Formal admission to the University of Akron is required as either a post-baccalaureate student, graduate student, or non-degree graduate student. The awarding of this certificate is not contingent upon a degree completion program.

Program of Study:

Students should successfully complete all four courses listed below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:630</td>
<td>Resource Management in Nursing Settings</td>
<td>3</td>
</tr>
<tr>
<td>8200:632</td>
<td>Fiscal Management in Nursing Administration</td>
<td>3</td>
</tr>
<tr>
<td>8200:634</td>
<td>Nursing Leadership in Organizations II</td>
<td>3</td>
</tr>
<tr>
<td>8200:635</td>
<td>Organizational Behavior in Nursing Settings</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credit hours 12

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 graduate students. The Certificate Program in Applied Politics offers course work in the history, organization and management of campaigns intended to influence the outcome of political decisions. Working from a set of core courses, students are allowed to concentrate in the area of applied politics of greatest interest—campaigns, communications, lobbying, political parties, etc. Believing that democracy is best served by having active and informed citizens, the certificate is designed for all students, no matter what their degree program as long as they have a deep interest in practical politics.

Requirements

Persons are eligible for admission to the Certificate Program in Applied Politics if they have been admitted to study as full-time students, special, or non-degree in any department of the University. Students who are pursuing a graduate degree in other departments at the University may be admitted to the Master’s level certificate program upon the recommendation of the chair/director of the department/school in which they are enrolled. The student shall schedule courses with the assistance of an advisor at the earliest possible time.

Core Courses (required –12 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3700:570</td>
<td>Campaign Management I</td>
<td>3</td>
</tr>
<tr>
<td>3700:571</td>
<td>Campaign Management II</td>
<td>3</td>
</tr>
<tr>
<td>3700:672</td>
<td>Seminar: Political Influence and Organizations</td>
<td>3</td>
</tr>
<tr>
<td>3700:696</td>
<td>Internship in Government and Politics</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives: (required – 6 credits):

Three credits selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3700:540</td>
<td>Survey Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>3700:572</td>
<td>Campaign Finance</td>
<td>3</td>
</tr>
<tr>
<td>3700:574</td>
<td>Political Opinion, Behavior and Electoral Policies</td>
<td>3</td>
</tr>
<tr>
<td>3700:577</td>
<td>Lobbying</td>
<td>3</td>
</tr>
<tr>
<td>3700:655</td>
<td>Campaign and Election Law</td>
<td>3</td>
</tr>
<tr>
<td>7600:575</td>
<td>Political Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Three credits of additional course work from above or from approved courses from Political Science, Communication, Public Administration, or other departments.

Certificate

Upon completion of their degree, M.A. in Political Science students who have completed certificate requirements will be awarded an M.A. degree in Political Science with a Certificate in Applied Politics. Majors in other disciplines will be given a Certificate in Applied Politics and have the certificate noted on their transcript.

ASIAN STUDIES GRADUATE CERTIFICATE

Dr. Janet Klein, Director

Department of History, (330) 972-2562 or klein@uakron.edu

The graduate certificate in Asian Studies offers students a multidisciplinary course of study that will provide them with in-depth training in a special area of Asian studies and provide a high degree of specialization. A minimum 3.0 grade point average in the courses that will fulfill the certificate. The student must be in good academic standing in his/her major department if enrolled in a degree program.

Requirements

Two years of an Asian language (or equivalent), which serves as the program’s core requirement plus four courses of approved electives. A minimum 3.0 grade point average in the courses that will fulfill the certificate. The student must be in good academic standing in his/her major department if enrolled in a degree program.

Language Core:

The entering student who does not have proficiency in an Asian language will have to satisfy the language requirement by completing two years of an Asian language
offered by The University of Akron or any other accredited institution. Students may also fulfill the language requirement by demonstrating competency in the equivalent of a fourth-semester level of his/her chosen language at the FS-1 level (U.S. Department of State) or equivalent level. Currently The University of Akron offers the following:

3500:101 Beginning Chinese 4
3500:102 Beginning Chinese II 4
3500:201 Intermediate Chinese 3
3500:202 Intermediate Chinese II 3
3560:101 Beginning Japanese 4
3560:102 Beginning Japanese II 4
3560:201 Intermediate Japanese 3
3560:202 Intermediate Japanese II 3

Elective Courses:
Complete four of the following courses. At least one must be outside the student’s major department. Exceptions or substitutions require approval from the Director. Credits will be provided with Director’s approval for study and certain experiences abroad in Asian countries.

3370:695 Field Studies in Geology* 3
3400:500 Women in Revolutionary China 3
3400:501 Japan and the Pacific War, 1895-1945 3
3400:516 Modern India 3
3400:596 Special Studies in Asian History 3
3400:610 Comparative Studies in World Civilization 4
3400:640 Reading Seminar: China 4
7100:501 Special Topics** 3

*Field Studies in Geology abroad counts for double credits.
**Recent 500-level Selected Topics in the School of Art have included “The Art of India,” “The Art of China,” “The Art of Korea and Japan,” and “The Art of Buddhist Japan.”

Courses with comparative content are encouraged. Any course that has significant Asian content for which the student has presented substantial written work on an Asian topic may count toward the certificate program with the Director’s approval. Students should consult with the Director for help planning an appropriate course of study.

CASE MANAGEMENT FOR CHILDREN AND FAMILIES
Richard Glotzer, Ph.D., Coordinator

Program
This certificate program is a special course of study which can be added to any graduate degree program. It may also be completed by a non-degree graduate student with special permission from the director of the Center for Family Studies. This certificate represents a concentration in theoretical and practical knowledge in collaborative cross-systems case management for children and families in the context of community-based services. This course of study promotes collaboration among disciplines and services.

Admission
To participate in the program the student should:
Be formally admitted to The University of Akron as a postbaccalaureate, graduate or non-degree graduate student.
Make written application to the program and receive written notification of admission from The Center for Family Studies.

Requirements
Core:
Students should successfully complete all three of the core courses listed below. However, the first two courses plus three hours of electives must be completed prior to the student’s enrollment in the practicum course.

7400:561 Case Management for Children and Families I 3
7400:562 Case Management for Children and Families II 3
7400:563 Practicum in Cross-Systems Case Management for Children and Families 3

Electives:
Students must successfully complete six credits of coursework selected from the various departmental courses listed below.

• Family and Consumer Sciences
3400:501 American Families in Poverty (online) 3
3400:504 Middle Childhood and Adolescence 3
3400:540 Family Crisis 3
3400:546 Culture, Ethnicity and the Family (online) 3
3400:602 Family in Life-Span Perspective 3
3400:610 Child Development Theories 3
3400:651 Family and Consumer Law 3
3400:665 Development in Infancy and Early Childhood 3
• Home-Based Intervention
1820:503 Home-Based Intervention Theory 3
1820:504 Home-Based Intervention Techniques and Practice 3

CHILD AND ADOLESCENT HEALTH NURSE PRACTITIONER – POST-MSN
The Post-MSN Child and Adolescent Health Nurse Practitioner certificate program is designed for those nurses who hold the Master of Science in Nursing degree and are seeking preparation for the role of the pediatric nurse practitioner. Upon completion of the 17 credit hour program, the students are eligible to sit for the pediatric nurse practitioner certification examination.

Admission
Admission criteria include the following:
Hold an MSN degree from a professionally accredited nursing program.
Minimum of a 3.0 GPA on a 4.0 scale for the master’s degree program.
A minimum of one year of clinical experience in a pediatric setting.
Complete an interview with the program coordinator.
Completion of the following prerequisite courses: Pathophysiological Concepts, Advanced Pediatric/Adolescent Assessment, Nutrition.

Program of Study
Students are required to complete a minimum of 500 clinical practice hours in conjunction with the Child and Adolescent Health Nursing courses.

Required Courses
8200:651 Child and Adolescent Health Nursing I 3
8200:652 Child and Adolescent Health Nursing Practicum I 2
8200:655 Child and Adolescent Health Nursing II 3
8200:653 Child and Adolescent Health Nursing Practicum II 2
8200:656 Pharmacology for Child and Adolescent Health Nursing 3
8200:658 Child and Adolescent NP Internship (required 4 credits) 1-4

Total 17

CHILD AND ADOLESCENT HEALTH NURSING-ACUTE CARE – POST-MSN
The Post-MSN Child and Adolescent Health Nursing-Acute Care certificate program is designed for those pediatric nurses who hold the MSN and are seeking preparation as pediatric acute care nurse practitioners. Post MSN students will be assessed on an individual basis and may be required to complete additional courses from the Child and Adolescent Health Nursing track in order to achieve the competencies required to sit for certification as a pediatric acute care nurse practitioner.

CAH Post-MSN Prerequisite Courses:
7400:585 Nutrition for the Pediatric Nurse Practitioner 2
8200:638 Pathophysiological Concepts 3
8200:650 Advanced Pediatric/Adolescent Assessment 3
8200:656 Pharmacology for Child and Adolescent Health Nursing 3

CAH Post-MSN Certificate Program Courses:
8200:686 CAH Acute Care III 3
8200:686 CAH Acute Care III Practicum 3
8200:687 CAH Acute Care IV 3
8200:688 CAH Acute Care IV Practicum 2
8200:688 Child and Adolescent Health NP Residency (required) 1-4*

Total 11-14

*One credit hour requires five hours of supervised clinical practice. Students may be required to complete additional acute care clinical hours to achieve required competencies to sit for certification and the CAH NP Residency.

COMPOSITION
Lance Sveha, Ph.D., Coordinator

Requirements
To be eligible for the certificate in composition, a person must be admitted to the University as a graduate student (with either full or provisional status). An eligible person interested in the program should contact the program director. Five courses in composition and linguistics are required. Other appropriate English courses in composition or linguistics may be substituted as optional courses with the permission of the director.

Required Courses:
3300:676 Theory and Teaching of Basic Composition 3
3300:673 Theories of Composition 3
3300:674 Research Methodologies in Composition 3

Optional Courses:
3300:570 History of English Language 3
3300:571 U.S. Dialects: Black and White 3
3300:589 Seminar in English: Grammatical Structures of Modern English 3
3300:575 Theory of Rhetoric 3
### DIVORCE MEDIATION

**Richard Glotzer, Ph.D., Coordinator**

**Requirements**

This graduate certificate program in divorce mediation requires a minimum of 15 graduate credits dependent upon previous educational background. The program has been designed to serve the practising or prospective divorce mediator.

All applicants to the program should have previously earned a law degree or a master’s degree (at minimum in the behavioral sciences, such as psychology, social work, counseling, and marriage and family therapy, or child and family development). Applicants planning to pursue the certificate must apply to the Center for Family Studies and the Graduate School for admission as non-degree students. Persons currently working toward a doctorate or J.D. or M.J. at the University may participate in the certificate program as a cognate or minor. In this case, students must receive permission from their academic department as well as admission from the Center for Family Studies. Since the educational preparation prior to entry to this program will be quite diverse, the selection of courses within the certificate will vary among the participants. However, all students are expected to complete the core courses in addition to 10 credit hours selected from among several disciplines related to divorce mediation.

**Core:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800:601</td>
<td>Divorce Mediation</td>
<td>3</td>
</tr>
<tr>
<td>1800:602</td>
<td>Divorce Mediation Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

**Select at least one from each area:**

- **Law**
  - 9200:638 Family Law | 3

- **Accounting**
  - 6200:601 Financial Accounting | 3
  - 9200:621 Accounting for Lawyers | 3

- **Family**
  - 5600:655 Marriage and Family Therapy: Theory and Techniques | 3
  - 5600:667 Marital Therapy | 3
  - 7400:607 Family Dynamics | 3

**Electives:**

Students who have already completed coursework in Law, Accounting or Family may select from courses listed below:

- 5600:647 Career Counseling | 3
- 5600:669 Systems Theory in Family Therapy | 3
- 7400:540 Family Crisis | 3
- 7400:590 W. Family and Divorce | 2
- 7400:602 Family in Life-Span Perspective | 3
- 9200:684 Alternate Dispute Resolution | 3

**E-BUSINESS**

B. S. Vijayaraman, Ph.D., Director

A new breed of technologies have offered new vistas and business opportunities. These technologies (called Web 2.0) have created possibilities for organizations to be innovative by incorporating internet social network and community tools such as blogs, wikis, and mashups. These technologies have also opened up new avenues and business models for entrepreneurs. The e-business certificate program is designed for students to learn how individuals can create exciting business opportunities on the internet. Persons are eligible for admission to the graduate certificate program if they have been admitted to the Graduate School at The University of Akron. Students admitted to the e-business certificate program may enroll only in those courses required for the completion of the certificate.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:608</td>
<td>Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>6500:644</td>
<td>Knowledge Management and Business Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>6600:600</td>
<td>Marketing Concepts</td>
<td>3</td>
</tr>
<tr>
<td>6600:635</td>
<td>E-Business Marketing Strategies and Tactics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Choose one of the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:665</td>
<td>Management of Technology</td>
<td>3</td>
</tr>
<tr>
<td>6500:663</td>
<td>Data Analysis for Managers</td>
<td>3</td>
</tr>
<tr>
<td>6600:645</td>
<td>Innovative Marketing Strategies</td>
<td>3</td>
</tr>
<tr>
<td>6600:630</td>
<td>Marketing of Services</td>
<td>3</td>
</tr>
</tbody>
</table>

### E-LEARNING

Cheryl Ward, Ph.D., Coordinator

**Program**

This certificate program in e-Learning requires a minimum of 16 credit hours. The certificate in e-Learning Technologies has been designed to assist students in becoming competent, employable professionals capable of making a significant contribution in the field of education and training. The graduate curriculum provides its students with exposure to a wide range of distance learning technologies, while still ensuring the basic competencies required of all practitioners. In this way, the program directly addresses the rapidly accelerating changes in distance learning technologies.

**Admission**

All applicants to the program should have previously earned a Bachelor’s degree. Applicants wishing to pursue a Master’s degree in Educational Foundations emphasizing Instructional Technology must apply to the Graduate School for admission into the program. Applicants wishing to pursue only the certificate program must apply to the graduate school for admission as a non-degree student.

**Requirements (16 credits):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100:629</td>
<td>e-Learning Fundamentals</td>
<td>1</td>
</tr>
<tr>
<td>5100:630</td>
<td>Topical Seminar: Advanced Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>5100:631</td>
<td>Instructional Design</td>
<td>3</td>
</tr>
<tr>
<td>5100:632</td>
<td>Web-based Learning Systems</td>
<td>3</td>
</tr>
<tr>
<td>5100:639</td>
<td>Strategies for Online Instruction</td>
<td>3</td>
</tr>
<tr>
<td>5100:696</td>
<td>Technology Project</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL ENGINEERING

This certificate program provides practicing professionals an opportunity to expand their knowledge base in environmental engineering. It is designed for people who cannot make the full time commitment to the graduate degree program but would like to receive recognition of their continued effort in the area of study or would like to cumulate credit hours toward their ultimate graduate degree goal.

**Admission Criteria**

This certificate is designed primarily for students with a B.S. degree in Civil Engineering or a closely related field.

**Program of Study**

Civil Engineering students may earn a Geotechnical Engineering Certificate by completing a total of 15 credit hours.

Civil Engineering students may earn an Environmental Engineering Certificate by completing five of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>4300:523</td>
<td>Chemistry for Environmental Engineers</td>
<td>3</td>
</tr>
<tr>
<td>4300:526</td>
<td>Environmental Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>4300:527</td>
<td>Water Quality Modeling and Management</td>
<td>3</td>
</tr>
<tr>
<td>4300:623</td>
<td>Physical/Chemical Treatment Processes</td>
<td>3</td>
</tr>
<tr>
<td>4300:624</td>
<td>Biological Wastewater Treatment Processes</td>
<td>3</td>
</tr>
<tr>
<td>4300:631</td>
<td>Soil Remediation</td>
<td>3</td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL STUDIES

Ira D. Sasowsky, Ph.D., Director

**Program**

This graduate certificate program is designed for environmental professionals who wish to broaden their background or update their skills. In order to satisfy the course prerequisites, it is recommended that students have an undergraduate degree in one of the natural sciences, engineering, or a strong background in mathematics and science. For advising please contact the Department of Geology and Environmental Science.

**Admission**

To participate in the program the student should:

- Be formally admitted to The University of Akron as a graduate or non-degree graduate student.
- Make a written application to the program and receive written notification of admission from the Center for Environmental Studies.

**Requirements**

A plan of study will be developed in consultation with the Director of the Center for Environmental Studies. Students must complete the core requirement and a minimum of 14 credits from the list of electives or other courses approved by the Director. Electives must be selected from a minimum of three different departments.

**Core (required):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3370:580</td>
<td>Seminar in Environmental Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

(may be repeated as an elective)
Electives (minimum of 14 credits):

- 3100:500 Food Plants 2
- 3100:521 Tropical Field Biology 4
- 3100:526 Wetland Ecology 4
- 3100:660 Environmental Physiology 3
- 3100:662 Advanced Aquatic Ecology 4
- 3350:505 Geographic Information Systems 3
- 3350:507 Advanced Geographic Information Systems 3
- 3350:547 Remote Sensing 3
- 3350:549 Advanced Remote Sensing 3
- 3350:596 Soil and Water Field Studies 3
- 3370:511 Glacial Geology 3
- 3370:570 Geochimistry 3
- 3370:574 Groundwater Hydrology 3
- 3370:580 Seminar in Environmental Studies 2
- 3370:661 Geologic Record of Past Global Change 3
- 3370:674 Advanced Groundwater Hydrology 3
- 3400:571 American Environmental History 3
- 3470:561 Applied Statistics I 4
- 3700:512 Global Environmental Politics 3
- 3850:686 Population 3
- 4200:563 Pollution Control 3
- 4200:750 Advanced Pollution Control 3
- 4300:523 Chemistry for Environmental Engineers 3
- 4300:526 Environmental Engineering Design 3
- 4300:527 Water Quality Modeling and Management 3
- 4300:528 Hazardous and Solid Wastes 3
- 4300:620 Sanitary Engineering Problems 2
- 4300:621 Environmental Engineering Principles 4
- 4300:631 Soil Remediation 3
- 4300:731 Bioremediation 3
- 9020:661 Environmental Law 3

FAMILY NURSE PRACTITIONER CERTIFICATE FOR CERTIFIED PNP - POST-MSN

The Post-MSN Family Nurse Practitioner Certificate program is designed for those nurses who hold the master’s degree in Child and Adolescent Health or Pediatric Nursing, are certified as Pediatric Nurse Practitioners, and are seeking preparation to practice as a family nurse practitioner. Upon completion of the 16-18 credit hour program, students are eligible to sit for the family nurse practitioner certification examination.

Prerequisites:
- 5600:648 Individual and Family Development Across the Life-Span 3
- 8200:602 Advanced Adult/Gerontological Assessment/FNP 2
- 8200:612 Advanced Clinical Pharmacology (or equivalent) 3

Required Courses:
- 8200:620 Adult/Gerontological Health Nursing I 2
- 8200:622 Adult/Gerontological Health Nursing II 2
- 8200:623 Primary Care of the OB Patient for the Family Nurse Practitioner 3
- 9200:690 Clinical Management I 3
- 9200:692 Clinical Management II 3
- 9200:694 Clinical Management III 3
- 9200:696 Adult/Gerontological NP Residency (consisting of 225-300 clinical hours)

Electives (9 credits):
- 3250:560 Economics of Developing Countries 3
- 3250:561 Principles of International Economics 3
- 3300:516 Modern India 3
- 3400:500 Women in Revolutionary China 3
- 3400:610 Graduate Reading Seminar:Comparative Studies: World Civilization 3
- 3700:610 Seminar in International Politics 3
- 3700:620 Seminar in Comparative Politics 3
- 3850:555 Family Violence 3
- 3850:521 Racial and Ethnic Relations 3
- 3850:590 China for Educators 3
- 5600:630 International Marketing Policies 3
- 7600:550 Communication in Conflict 3
- 7600:645 Intercultural Communication Theory 3
- 9200:684* Alternative Dispute Resolution 3
- 3700:695 Internship (Student Conference on Cross-Cultural Negotiation or related project involving language immersion with approval of Director) 3-6

*Law School classes are offered on a space availability basis only.

Middle Eastern Track

Conflict Core (6 credits):
- 3700:622 Alternatives to Violence at Home and Abroad 3
- 6600:575 Business Negotiations 3

Language Core (6 credits):
- Complete second year Chinese or Japanese Language; or complete second language work in another South or East Asian Language at an institution approved by the Director;
- or an equivalent approved by the Director.

Electives (9 credits):
- 3250:560 Economics of Developing Countries 3
- 3250:561 Principles of International Economics 3
- 3300:516 Modern India 3
- 3400:500 Women in Revolutionary China 3
- 3400:610 Graduate Reading Seminar:Comparative Studies: World Civilization 3
- 3700:610 Seminar in International Politics 3
- 3700:620 Seminar in Comparative Politics 3
- 3850:555 Family Violence 3
- 3850:521 Racial and Ethnic Relations 3
- 5500:590 China for Educators 3
- 6600:630 International Marketing Policies 3
- 7600:550 Communication in Conflict 3
- 7600:645 Intercultural Communication Theory 3
- 9200:684* Alternative Dispute Resolution 3
- 3700:695 Internship (Student Conference on Cross-Cultural Negotiation or related project involving language immersion with approval of Director) 3-6

*Law School classes are offered on a space availability basis only.

Students must select their electives from only one of the above two tracks and electives must include courses taken from more than two departments. Students are encouraged 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: There are no substitutions for the Conflict Core classes.

GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCES

Program

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 GIS scientists, as geographic information systems (GIS) analysts, programmers, or technicians, or as cartographers or remote sensing analysts.

This graduate 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 seek-
ers 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.

For further program information contact Graduate Advisor, Department of Geography and Planning, (330) 972-7620.

Requirements

Geotechniques Requirements (9 credits):
- 3350:505 Geographic Information Systems
- 3.0
- 3350:540 Cartography
- 3.0
- 3350:547 Remote Sensing
- 3.0

Geotechniques Electives (9 credits):
- 3350:507 Advanced Geographic Information Systems
- 3.0
- 3350:541 Global Positioning Systems (GPS)
- 3.0
- 3350:542 Cartographic Theory and Design
- 3.0
- 3350:544 Applications in Cartography and Geographic Information Systems
- 3.0
- 3350:545 GIS Database Design
- 3.0
- 3350:546 GIS Programming and Customization
- 3.0
- 3350:549 Advanced Remote Sensing
- 3.0
- 3350:581 Research Methods in Geography and Planning
- 3.0
- 3350:583 Spatial Analysis
- 3.0
- 3350:596 Field Research Methods
- 3.0

GEOTECHNICAL ENGINEERING

This certificate program provides practicing professionals an opportunity to expand their knowledge base in geotechnical engineering. It is designed for people who cannot make the full-time commitment to the graduate degree program but would like to receive recognition of their continued effort in the area of study or would like to cumulate credit hours toward their ultimate graduate degree goal.

Admission Criteria

This certificate is designed primarily for students with a B.S. degree in Civil Engineering or a closely related field.

Program of Study

Civil Engineering students may earn a Geotechnical Engineering Certificate by completing a total of 15 credit hours.

At least three (3) of the following courses must be taken:
- 4300:612 Advanced Soil Mechanics
- 3.0
- 4300:614 Foundation Engineering I
- 3.0
- 4300:615 Foundation Engineering II
- 3.0
- 4300:617 Numerical Methods in Geotechnical Engineering
- 3.0
- 4300:717 Soil Dynamics
- 3.0

Four of the following workshop courses may be taken and substituted for two (2) of the courses above:
- Load and Resistance Factor Design of Foundations and Geotechnical Features
- 1.5
- Ground Improvement Methods
- 1.5
- Mechanically Stabilized Earth Walls and Reinforced Soil
- 1.5
- Slopes
- 1.5
- Deep Foundations
- 1.5

Students interested in these workshop courses should contact the Department of Civil Engineering

GERONTOLOGY

Harvey L. Sterns, Ph.D., Director

Requirements

This certificate program is a special course of study in gerontology that compliments graduate degree programs in various departments and colleges throughout the University. There is a combined graduate certificate program with Kent State University. Combined, the two universities offer a diverse range of graduate courses with aging-related content and joint faculty that are nationally and internationally recognized scholars in gerontology. The graduate certificate is to be received with either a master’s or doctoral degree. Individuals who already hold a graduate degree may also pursue the certificate. The program represents a concentration involving current knowledge and research in gerontology. It adds another dimension to the knowledge and skills that 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 graduate 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 of the certificate have been completed.

B.S./M.D. students may complete Practicum/Internship and electives from courses available from the Institute or the Office of Geriatric Medicine and Gerontology, NEOUCOM.

Admission

To participate in the program at the graduate level, a student must:

- Obtain admittance to the Graduate School.
- Submit an application to the program countersigned by the student’s major academic advisor.
- Participate in an interview with the Director or 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 for admission from the director of the Institute for Life-Span Development and Gerontology.

Program

Minimum: 18 credits

Core:
- 3006:680 Research Methods Course
- 3.0
- 3006:690 Interdisciplinary Seminar in Life-Span Development and Gerontology
- 3.0
- 3006:695 Practicum in Life-Span Development and Gerontology
- 3.0

Electives:*

- 3006:686 Retirement Specialist
- 2.0
- 3006:690 Workshop – Women: Middle and Later Years
- 2.0
- 3006:692 Workshop – Aging: Process and Intervention
- 2.0
- 3750:580 Policy Problems: Aging Offered every other year
- 3.0
- 3750:620 Psychology Core II: Developmental, Perceptual, Cognitive
- 2.0
- 3750:727 Psychology of Adulthood and Aging
- 3.0
- 3850:681 Cross Cultural Perspectives in Aging
- 3.0
- 3850:678 Social Gerontology
- 3.0
- 5400:541 Educational Gerontology Seminar
- 3.0
- 5400:661 Current Issues in Higher Education: Life-Span and Community Education
- 3.0
- 6500:683 Health Services Systems Management (with permission)
- 3.0
- 7400:541 Family Relationships in Middle and Later Years
- 3.0
- 7700:624 Neuropsychic Speech and Language Disorders
- 3.0
- 7750:550 Social Needs and Services for Later Adulthood and Aging
- 3.0

*From student’s home department.

**Select a minimum of two courses. A student is required to take one of the electives outside the major or degree department. One credit workshop may be included as an elective, with permission.

HEALTHCARE MANAGEMENT

Healthcare is one of the fastest growing sectors in the economy. According to some estimates healthcare has accounted for as much as a third of new private jobs in recent times. The healthcare management certificate program is designed for students to understand the structure and components of the healthcare sector and their interdependencies. In addition, students will learn how services such as ambulatory care and inpatient care will affect the cost, quality, and accessibility of health-care delivery.

Persons are eligible for admission to the graduate certificate program if they have been admitted to the Graduate School at The University of Akron. Students admitted to the healthcare management certificate program may enroll only in those courses required for the completion of the certificate.

Required Courses:

- 6500:580 Introduction to Healthcare Management
- 3.0
- 6500:582 Health Services Operations Management
- 3.0
- 6600:603 Health Services Systems Management
- 3.0

Elective Courses (Choose six credits from the following):

- 6500:585 Special Topics in Health Services Administration
- 1-3
- 6500:686 Health Services Research Project
- 3.0
- 6500:688 Independent Study in Health Services Administration
- 1-3
- 3350:526 Health Economics
- 3.0
- 3850:615 Epidemiologic Methods in Health Research
- 3.0
- 3850:656 Sociology of Healthcare
- 3.0
- 4800:630 Biomedical Computing
- 3.0
- 6200:632 Fiscal Management in Nursing Administration
- 3.0
- 6500:602 Computer Techniques for Managers
- 3.0
- 6500:641 Database Systems
- 3.0
- 6600:650 Human Resource Systems for Managers
- 3.0
- 6600:663 Data Analysis for Managers
- 3.0
- 6500:675 Supply Chain Management
- 3.0
- or
- 6500:6ex Any course with the approval of the Director
- 3.0
HIGHER EDUCATION

Requirements*

This certificate program in higher education requires a minimum of 18 credits. The program of studies has been designed to serve the practicing or prospective college or university administrator or instructor.

Admission

All applicants to the program should have previously earned a bachelor's degree. Special admission for concurrent studies toward a master’s degree and the higher education certificate may be allowed for persons currently employed in higher education. Students interested in admission should first meet with the program coordinator. Persons wishing to pursue a master’s degree in Educational Administration-Higher Education Option must, however, also apply to the Graduate School for admission to the program. Applicants wishing to pursue only the certificate program must apply to the Graduate School for admission as a special non-degree student.

Program

Courses and internships in higher education are directed toward the study of administrative and academic operations of colleges and universities. Specific program options include: administration, student services, curriculum, and instruction option, a higher education teaching internship developed in conjunction with the student’s major academic advisor and the center staff may be anticipated. Internships may be completed at the University or at one of several cooperating institutions.

Required (12):

- 5100:703 Seminar: History and Philosophy of Higher Education 3
- 5190:514 Administration in Higher Education 3
- 5190:600 Advanced Administrative Colloquium in Higher Education 3
- 5190:601 Internship in Higher Education 2
- 5190:602 Internship in Higher Education Seminar 1

Total credits: 12

Electives (6):

- 5190:521 Law and Higher Education 3
- 5190:526 Student Services in Higher Education 3
- 5190:527 The American College Student (BI) 3
- 5190:530 Higher Education Curriculum and Program Planning 3
- 5190:620 Finance in Higher Education 3
- 5190:626 Policy, Assessment, and Accountability in Higher Education 3

Total hours required: 18

*The awarding of this certificate is not contingent upon completion of a degree program. Graduate certificate programs require a 3.00 grade point average

HOME-BASED INTERVENTION THERAPY

Richard Glotzer, Ph.D., Coordinator

Program

This certificate program is a special course of study along with undergraduate and graduate degree programs in various departments and colleges throughout the University. Undergraduate students will earn the certificate upon graduation in their degree program. Individuals who already hold undergraduate or graduate degrees may also pursue the certificate. Students with an undergraduate degree who do not seek a graduate degree may pursue the certificate in the postbaccalaureate program. Students who already hold a graduate degree may be admitted to the program as non-degree graduate students. Students pursuing graduate degrees will receive their graduate certificate upon completion of the requirements for their graduate degree. The program represents a concentration in current theoretical knowledge and practice in home-based intervention. It adds another dimension to the knowledge and skills a student is able to offer in the many professions that relate to services to at-risk children and their families. This course of study coordinates multidisciplinary training of personnel in home-based intervention and helps to meet the need for trained professionals in home-based intervention.

The undergraduate and graduate curriculum committees of the Center for Family Studies will oversee the certificate program and certify through the Director of the Certificate Programs in Home-Based Intervention that all requirements for the certificate have been completed.

Admission

To participate in the program at the graduate level, the student should:

- Be formally admitted to The University of Akron Graduate School.
- Make written application to the program countersigned by student’s major academic advisor (if applicable).
- Have an interview with the Director of the Certificate Programs in Home-Based Intervention.
- Receive written notification for admission from the Director of the Certificate Programs in Home-Based Intervention.

- Consult with the Director of the Certificate Programs in Home-Based Intervention to formulate a program of study.

All students enrolled in the home-based certificate programs will enroll in the core course in Home-Based Intervention. Students enrolled in the undergraduate and postbaccalaureate program will enroll in the courses at the undergraduate level. Students admitted to the Graduate School as degree seeking or non-degree students will enroll in graduate courses. Graduate students enrolled in the core courses at the 500 level will have an additional graduate level project.

Students will complete a minimum of 18 hours of graduate credits in core and elective coursework. In order to earn the interdisciplinary certificate in Home-Based Intervention, the student must complete the following requirements within six years after beginning the program.

Requirements

Core Courses:

- 1820:503 Home-Based Intervention Theory 3
- 1820:504 Home-Based Intervention Techniques and Practice 3
- 1820:505 Home-Based Intervention Internship 3-5

Eligibility Courses:

Students must have completed at least 9 credits of coursework in theoretical frameworks from their discipline or related areas follows:

Theoretical Frameworks:

- Systems Theory
  - 3850:620 General Systems Theory 3
  - 5600:643 Theories and Philosophy of Counseling 3
  - 5600:655 Marriage and Family Therapy: Theory and Techniques 3

- Developmental Theory
  - 3850:512 Socialization: Child to Adult 3
  - 7400:602 Family in Life-Span Perspective 3
  - 7400:626 Developmental Parent-Child Interactions (online) 3
  - 7400:610 Child Development Theories 3

- Therapeutic Theory
  - 5600:651 Techniques in Counseling 3
  - 5600:667 Mental Therapy 3
  - 5600:669 Systems Theory in Family Therapy 3

Elective Courses (9 credits):

Select one course from three different disciplines. (Must be outside student’s major degree area.)

Specific Skill Areas:

- Psychology
  - 3750:530 Psychological Disorders of Children 4
  - 3750:704 Theories of Personality 3

- Sociology
  - 3850:550 Sociology of Mental Illness 3
  - 3850:688 Human Ecology 3
  - 3850:753 Family and Health (Special Topics) 1-3

- Counseling
  - 5600:550 Counseling Problems Related to Life-Threatening Illness and Death 3
  - 5600:620 Issues in Sexuality for Counselors 3

- Special Education
  - 5610:540 Developmental Characteristics of Exceptional Individuals 3
  - 5610:560 Family Dynamics and Communication in the Educational Process 3
  - 5610:604 Collaboration and Consultation Skills for Special Educators 3

- Multicultural Education (Curricular and Instructional Studies)
  - 5500:571 Characteristics of Culturally Diverse Populations 3

- Family and Consumer Sciences
  - 3400:501 American Families in Poverty (online) 3
  - 3400:504 Middle Childhood and Adolescence 3
  - 3400:506 Family Financial Management 3
  - 3400:540 Family Crisis 3
  - 3400:542 Human Sexuality 3
  - 3400:546 Culture, Ethnicity, and the Family (online) 3
  - 3400:590 Workshop in Family and Consumer Sciences: Family and Divorce 2
  - 3400:596 Parent Education (online) 3

- Social Work
  - 7750:510 Minority Issues in Social Work Practice 3
  - 7750:552 Social Work and Mental Health 3
  - 7750:554 Social Work in Juvenile Justice 3

HUMAN RESOURCE MANAGEMENT

Program

The Human Resource Management Certificate is a course of study that educates an individual who seeks a career in Human Resources or who is working in Human Resources without having had formal training.
Admission
To participate in the program, the student must be formally admitted to The University of Akron as a graduate or non-degree student and must complete 15 credits. Students should visit the Director of Graduate Studies in Business Administration to request that notification of the certificate be included on the student transcript as soon as the course of study is completed. Students admitted to the Human Resource Management Certificate Program may enroll only in those courses required for completion of the certificate.

Requirements (complete all 15 credits)
- 6500:600 Management and Organizational Behavior* 3
- And Pick Four Out Of:
  - 6500:650 Human Resource Systems for Managers 3
  - 6500:651 Management of Organizational Transformation 3
  - 6520:658 Strategic and Global Human Resource Management 3
  - 6500:660 Staffing and Employment Regulation 3
  - 6500:654 Management of Organizational Conflict 3

*Students who waive 6500:600 will be required to substitute either 6500:651 Management of Organizational Transformation or 6500:654 Management of Organizational Conflict per approval of Department of Management Chair.

INFORMATION SYSTEM PROJECT MANAGEMENT

Program
Information system project portfolios consist of a combination of off-shored and onshore outsourcing as well as in-house development. The successful collaboration between the various stakeholders in global teams is now a necessity. Project management has thus assumed a key role in determining the success of IT-based initiatives in this complex and dynamic environment. The IS Project Management graduate certificate program has been designed to meet the needs of IT and other professionals who are interested in developing this expertise. The fifteen credit hour certificate program consists of coursework addressing key areas in the project management life cycle. These include project planning, requirements analysis and design, rapid application development (RAD), and implementation.

Required Courses:
- 6500:643 Systems Analysis and Design 3
- 6500:645 Software Development and Quality Assurance 3
- 6500:646 Enterprise Systems Implementation 3
- 6500:678 Project Management 3

Choose one of the following:
- 6500:640 IS and IT Governance 3
- 6500:641 Database Systems 3
- 6500:644 Knowledge Management and Business Intelligence 3
- 6500:651 Organizational Transformation 3

Total credit hours 15

LITERATURE
Hillary Nunn, Ph.D., Coordinator
To be eligible for the graduate certificate in literature, a person must be admitted to the University as a graduate student (with either full or provisional status). An eligible person interested in the program should contact the Graduate Coordinator in the Department of English. Of the five required courses (15 credits), two must be core courses, Chaucer and Shakespearean Drama; four of the five courses must be at the 600-level; and one must be in American literature.

Core Courses:
- 3300:506 Chaucer* 3
- 3300:615 Shakespearean Drama 3

*Unless the student has passed a comparable course at the undergraduate level with a grade of B or better.

MANAGEMENT OF TECHNOLOGY AND INNOVATION
R. Ray Gehani, D.Eng., Ph.D., Director
In an increasingly global economy integrated with technology, the innovative enterprises with effective and efficient management of technology and innovation will gain competitive advantage over their rivals. To respond to these needs of our potential employers, this certificate program in Management of Technology and Innovation was developed by the College of Business Administration with the cooperation of the College of Polymer Science and Polymer Engineering and the guidance of the members of the Advancement Councils of the two colleges. This graduate certificate program offers courses in Management of Technology and other innovation-related business disciplines, including marketing, finance, accounting, entrepreneurship, and more. This certificate program will prepare the learners to innovatively manage a technology-driven enterprise.

To participate in the program the student should:
- Be formally admitted to The University of Akron as a graduate or non-degree graduate student.

Students admitted to the Management of Technology and Innovation Certificate Program may enroll only in those courses required for completion of the certificate.

Required Courses:
- 6500:665 Management of Technology 3
- 6500:669 Polymer Management Decisions 3
- 6600:600 Marketing Concepts 3
- 6200:601 Financial Accounting 3

Recommended Electives:
Select six credits from the following for which the proper prerequisites have been met:
- 6200:610 Process Analysis and Cost Management 3
- 6400:602 Managerial Finance 3
- 6500:600 Management and Organizational Behavior 3
- 6500:602 Computer Techniques for Management 3
- 6500:608 Entrepreneurship 3
- 6500:650 Human Resource Systems for Managers 3
- 6500:654 Management of Organizational Conflict 3
- 6500:656 Management of Global Supply Chain and Operations 3
- 6600:540 Product and Brand Management 3

MIDDLE EASTERN STUDIES GRADUATE CERTIFICATE
Dr. Janet Klein, Director
Department of History, (330) 972-2562 or klein@uakron.edu

The graduate certificate in Middle Eastern Studies offers students a multidisciplinary course of study that will provide them with in-depth training in a special area that may be particularly useful as they pursue careers in such fields as Academia, Law, Public History, Education, Business, or Medicine where they will practice their profession abroad or use their international experience to expand their understanding of these regions as they work with topics on or populations from diverse societies in the Middle East. The certificate complements any graduate major and is also appropriate for students with a graduate degree who might like to return to the university for mid-career training.

Requirements
Two years of a Middle Eastern language (or equivalent), which serves as the program’s core requirement plus four courses of approved electives. A minimum 3.0 grade point average in the courses that will fulfill the certificate. The student must be in good academic standing in his/her major department if enrolled in a degree program.

Language Core:
The entering student who does not have proficiency in a Middle Eastern language will have to satisfy the language requirement by completing two years of a Middle Eastern language offered by The University of Akron or any other accredited institution. Students may also fulfill the language requirement by demonstrating competency in the equivalent of a fourth-semester level of his/her chosen language at the FS-1 level (U.S. Department of State) or equivalent level. Currently The University of Akron offers the following:

Core courses where 600-level may not be offered:
- 3500:101 Beginning Arabic 4
- 3500:102 Beginning Arabic II 4

Courses with the same content as the 600-level course are offered:
- 3230:572 Selected Topics** 3
- 3300:598 Race, Nation, and Class in the Middle East 3
- 3400:597 Ottoman State and Society 3
- 3400:596 Selected Studies in the Middle East 3
- 3400:595 Women and Gender in the Middle East 3
- 3400:612 Graduate Reading Seminar: The Middle East 4
- 3700:506 Politics in the Middle East 3

*Only one ancient world course will count toward the certificate.

**Recent 500-level Selected Topics in the Department of Classical Studies, Anthropology and Archaeology have included “ Cultures of the Arab World.”

Courses with comparative content are encouraged. Any course that has significant Middle-Eastern content (and for which the student has presented substantial written work on a Middle Eastern topic) may count toward the certificate program with the Director’s approval. Students should consult with the Director for help planning an appropriate course of study.
MOTION AND CONTROL SPECIALIZATION

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 of over five years old almost obsolete. The primary purpose of the Motion and Control Specialization certificate program is to provide the graduating engineers with a focused expertise in motion and control and to furnish them with the necessary tools in order to enable them to follow the changes in technology after graduation. In addition, the program will also serve the practicing engineers and life-long learners to come back to school and refresh their skills using the certificate program.

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 non-degree graduate student.

Requirements:

Students should successfully complete all three courses listed below.

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

* Undergraduate students must obtain permission to take this course.

NEW MEDIA TECHNOLOGIES

Cheryl Ward, Ph.D., Coordinator

All applicants to the program should have previously earned a bachelor’s degree. Applicants wishing to pursue a master’s degree in Educational Foundations emphasizing Instructional Technology must apply to the Graduate School for admission into the program. Applicants wishing to pursue only the certificate program must apply to the Graduate School for admission as a special non-degree student.

To receive the certificate in New Media Technologies, students are required to take 18 hours from the list of available electives.

Available Electives:

5100:590 Workshop: Instructional Technology* 3
5100:631 Instructional Design 3
5100:632 Web-Based Learning Systems 3
5100:633 Hypermedia 3
5100:634 Visual Literacy 3
5100:635 Emerging Technologies 3
5100:636 Topical Seminar: Advanced Multimedia (may be repeated for 6 hours) 3
7500:590 Workshops in Music Technology* 3
7600:516 New Media Writing 3
7600:517 New Media Production 3
7600:568 Nonlinear Editing 3
7600:590 Workshops in Communication* 3

*Workshops may be repeated for a total of 6 credit hours.

NURSE ANESTHESIA - POST MSN

The Post-Master’s Nurse Anesthesia certificate program prepares Registered Nurses to become Certified Registered Nurse Anesthetists and requires 27 months of concentrated theory and clinical practice. The program is built upon a core of biophysical sciences, pharmacology, principles of anesthesia, and professional role issues. Graduates of the program are prepared to deliver all types of perioperative anesthesia care to patients of all ages in a wide variety of health care settings and are eligible to take the National Certifying Examination. The program consists of 18 credits of graduate-level course work upon completion of required prerequisites and approximately 1000-1500+ hours of direct anesthetic management.

For information concerning admission to the certificate program, please contact the College of Nursing, Graduate Program, (330) 972-7555.

Admission:

Admission criteria include the following:

1. Hold an MSN degree from a professionally credentialed nursing program.
2. Minimum GPA of 3.0 on a 4.0 scale for the master’s degree program.
3. GRE (greater than 1200) or MAT (greater than 50) within the last five years.
4. Current Ohio state license as a registered nurse.
5. Recent one-year experience in adult critical care.
6. Three letters of reference from a recent employer; a member of the nursing profession; a former faculty member.
7. Interview prior to admission to the program.
8. Acceptance into the anesthesia track is competitive and is decided by voting of the Admission Committee members.
9. Prerequisite: 3470:661 Statistics for Life Sciences

Program of Study (Phase II):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:631</td>
<td>Residency I (Pain)</td>
<td>4</td>
</tr>
<tr>
<td>8200:632</td>
<td>Residency II (Cardiac, Thoracic, Cardiovascular)</td>
<td>4</td>
</tr>
<tr>
<td>8200:633</td>
<td>Residency III (Hepatic, Renal, Endocrine, Head &amp; Neck, Trauma)</td>
<td>4</td>
</tr>
<tr>
<td>8200:647</td>
<td>Professional Role Seminar</td>
<td>2</td>
</tr>
<tr>
<td>8200:649</td>
<td>Residency IV (Senior Seminar)</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

NURSING EDUCATION

The certificate in Nursing Education allows for advanced role specialization in nursing education. Four sequential courses for a total of 12 credit hours comprise the certificate requirements. The certificate program is open to all current master’s and doctoral students in the College of Nursing, post-baccalaureate students, post-MSN students, post-doctoral and faculty currently teaching in nursing programs. Formal admission to The University of Akron is required as either a post-baccalaureate student, graduate student or non-degree graduate student. The awarding of this certificate is contingent upon a degree completion program.

For information concerning admission to the certificate program, please contact the College of Nursing, Graduate Program, (330) 972-7555.

Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:681</td>
<td>Instructional Methods in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>8200:682</td>
<td>Nursing Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>8200:683</td>
<td>Evaluation in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>8200:684</td>
<td>Practicum: The Academic Role of the Nurse Educator</td>
<td>3</td>
</tr>
</tbody>
</table>

PARENT AND FAMILY EDUCATION

Susan D. Witt, Ph.D., Coordinator

Program:

This certificate program is a special course of study which can be added to any graduate degree program. It may also be completed by a non-degree graduate student with special permission from the Coordinator. This certificate represents a concentration in theoretical and practical knowledge in parent and family education for community-based services. This course of study promotes collaboration among disciplines and services.

Admission:

To participate in the program the student should:

Be formally admitted to The University of Akron as a post-baccalaureate, graduate or non-degree graduate student.

Contact the Coordinator of the program for requirements.

Requirements:

Core:

Students must successfully complete all three of the core courses listed below. However, the first two courses plus three hours of electives must be completed prior to the student’s enrollment in the practicum course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:596</td>
<td>Parent Education (online)</td>
<td>3</td>
</tr>
<tr>
<td>7400:605</td>
<td>Developmental Parent-Child Interactions (online)</td>
<td>3</td>
</tr>
<tr>
<td>7400:694</td>
<td>Practicum in Parent and Family Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives:

Students must successfully complete six credits of coursework selected from among the various departmental courses listed below. These credits shall be chosen from departments outside the student’s discipline.

- Family and Consumer Sciences
  - 7400:501 American Families in Poverty (online) | 3 |
  - 7400:504 Middle Childhood and Adolescence | 3 |
  - 7400:540 Family Crisis | 3 |
  - 7400:546 Culture, Ethnicity and the Family (online) | 3 |
  - 7400:602 Family in Life-Span Perspective | 3 |
  - 7400:610 Child Development Theories | 3 |
  - 7400:665 Development in Infancy and Early Childhood | 3 |

- Social Work
  - 7750:555 The Black Family | 3 |
  - 7750:685 Social Work Practice: Family and Children | 3 |
In order to become eligible to sit for national certification as a Psychiatric Nurse Practitioner, applicants must complete an interview with the program coordinator and hold an earned master's degree with a specialty in psychiatric nursing. Admission criteria include the following:

- Hold an earned master's degree with a specialty of psychiatric nursing.
- Completes an interview with the program coordinator.

Admission requirements are issued by the University and meet the experiential requirements are eligible for the certificate programs. Should a student wish to pursue additional course work, the following courses are recommended:

- 8200:608 Pathophysiological Concepts
- 8200:610 Advanced Adult/Gerontological Assessment
- 8200:611 Advanced Mental Health Assessment

Required Courses:

- 8200:662 Clinical Psychopharmacology
- 8200:665 Psychiatric Mental Health-Acute, APN II
- 8200:667 Psychiatric Mental Health-Chronic, APN III
- 8200:666 Psychiatric Mental Health Nursing Post MSN Residency

The Post-MSN Psychiatric Nurse Practitioner certificate program is designed to prepare advanced practice nurses certified as Psychiatric and Mental Health Nurse Practitioners with the competencies required to sit for national certification as a Family Psychiatric and Mental Health Nurse Practitioner. This 13 credit hour program that includes at least 500 hours of supervised practice is built upon a core of advanced assessment, pathophysiology, and advanced psychoneuroimmunology and the Psychiatric Mental Health Nurse Practitioner track.

Elective Courses:

- 8200:608 Pathophysiological Concepts
- 8200:610 Advanced Adult/Gerontological Assessment
- 8200:611 Advanced Mental Health Assessment

Public Administration and Urban Studies

Requirements

The certificates will require the successful completion of 15 graduate credits of defined coursework in a single content or issue area within either public administration or urban affairs. Upon completion of the coursework a certificate will be issued.

Admission

To participate in the certificate program an applicant first must satisfy the requirements for entrance into the Graduate School, or have a bachelor's degree and the equivalent of five years experience in a professional, administrative, or leadership position. Only applicants for admission as a non-degree graduate student within the department or students who are fully admitted to other graduate programs of the University and meet the experiential requirements are eligible for the certificate programs. Students admitted to the graduate programs of the department are not eligible for the certificate programs. Should a student wish to pursue additional coursework, the student must seek formal admission to either the MA in Urban Studies or MPA program. Participation in the certificate program in no way promotes or assures admission to graduate programs of the department, nor does it alter the requirements for admission to those graduate programs. Subject to the Graduate School's time limitation rule for degree completion, once a student has been admitted to a degree program, courses taken as part of a certificate program may be transferred into either of the department's master's programs.

Program

There are six variations of the Certificate Program in Public Administration and Urban Studies: a certificate in Public Management, a certificate in Non-profit Management, a certificate in Local and Regional Development Administration, a certificate in Policy Analysis, a certificate in Program Evaluation, and a certificate in Urban Affairs. Each certificate requires the successful completion of 15 credit hours of required and elective coursework offered by the Department of Public Administration and Urban Studies, as specified below.

Public Management

- 3980:611 Introduction to the Profession of Public Administration (required)
- 3980:615 Public Organization Theory (required)
- 3980:616 Public Personnel
- 3980:617 Leadership and Decision Making (required)
- 3980:618 Citizenship Participation
- 3980:626 Grantmanship
- 3980:660 Strategic Management in Public and Non-profit Sectors
- 3980:680 Special Topics
Non-profit Management
3980:617 Leadership and Decision Making 3
3980:619 Community Organizing 3
3980:626 Grantmanship (required) 3
3980:660 Management in Public and Nonprofit Sectors (required) 3
3980:662 Fund Raising and Resource Management (required) 3
3980:663 Non-profit Management (required) 3
3980:680 Special Topics 3

Local and Regional Development
3980:620 History of Urban Development (required) 3
3980:612 National Urban Policy 3
3980:619 Community Organizing 3
3980:641 Urban Economic Growth and Development (required) 3
3980:650 Comparative Urban Systems 3
3980:661 Public Project Design and Management (required) 3
3980:681 Special Topics 1-3

Policy Analysis
3980:600 Basic Quantitative Research (required) 3
3980:601 Advanced Quantitative Research (required) 3
3980:640 Fiscal Analysis 3
3980:643 Introduction to Public Policy 3
3980:673 Computer Applications in Public Organizations 3
3980:674 Analytical Techniques for Public Administration (required) 3
3980:680 Special Topics 3

Program Evaluation
3980:600 Basic Quantitative Research (required) 3
3980:601 Advanced Quantitative Research (required) 3
3980:640 Fiscal Analysis 3
3980:671 Program Evaluation in Urban Studies (required) 3
3980:673 Computer Applications in Public Organizations 3
3980:674 Analytical Techniques for Public Administration 3
3980:680 Special Topics 3

Urban Affairs
3980:602 History of Urban Development (required) 3
3980:612 National Urban Policy (required) 3
3980:618 Citizen Participation 3
3980:619 Community Organizing 3
3980:621 Urban Society and Service Systems 3
3980:650 Comparative Urban Systems 3
3980:680 Special Topics 3

**GRADUATE CERTIFICATE IN RACIAL CONFLICT AT THE CENTER FOR CONFLICT MANAGEMENT**

An 18 credit graduate certificate that offers students the opportunity to intensively examine racial conflict from an interdisciplinary perspective.

Required Courses:
3700:522 Understanding Racial and Gender Conflict 3
3850:522 Racial and Ethnic Relations 3

Electives:
3700:502 Politics and the Media 3
3700:562 Supreme Court and Civil Liberties 3
3700:530 Management of Probation and Parole 3
3700:622 Seminar in Alternatives to Violence at Home and Abroad 3
3850:646 Social Inequalities 3
3850:510 Social Structures and Personality 3
3850:530 Juvenile Delinquency 3
3850:541 Sociology of Law 3
3230:510 Evolution and Human Behavior 3
3230:563 Social Anthropology 3
3400:538 Nazi Germany 3
3400:554 The Civil War and Reconstruction, 1865-1877 4

Internship 3 credits from Sociology, Political Science, Anthropology, or History

**STRUCTURAL ENGINEERING**

This certificate program provides professionals an opportunity to expand their knowledge base in the design and behavior of structural systems. It is designed for people who cannot make the full time commitment to the graduate degree program but would like to receive recognition of their continued effort in the area of study or would like to cumulate credit hours toward their ultimate graduate degree goal.

**Admission Criteria**
This certificate is designed primarily for students with a B.S. degree in Civil Engineering or a closely related field.

**Program of Study**
Civil Engineering graduates may earn a Structural Engineering Certificate by completing the following five courses:
4300:551 Computer Methods of Structural Analysis 3
4300:554 Advanced Mechanics of Materials 3
4300:605 Structural Stability 3
4300:684 Advanced Reinforced Concrete Design 3
4300:685 Advanced Steel Design 3

Total 15

**SUPPLY CHAIN MANAGEMENT**

Supply chain management (SCM) is the process of planning, implementing, and controlling the operations of the supply chain as efficiently as possible. Supply chain professionals are actively involved in key management and coordination functions related to purchasing, contract negotiation, inventory management, transportation, and import/export policies. Today, it would be difficult to find an organization, large or small, that doesn’t understand the importance of supply chain management, and how successful implementation of supply chain management principles can have a positive impact on its overall success.

The Supply Chain Management graduate certificate program has been designed to meet the needs of business professionals who are interested in developing expertise in supply chain operations management. The fifteen credit hour certificate program consists of coursework addressing key aspects of supply chain operations management, including logistics, sourcing, and globalization.

**Requirements (12 credits)**
6500:533 Supply Chain Logistics Planning 3
6500:536 Supply Chain Sourcing 3
6500:656 Management of Global Supply Chain 3
6500:675 Supply Chain Management 3

**Requirements (Choose 3 credits from the following)**
6500:600 Management and Organization Behavior 3
6500:662 Supply Chain Operations and Analysis 3
6500:670 Management of Operations 3

**TEACHING ENGLISH AS A SECOND LANGUAGE**
Kenneth J. Pakenham, Ph.D., Director

**Requirements**
This program is intended for those seeking training and an initial qualification in the teaching of English as a second language for the purpose of teaching ESL in settings other than the Ohio public school system.

The program is designed to introduce the student to the central issues in the theory and practice of teaching English to non-native speakers through courses in modern and applied linguistics, in second language pedagogy and in related disciplines.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of at least 550.

**Program**
3300:573 Seminar in Teaching ESL: Theory and Method 3
3300:589 Seminar in English: Grammatical Structures of English 3
5500:570 Multicultural Education in the U.S.** 3
3300:589 Seminar in English: Sociolinguistics** 2-3
5500:543 Techniques of Teaching English as a Second Language 4

**TECHNICAL AND SKILLS TRAINING**
Qetler Jensrud, Ph.D., Coordinator (e-mail: qetler@uakron.edu)

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 as graduate students. Individuals who hold undergraduate or graduate degrees may also pursue this certificate. All coursework must be completed within six years. Beginning Fall 2006 all courses will also be available online.

**Requirements**
Minimum: 18 Credits
5400:500 Postsecondary Learner 3
5400:600 The Two-Year College 3
5400:520 Postsecondary Instructional Technology 3
5400:530 Systemic Curriculum Design for Postsecondary Instruction 3
5400:535 Systemic Curriculum Design in Postsecondary Education 3
5400:675 Instructional Applications Seminar 3

The Instructional Applications Seminar is the last course taken.
TRANSPORTATION ENGINEERING

This certificate program provides practicing professionals an opportunity to expand their knowledge base in the design and operation of transportation systems. It is designed for people who cannot make the full time commitment to the graduate degree program but would like to receive recognition of their continued effort in the area of study or would like to cumulate credit hours toward their ultimate graduate degree goal.

Admission Criteria

This certificate is designed primarily for students with a B.S. degree in Civil Engineering or a closely related field.

Program of Study

Civil Engineering students may earn a Transportation Engineering Certificate by completing the following three courses:

- 4300:564 Highway Design 3
- 4300:565 Pavement Engineering 3
- 4300:566 Traffic Engineering 3

and two of the following courses:

- 4300:663 Advanced Transportation Engineering I 3
- 4300:664 Advanced Transportation Engineering II 3
- 4300:665 Traffic Detection and Data Analysis 3

Total 15

WOMEN’S STUDIES

For information, contact Women’s Studies, located in the Polsky Building 315B, (330) 972-7008.

Interdisciplinary and specialized, the Women’s Studies graduate program fosters a critical approach to knowledge about women. 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 graduate certificate integrates scholarship and research on women and gender from literature, psychology, history, sociology, and communication. Students are challenged to explore diverse viewpoints and discover the partial and often self-interested emphases of our society’s most powerful institutions – family, church, academia, business, and government.

Admission

Hold a Bachelor’s Degree with a minimum 2.75 grade point average.

Requirements (required 5-7)

- 1840:580 Feminist Theory 3
- 1840:589 Internship in Women’s Studies 1-4
- 1840:590 Workshop: Women’s Studies Lecture Series 3

Electives

Three classes selected from the Women’s Studies Coordinating Council-approved list of graduate level courses.

- 1840:585 Special Topics in Women’s Studies: Women, Minorities and Media 3
- 1840:585 Special Topics in Women’s Studies: Women, Poverty and Welfare 3
- 1840:585 Special Topics in Women’s Studies: Women as Survivors 3
- 1840:585 Special Topics in Women’s Studies: Worlds of Women 3
- 1840:589 Internship in Women’s Studies 1-4
- 1840:593 Individual Studies on Women 1-3
- 3200:550 ST in Ancient Culture: Women and Gender in Classical Antiquity 3
- 3230:572 Women in Antiquity 3
- 3300:553 American Women Poets 3
- 3230:516 The Anthropology of Sex and Gender 3
- 3300:589 Seminar in English: Twentieth Century Women Writers 3
- 3300:589 Seminar in English: Women and Film 3
- 3300:589 Seminar in English: Subversive Women 3
- 3300:589 Seminar in English: British Women Writers 3
- 3400:500 Women in Revolutionary China 3
- 3400:593 Special Studies: Women Film and History 4
- 3400:593 Special Studies: Women in the Middle East 3
- 3400:593 Special Studies: Medieval Women 3
- 3700:522 Understanding Racial and Gender Conflict 3
- 3750:574 Psychology of Women 4
- 3850:525 Sociology of Urban Life 3
- 3850:555 Family Violence 3
- 3850:630 Sociology of Gender 3
- 7100:501 Special Topics in History of Art: Women in Art 3
- 7420:585 Seminar: Women and Food 1-3
- 7600:508 Women, Minorities, and News 3
- 7750:511 Women’s Issues in Social Work Practice 3
- 9200:654 Seminar: Feminist and Race Theory 3

or other classes as approved by Women’s Studies Graduate Coordinator for the certificate.
### SECTION 5.
Graduate Courses

#### Course Numbering Index*

<table>
<thead>
<tr>
<th>Interdisciplinary Programs</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 Divorce Mediation</td>
<td>3000</td>
</tr>
<tr>
<td>1820 Home-Based Intervention Therapy</td>
<td>3006</td>
</tr>
<tr>
<td>1840 Women's Studies</td>
<td>3010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buchtel College of Arts and Sciences</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100 Biology</td>
<td>3500 Modern Languages</td>
</tr>
<tr>
<td>3110 Biology/GEOLCOM</td>
<td>3501 Arabic</td>
</tr>
<tr>
<td>3150 Chemistry</td>
<td>3502 Chinese</td>
</tr>
<tr>
<td>3200 Classics</td>
<td>3510 Latin</td>
</tr>
<tr>
<td>3230 Anthropology</td>
<td>3520 French</td>
</tr>
<tr>
<td>3240 Archaeology</td>
<td>3530 German</td>
</tr>
<tr>
<td>3250 Economics</td>
<td>3550 Italian</td>
</tr>
<tr>
<td>3300 English</td>
<td>3580 Spanish</td>
</tr>
<tr>
<td>3350 Geography and Planning</td>
<td>3600 Philosophy</td>
</tr>
<tr>
<td>3370 Geology</td>
<td>3650 Physics</td>
</tr>
<tr>
<td>3400 History</td>
<td>3700 Political Science</td>
</tr>
<tr>
<td>3450 Mathematics</td>
<td>3750 Psychology</td>
</tr>
<tr>
<td>3480 Computer Science</td>
<td>3850 Sociology</td>
</tr>
<tr>
<td>3470 Statistics</td>
<td>3980 Public Administration</td>
</tr>
<tr>
<td>3490 Engineering Applied</td>
<td>Urban Studies</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Engineering</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>4100 General Engineering</td>
<td>4400 Electrical Engineering</td>
</tr>
<tr>
<td>4200 Chemical Engineering</td>
<td>4450 Computer Engineering</td>
</tr>
<tr>
<td>4300 Civil Engineering</td>
<td>4600 Mechanical Engineering</td>
</tr>
<tr>
<td>4800 Biomedical Engineering</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Education</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>5100 Educational Foundations</td>
<td>5550 Physical Education</td>
</tr>
<tr>
<td>and Leadership</td>
<td>5560 Outdoor Education</td>
</tr>
<tr>
<td>5170 General Administration</td>
<td>5570 Health Education</td>
</tr>
<tr>
<td>5190 Higher Education Administration</td>
<td>5600 Educational Guidance and Counseling</td>
</tr>
<tr>
<td>5400 Postsecondary Technical</td>
<td>5610 Special Education</td>
</tr>
<tr>
<td>Education</td>
<td>5620 School Psychology</td>
</tr>
<tr>
<td>5500 Curricular and Instructional</td>
<td>5800 Special Educational Programs</td>
</tr>
<tr>
<td>Studies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Business Administration</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200 Accountancy</td>
<td>6600 Marketing</td>
</tr>
<tr>
<td>6300 Entrepreneurship</td>
<td>6700 Professional</td>
</tr>
<tr>
<td>6400 Finance</td>
<td>6800 International Business</td>
</tr>
<tr>
<td>6500 Management</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Fine and Applied Arts</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>7100 Art</td>
<td>7700 Speech-Language Pathology and Audiology</td>
</tr>
<tr>
<td>7400 Family and Consumer Sciences</td>
<td>7750 Social Work</td>
</tr>
<tr>
<td>7500 Music</td>
<td>7800 Theatre</td>
</tr>
<tr>
<td>7510 Musical Organizations</td>
<td>7810 Theatre Organization</td>
</tr>
<tr>
<td>7520 Applied Music</td>
<td>7900 Dance</td>
</tr>
<tr>
<td>7600 Communication</td>
<td>7910 Dance Organisations</td>
</tr>
<tr>
<td>7920 Dance Performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Nursing</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200 Nursing</td>
<td>8300 Public Health</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College of Polymer Science and Polymer Engineering</th>
<th>Course Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>9841 Polymer Engineering</td>
<td>9871 Polymer Science</td>
</tr>
</tbody>
</table>

---

* 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:

3300-507 Middle English Literature

In the above example, the first four digits of the number (3300) indicate the college and department. In the case, 3000 represents the Buchtel College of Arts and Sciences; 300 refers to the Department of English. The second set of digits (507) 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. A student must apply for and be admitted to the Graduate School before registering for graduate credit.

An explanation of that numbering system follows:

500-699 Master's-level courses (also, 600-799 J.D.-level courses)
700-699 Doctoral-level courses

---

### Interdisciplinary Programs

#### DIVORCE MEDIATION

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>602</td>
<td>DIVORCE MEDIATION PRACTICUM</td>
<td>2</td>
<td>601</td>
<td>Practical application of divorce mediation procedures. Review of strategies and ethical considerations.</td>
</tr>
</tbody>
</table>

#### HOME-BASED INTERVENTION THERAPY

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>503</td>
<td>HOME-BASED INTERVENTION THEORY</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>504</td>
<td>HOME-BASED INTERVENTION TECHNIQUES AND PRACTICE</td>
<td>3</td>
<td>503</td>
<td>Provides intervention techniques and skills required for home-based intervention and learning opportunities for matching techniques with specific family problems.</td>
</tr>
<tr>
<td>505</td>
<td>HOME-BASED INTERVENTION INTERNSHIP</td>
<td>3-6</td>
<td>504</td>
<td>Gives students the opportunity to apply knowledge of home-based intervention in actual delivery process working with families in their homes under the direct supervision of trained, experienced home-based intervention therapists.</td>
</tr>
</tbody>
</table>

#### WOMEN'S STUDIES

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>580</td>
<td>FEMINIST THEORY</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>585</td>
<td>SPECIAL TOPICS IN WOMEN'S STUDIES</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>589</td>
<td>INTERNSHIP IN WOMEN'S STUDIES</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>590</td>
<td>WORKSHOP</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>593</td>
<td>INDIVIDUAL STUDIES ON WOMEN</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### COOPERATIVE EDUCATION

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>COOPERATIVE EDUCATION</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### INSTITUTE FOR LIFE-SPAN DEVELOPMENT & GERONTOLOGY

<table>
<thead>
<tr>
<th>Course Numbering</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>680</td>
<td>INTERDISCIPLINARY SEMINAR IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>685</td>
<td>SPECIAL TOPICS</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>686</td>
<td>RETIREMENT SPECIAL</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>690</td>
<td>WORKSHOP</td>
<td>1-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>695</td>
<td>PRACTICUM IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Biology Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>Principles of Systematics</td>
<td>3</td>
</tr>
<tr>
<td>512</td>
<td>Advanced Ecology</td>
<td>3</td>
</tr>
<tr>
<td>513</td>
<td>Tropical Field Biology</td>
<td>4</td>
</tr>
<tr>
<td>514</td>
<td>Conservation Biology</td>
<td>2</td>
</tr>
<tr>
<td>520</td>
<td>Population Biology</td>
<td>3</td>
</tr>
<tr>
<td>526</td>
<td>Wetland Ecology</td>
<td>4</td>
</tr>
<tr>
<td>527</td>
<td>Limnology</td>
<td>4</td>
</tr>
<tr>
<td>528</td>
<td>Biology of Behavior</td>
<td>3</td>
</tr>
<tr>
<td>530</td>
<td>Community/Ecosystem Ecology</td>
<td>3</td>
</tr>
<tr>
<td>532</td>
<td>Pathogenic Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>533</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>539</td>
<td>Advanced Immunology</td>
<td>3</td>
</tr>
<tr>
<td>540</td>
<td>Mycology</td>
<td>4</td>
</tr>
<tr>
<td>541</td>
<td>Field Marine Physiology</td>
<td>3</td>
</tr>
<tr>
<td>545</td>
<td>General Entomology</td>
<td>4</td>
</tr>
<tr>
<td>547</td>
<td>Invertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>548</td>
<td>Parasitology</td>
<td>4</td>
</tr>
<tr>
<td>549</td>
<td>Ichthyology</td>
<td>4</td>
</tr>
<tr>
<td>550</td>
<td>Ornithology</td>
<td>4</td>
</tr>
<tr>
<td>553</td>
<td>Herpetology</td>
<td>4</td>
</tr>
<tr>
<td>556</td>
<td>Vertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>561</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>565</td>
<td>Advanced Cardiovascular Physiology</td>
<td>3</td>
</tr>
<tr>
<td>566</td>
<td>Vertebrate Embryology</td>
<td>4</td>
</tr>
<tr>
<td>567</td>
<td>Comparative Vertebrate Morphology</td>
<td>4</td>
</tr>
<tr>
<td>568</td>
<td>Physiology of Reproduction</td>
<td>3</td>
</tr>
<tr>
<td>569</td>
<td>Respiratory Physiology</td>
<td>3</td>
</tr>
<tr>
<td>570</td>
<td>Lab Animal Regulations</td>
<td>1</td>
</tr>
<tr>
<td>571</td>
<td>Physiological Genetics</td>
<td>4</td>
</tr>
<tr>
<td>572</td>
<td>Biomechanical Stress</td>
<td>3</td>
</tr>
<tr>
<td>573</td>
<td>Comparative Animal Stress</td>
<td>3</td>
</tr>
<tr>
<td>574</td>
<td>Comparative Animal Physiology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>580</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>581</td>
<td>Advanced Genetics</td>
<td>3</td>
</tr>
<tr>
<td>582</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>585</td>
<td>Cell Physiology</td>
<td>4</td>
</tr>
<tr>
<td>587</td>
<td>Biological Problems</td>
<td>1-3</td>
</tr>
<tr>
<td>590</td>
<td>Evolutionary Ecology</td>
<td>3</td>
</tr>
<tr>
<td>591</td>
<td>Topics in Integrative Biology</td>
<td>2</td>
</tr>
<tr>
<td>592</td>
<td>Graduate Evolution Biology</td>
<td>4</td>
</tr>
<tr>
<td>593</td>
<td>Basic DNA Techniques</td>
<td>3</td>
</tr>
<tr>
<td>594</td>
<td>Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>595</td>
<td>Experimental Approaches</td>
<td>4</td>
</tr>
<tr>
<td>596</td>
<td>Advanced Aquatic Ecology</td>
<td>4</td>
</tr>
<tr>
<td>597</td>
<td>Genetic Problems</td>
<td>1-3</td>
</tr>
<tr>
<td>601</td>
<td>Evolutionary Ecology</td>
<td>3</td>
</tr>
<tr>
<td>602</td>
<td>Evolutionary Ecology</td>
<td>4</td>
</tr>
<tr>
<td>603</td>
<td>Graduate Ecology</td>
<td>3</td>
</tr>
<tr>
<td>604</td>
<td>Basic DNA Techniques</td>
<td>3</td>
</tr>
<tr>
<td>605</td>
<td>Biophysics</td>
<td>3</td>
</tr>
<tr>
<td>606</td>
<td>Advanced Topics in Behavior</td>
<td>3</td>
</tr>
<tr>
<td>607</td>
<td>Entomology</td>
<td>4</td>
</tr>
<tr>
<td>608</td>
<td>Environmental Physiology</td>
<td>3</td>
</tr>
<tr>
<td>609</td>
<td>Advanced Exercise Physiology</td>
<td>3</td>
</tr>
<tr>
<td>610</td>
<td>Histology, Cell Biology, and Introductory Pathology</td>
<td>4</td>
</tr>
<tr>
<td>611</td>
<td>Medical Physiology, Pathophysiology, and Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>612</td>
<td>Development Biology</td>
<td>4</td>
</tr>
</tbody>
</table>

### BIOSCIENCE 3100:

- **568 THE PHYSIOLOGY OF REPRODUCTION**: Study of the physiological mechanisms of reproduction throughout the animal kingdom with special emphasis upon mammalian endocrinological control. **3 credits**
- **569 RESPIRATORY PHYSIOLOGY**: Study of mechanisms determining gas exchange including mechanics, ventilation, blood flow, diffusion, and control systems. Emphasis is given to normal human lung function. **3 credits**
- **570 LAB ANIMAL REGULATIONS**: Required of anyone working with animals, and covers government regulations, care of animals and a lab to teach basic animal handling and measurement techniques. **1 credit**
- **571 PHYSIOLOGICAL GENETICS**: The integrative study of how genetics and physiology influence complex systems from molecular to behavioral in plants and animals. **4 credits**
- **572 BIOCHEMICAL MECHANISMS OF STRESS**: Study of mechanisms from molecular to behavioral of how stress influences body systems and signals. The latest research and experimental issues are discussed. **3 credits**
- **573 COMPARATIVE ANIMAL PHYSIOLOGY**: Study of respiration, circulation, digestion, metabolism, osmoregulation, and excretion in a variety of invertebrate and vertebrate animals. Adaption to the environment is emphasized. **3 credits**
- **574 COMPARATIVE ANIMAL PHYSIOLOGY LABORATORY**: Laboratory experiments in animal physiology (respiration, circulation, metabolism, osmoregulation). Presentation of results in scientific format and as oral reports. **1 credit**
- **580 MOLECULAR BIOLOGY**: Fundamentals of molecular biology, including recombinant DNA technology, applications in biotechnology, medicine, and genetic engineering. Mechanisms of gene regulation. **3 credits**
- **581 ADVANCED GENETICS**: Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar. **3 credits**
- **582 NEUROBIOLOGY**: 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. **3 credits**
- **585 CELL PHYSIOLOGY**: Explores molecular and biochemical aspects of energy metabolism, inter and intracellular signaling, growth and death of cells. Emphasizes up-to-date scientific literature and techniques. **4 credits**
- **589 WORKSHOP IN BIOLOGY**: 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. **1 credits each**
- **593 BIOLOGICAL PROBLEMS**: Advanced studies of topics in ecology and evolution, including population genetics, coevolution, metapopulations, and conservation genetics. Lecture/discussion format. **3 credits**
- **594 TOPICS IN INTEGRATIVE BIOLOGY**: Reading, critical analysis, presentation, discussion and debate of cutting edge biological research with an emphasis on understanding the integrative approach to biological investigations. **3 credits**
- **595 GRADUATE EVOLUTIONARY BIOLOGY**: A survey of theory and methods in evolutionary biology including evolutionary genetics, natural selection, drift, mating systems, trait integration, plasticity, phylogenetics, and paleontology. **4 credits**
- **596 GRADUATE ECOLOGY**: Advanced training for students pursuing a professional / academic career in ecology or associated disciplines. Exploration of interactions at the organismal, population, community, and ecosystem levels. **3 credits**
- **597 EXPERIMENTAL APPROACHES IN FIELD ECOLOGY**: Prerequisite: Graduate status. Field oriented course intended to help students learn to formulate questions and hypotheses, design field studies, and analyze and interpret data, and present conclusions. Laboratory. **4 credits**
- **598 ADVANCED AQUATIC ECOLOGY**: Prerequisite: permission. This course examines interactions between aquatic organisms and their environment across freswater and marine systems. It includes primary literature, field trips, and student-designed experiments. **4 credits**
- **599 BASIC DNA TECHNIQUES**: Basic DNA techniques including extraction of DNA, cleavage of DNA and cloning. Laboratory. **3 credits**
- **600 TECHNIQUES IN MOLECULAR BIOLOGY**: Discussion of current techniques in molecular biology such as microscopy, cell culture, gene expression, and protein analysis. Laboratory. **3 credits**
- **601 EVOLUTIONARY ECOLOGY**: Advanced studies of topics in ecology and evolution, including population genetics, coevolution, metapopulations, and conservation genetics. Lecture/discussion format. **3 credits**
- **602 TOPICS IN INTEGRATIVE BIOLOGY**: Reading, critical analysis, presentation, discussion and debate of cutting edge biological research with an emphasis on understanding the integrative approach to biological investigations. **3 credits**
- **603 GRADUATE ECOLOGY**: Advanced training for students pursuing a professional / academic career in ecology or associated disciplines. Exploration of interactions at the organismal, population, community, and ecosystem levels. **3 credits**
- **604 EXPERIMENTAL APPROACHES IN FIELD ECOLOGY**: Prerequisite: Graduate status. Field oriented course intended to help students learn to formulate questions and hypotheses, design field studies, and analyze and interpret data, and present conclusions. Laboratory. **4 credits**
- **605 ADVANCED AQUATIC ECOLOGY**: Prerequisite: permission. This course examines interactions between aquatic organisms and their environment across freswater and marine systems. It includes primary literature, field trips, and student-designed experiments. **4 credits**
- **606 BASIC DNA TECHNIQUES**: Basic DNA techniques including extraction of DNA, cleavage of DNA and cloning. Laboratory. **3 credits**
- **607 TECHNIQUES IN MOLECULAR BIOLOGY**: Discussion of current techniques in molecular biology such as microscopy, cell culture, gene expression, and protein analysis. Laboratory. **3 credits**
- **608 ADVANCED TOPICS IN BEHAVIOR**: Prerequisites: 528 or equivalent. Advanced studies of topics in behavior, emphasizing current scientific literature. **3 credits**
- **609 ENTOCOMOLOGY**: Prerequisite: Graduate standing. Exploration of the diversity and biology of insects and their relatives. Laboratories emphasize field experiences and a collection. **4 credits**
- **610 ENVIRONMENTAL PHYSIOLOGY**: Prerequisites: 501, 563. Study of physiological reactions of healthy mammals to natural changes or extremes of physical environment. **3 credits**
- **611 ADVANCED EXERCISE PHYSIOLOGY**: Through lecture, reading, and critical analysis of current literature, physiologic mechanisms of exercise in animals will be explored. **3 credits**
- **612 HUMAN PHYSIOLOGY**: Detailed study of function of the human body with special emphasis on neuroendocrine, cardiovascular, respiratory, renal and endocrine physiology. Laboratory. **4 credits**
- **613 ADVANCED CARDIOVASCULAR PHYSIOLOGY**: Study of cardiovascular physiology. **3 credits**
- **614 VERTEBRATE EMBRYOLOGY**: Lectures focus on development of model vertebrate organisms and cellular and molecular mechanisms underlying animal development. Laboratory focuses on frog and chick development. **4 credits**
- **615 COMPARATIVE VERTEBRATE MORPHOLOGY**: An introduction to the comparative morphology of major vertebrates. The laboratory consists of dissections of representative vertebrates. **4 credits**
673 INTEGRATIVE STRESS PHYSIOLOGY 3 credits
Prerequisite: B.S. in Biological Science. This course is designed to examine the behavioral, physiological, genetic, and molecular mechanisms of how various types of stressors affect the organism.

674 INTEGRATIVE CARDIOVASCULAR PHYSIOLOGY 3 credits
Prerequisite: B.S. in Biology or equivalent. Integration of epidemiological, behavioral,physiological, molecular, and genetic mechanisms of cardiovascular function in health and disease. Emphasis on critical thinking and class discussions.

675 INTEGRATIVE PHYSIOLOGICAL GENOMICS 4 credits
Prerequisite: B.S. in science discipline. This course uses methodologies from genetics and computational biology to develop an integrative approach to studying whole body systems.

676 INTEGRATIVE PHYSIOLOGY 3 credits
Explorations of the integrative nature of physiology through reading, lecture, and critical analysis of current literature.

681 CYTOLHOLOGY 4 credits
The study of how a cell's structure, biochemistry, metabolism, and molecular biology integrate to produce cell function. Laboratory.

683 SELECTED TOPICS IN MICROBIOLOGY 3 credits
The study of organization, function, and development of the vertebrate nervous system.

685 ADVANCED CELL PHYSIOLOGY 3 credits
Structure and functional organization of cells at ultrastructural level. Three lecture hours a week.

688 PRINCIPLES OF TRANSMISSION ELECTRON MICROSCOPY 3 credits
Modern cytological methods using transmission electron microscope. Portfolio required to demonstrate proficiency in fixation techniques, use of ultramicrotome, light and electron microscopes and darkroom techniques.

689 PRINCIPLES OF SCANNING ELECTRON MICROSCOPY 3 credits
An introduction of modern cytological methods using the scanning electron microscope. A portfolio required to demonstrate proficiency in fixation techniques; the use of supplemental equipment such as the critical point drying apparatus and the sputter-coating apparatus and the efficient use of the scanning electron microscope.

695 SPECIAL TOPICS: BIOLOGY/NEUOCOM 1-3 credits
(May be repeated) Prerequisite: permission. Special courses offered once or only occasionally in areas where no formal course exists.

697 BIOLOGY SEMINAR 1 credit each
(May be repeated) Prerequisite: permission. Attendance at all departmental seminars and presentation of seminar based on original research. Required of all thesis option students who shall present their thesis research.

699 MASTER'S THESIS 1-6 credits
(May be repeated) A minimum of six credits required for thesis option student.

701 RESEARCH TECHNIQUES IN INTEGRATED BIOSCIENCES 4 credits
Students will learn standard, common techniques that are applicable across broad areas of research in integrated biosciences.

702 COMMUNICATING IN INTEGRATED BIOSCIENCES 2 credits
Communication of bioscience topics to professionals of a broad audience. Students present topics in their area of expertise to other (non)-science students in the course.

703 PROBLEM SOLVING IN INTEGRATED BIOSCIENCES 3 credits
Prerequisite: 702. Students will learn how to study complex systems and get hands-on experience working in interdisciplinary teams.

707 INTEGRATED BIOSCIENCES SEMINAR 1 credit
Prerequisite: Permission. Seminars of original research from a broad range of biosciences-related disciplines.

899 DOCTORAL DISSERTATION 1-12 credits
Original research by the doctoral student.

BIOLOGY/NEUOCOM: 3110:

630 HUMAN GROSS ANATOMY I 3 credits
Prerequisites: graduate standing and permission. An intensive study of human macroanatomy.

631 HUMAN GROSS ANATOMY II 3 credits
Prerequisite: graduate standing and permission. An intensive survey of human macroanatomy.

695 SPECIAL TOPICS: BIOLOGY/NEUOCOM 1-6 credits
Prerequisite: permission of instructor. Advanced topics in medical education covering areas not otherwise available. May be repeated with a change in topic.

CHEMISTRY: 3150:

501 BIOCHEMISTRY LECTURE I 3 credits
Prerequisite: Graduate status or permission of department. Biochemistry of amino acids, carbohydrates, lipids, and nucleic acids: structure/function relations. Enzymes as catalysts: kinetics and regulation.

502 BIOCHEMISTRY LECTURE II 3 credits
Prerequisite: 501, graduate status or permission of department. Overview of metabolism; thermodynamics, carbohydrate, fatty acid, amino acid, and nucleoside analogues and catalysis; hormonal control of metabolism. Photosynthesis.

572 ADVANCED INORGANIC CHEMISTRY 3 credits
Prerequisite: Graduate status or permission of department. Concepts of atomic structure integrated with systematic classification of elements. Periodic table. Chemistry of the representative elements. Transition elements including coordination compounds, organometallics and metal cations.

590 WORKSHOP 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.

592 SPECIAL TOPICS: CHEMICAL EDUCATION 1-6 credits
(May be repeated up to 6 credits) Consideration of topics in chemical education.

603 BIOCHEMISTRY LABORATORY III 3 credits
Prerequisite: 501 and 502, graduate status or permission of department. DNA, RNA and protein metabolism. Translation and transcription. Gene function and expression.

610 BASIC QUANTUM CHEMISTRY 3 credits
Prerequisite: Graduate status or permission of department. Quantum mechanics with applications to molecular systems. Includes angular momentum, molecular Hamiltonians, variation and perturbation methods and molecular orbital theories.

632 SPECTROSCOPY 3 credits
Prerequisites: 610, graduate status or permission of department. Interaction of light with matter. Linear and nonlinear spectroscopies. Rotational, vibrational and electronic spectroscopy.

633 TRANSITION-METAL ORGANOMETALLICS 3 credits
Prerequisite: Graduate status or permission of department. The organometallic chemistry of the transition metal elements. Topics covered include synthesis, characterization methods, structure, bonding, reactivity, and application.

634 MAIN GROUP ORGANOMETALLICS 3 credits
Prerequisite: Graduate status or permission of department. The organometallic chemistry of main group elements. Topics covered include synthesis, characterization methods, structure, bonding, reactivity, and applications.

625 CHEMISTRY SEMINAR 1 credit
Prerequisite: Graduate status or permission of department. Lectures on current research topics in chemistry by invited speakers.

629 PHYSICAL INORGANIC CHEMISTRY 3 credits
Prerequisites: Graduate status or permission of department. Detailed treatment of chemistry of transition elements. Group theoretical applications, ligand field theory, kinetics and mechanisms, electronic spectra, molecular orbital theory.

630 THEORETICAL INORGANIC CHEMISTRY 2 credits
Prerequisites: 629, graduate status or permission of department. Detailed treatment of chemistry of transition elements. Group theoretical applications, ligand field theory, kinetics and mechanisms, electronic spectra, molecular orbital theory.

631 METALS IN MEDICINE 3 credits
Prerequisite: Graduate status or permission of department. This course will cover the synthesis and development of metal based medicines including the tumor drug cisplatin, technology based imaging agents and silver antimicrobials.

635 THERMODYNAMICS AND STATISTICAL THERMODYNAMICS 3 credits
Prerequisites: Graduate status or permission of department. Rigorous treatment of laws of thermodynamics and their applications to selected chemical systems. Fundamentals of statistical thermodynamics and applications to systems in chemical equilibrium.

636 CHEMICAL KINETICS 3 credits
Prerequisite: 635, graduate status or permission of department. Phenomenological kinetics, experimental methods of investigation and analysis of reaction systems. Theoretical treatment of reaction rates.

640 CHEMICAL SEPARATIONS 3 credits
Prerequisites: Graduate status or permission of department. General theory, instrumentation and application of methods of separation. Emphasis on modern chromatographic techniques and recent advances.

641 ELECTROCHEMICAL METHODS 3 credits
Prerequisites: Graduate status or permission of department. Theory and application of instrumental measurements. Interpretation of data.

645 X-RAY CRYSTALLOGRAPHY 3 credits
Prerequisites: Graduate status or permission of department. The theoretical and practical aspects of single crystal X-ray crystallography are discussed. Topics covered include diffraction, space groups, structure solution and refinement.

670 SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS 3 credits
Prerequisites: Graduate status or permission of department. Determination of the structures of organic compounds by spectroscopic analysis: IR, UV/VIS, mass spectroscopy, NMR, NMR spectroscopy, 2D-NMR.

679 INORGANIC POLYMERS 3 credits
Prerequisites: 572 or permission of instructor. Synthesis, structure, bonding, characterization, and applications of polyelectrolytes, polyanions, polyelectrolytes, polycationic (polymethacrylates), and sol-gel materials, coordination polymers, and related materials.

683 MECHANISTIC AND SYNTHETIC ORGANIC CHEMISTRY I 3 credits
Prerequisites: Graduate status or permission of department. Introduction to the structural and mechanistic aspects of organic reacions: HMO calculations, acids and bases, equilibrium, nucleophiles, linear free energy relationships, reaction intermediates, reaction mechanisms.

684 MECHANISTIC AND SYNTHETIC ORGANIC CHEMISTRY II 3 credits
Prerequisite: 683, graduate status or permission of department. Synthetic organic chemistry from a mechanistic perspective; nucleophilic and electrophilic substitution and addition reactions, carbon-organic functional group manipulations, oxidations, reductions, cyclizations and reactions.

699 MASTER'S THESIS 1-6 credits
Prerequisite: Graduate status or permission of department. For properly qualified candidates for master's degree. Supervised original research in analytical, inorganic, organic, physical or biochemistry.

710 SPECIAL TOPICS: ANALYTICAL CHEMISTRY 3 credits
(May be repeated) Prerequisite: Graduate status or permission of department. Topics in advanced analytical chemistry. Electroanalysis, actinometry, atomic absorption spectroscopy, mass spectrometry, liquid-liquid, liquid-solid and gas chromatography, ion exchange, thermochromatographic separations, standards, sampling, recent developments.

711 SPECIAL TOPICS: INORGANIC CHEMISTRY 1-3 credits
( May be repeated) Prerequisite: Graduate status or permission of department. Consideration of topics in modern inorganic chemistry such as coordination compounds, chemistry of the transition metals, representative elements, nonaqueous solvents, organometallics, homogeneous catalysis.

712 SPECIAL TOPICS: ORGANIC CHEMISTRY 1-3 credits
( May be repeated) Prerequisite: Graduate status or permission of department. Topics in advanced organic chemistry such as natural products, heterocyclic compounds, photochemistry.

713 SPECIAL TOPICS: PHYSICAL CHEMISTRY 1-3 credits
( May be repeated) Prerequisite: Graduate status or permission of department. Subject from modern physical chemistry.

715 SPECIAL TOPICS: BIOCHEMISTRY 1-3 credits
( May be repeated) Prerequisite: Graduate status or permission of department. Recent developments in areas of biochemistry.

720 ADVANCED BIOCHEMICAL TECHNIQUES 3 credits
Prerequisites: 501, graduate status or permission of department. An advanced lecture course on physical techniques in biochemistry. Includes optical and hydrodynamic methods; radiolarylal techniques, scattering and magnetic resonance spectroscopy.

96 The University of Akron 2009-2010
530 LABOR MARKET AND SOCIAL POLICY 3 credits
Prerequisites: Admission to the master's program in Economics or permission. Intensive study of current labor and social policy issues (e.g. discrimination, poverty, migration, education, demographic and labor market changes, impact of international trade on employment).

534 LABOR MARKET ANALYSIS AND EVALUATION 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Advanced labor market research using specialized techniques. Employment, health, education, and other current policy issues and programs analyzed and evaluated. Original research project required.

556 HEALTH ECONOMICS 3 credits
Prerequisite: Permission of instructor. Economic analysis of health care. Stresses health policy issues, includes study of demand and supply of medical services and insurance, analysis of public and private health care industries.

538 ECONOMICS OF SPORTS 3 credits
Prerequisite: Permission of instructor. Sports franchises as profit maximizing firms; costs and benefits of a franchise to a city, labor markets in professional sports; the economics of college sports.

540 SPECIAL TOPICS: ECONOMICS 3 credits
Prerequisite: Permission of instructor. Opportunity to study special topics and current issues in Economics.

560 ECONOMICS OF DEVELOPING COUNTRIES 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Basic problems of economic development. Theories of economic development, issues of political economy and institutions. Topics include poverty, population, migration, employment, finance, international trade, environment.

561 PRINCIPLES OF INTERNATIONAL ECONOMICS 3 credits
May be repeated with another cuneiform language for credit. Prerequisite: admission to the master's program in Economics or permission. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.

575 DEVELOPMENT OF ECONOMIC THOUGHT 3 credits
Prerequisites: Admission to the master's program in Economics or permission. Evolution of theory and method, relation of ideas of economists contemporary to conditions.

581 MONETARY AND BANKING POLICY 3 credits
Prerequisites: Admission to the master's program in Economics or permission. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.

587 URBAN ECONOMICS: THEORY AND POLICY 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Analysis of urban issues from an economic perspective. Emphasis on urban growth, land-use patterns, housing, income distribution, poverty and urban fiscal policy.

591 WORKSHOP IN ECONOMICS 1-3 credits
May be repeated with another cuneiform language for credit. Prerequisite: Admission to the master's program in Economics or permission. Laboratory research on selected topics in economics. May be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.

600 FOUNDATIONS OF ECONOMIC ANALYSIS 3 credits
Prerequisite: graduate standing. Determination of national income, employment and price level; aggregate consumption, investment and asset holding; decision problems faced by households and firms. Partial equilibrium and analysis of competition and monopoly and monopolistic competition; general equilibrium analysis. May not be substituted for 602, 603, E10, or applied toward the 30 grad- uate credits required for M.A. in economics.

602 MACROECONOMIC ANALYSIS I 3 credits
Construction of static macroeconomic models. Analysis predominantly in terms of comparative statics with only relatively brief mention of dynamic models.

606 ECONOMICS OF THE PUBLIC SECTOR 3 credits

610 FRAMEWORK OF ECONOMIC ANALYSIS 3 credits
Prerequisite: graduate standing. Development of theoretical and analytical framework for decision making. Discussion of applications of the framework to situations concerning demand, cost, supply, production, price, employment and wage.

611 MICROECONOMIC THEORY 1 3 credits
Modelling of consumer behavior and of the firm. Determination of market prices. Opti- mization models, establishment of criteria for productive, allocative and distributive efficiency.

615 INDUSTRIAL ORGANIZATION 3 credits
Prerequisite: E10 or permission of instructor. Examines link between market structure, firm conduct and economic performance. Measurement and effects of monopoly power, industrial concentra- tion and changes.

617 THE ECONOMICS OF REGULATION 3 credits
Prerequisite: E10 or permission of instructor. Examines rationale, methods and success of government regulation of public utility, transportation and communications industries.

ECONOMICS 3250:

506 STATE AND LOCAL PUBLIC FINANCE 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

523 APPLIED GAME THEORY 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economic issues including bargaining, cartels, voting, conflict resolution, and non-competitive pricing.

552 ECONOMIC FORECASTING 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Study of methods for building, identifying, fitting, and checking dynamic economic models and the use of these models for forecasting. Emphasis is on the applications of computer software systems.

583 QUALITATIVE METHODS: ECONOMICS 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Advanced instruction in qualitative research methods in student's chosen field of interest. Regular conferences with instructor. Preparation of a comprehensive and extended household and other kinship groupings. Lecture.

587 URBAN ECONOMICS: THEORY AND POLICY 3 credits
Prerequisite: Admission to the master's program in Economics or permission. Analysis of urban issues from an economic perspective. Emphasis on urban growth, land-use patterns, housing, income distribution, poverty and urban fiscal policy.

591 WORKSHOP IN ECONOMICS 1-3 credits
May be repeated. Group studies of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.
560 MODERN AMERICAN FICTION
3 credits
Study of significant American short and long fiction from World War I to the present.

553 AMERICAN WOMEN POETS
3 credits
Studies modern poets' uses and revisions of tradition, women's relationships, constructions of art and of the artist-as-woman, and the debate between "public" and "private" poetry.

556 THOREAU, EMERSON, AND THEIR CIRCLE
3 credits
A study of the work and life of Henry David Thoreau, Ralph Waldo Emerson, and other key figures of the American Renaissance.

560 FILM AND LITERATURE
3 credits
Analysis of literary texts and their film adaptations. Emphasis on genre, structure, and visual elements as counterparts to written texts.

567 MODERN EUROPEAN FICTION
3 credits
Representative European writers from about 1850 to present, in translation. Focus on fiction written by such writers as Zola, Tolstoy, Dostoevsky, Mann, Proust, Kafka and Saltefanu.

568 INTERNATIONAL POETRY
3 credits
This survey of world poetry focuses on the stylistic and social consequences of literary movements toward realism. Writers discussed include Cooper, Poe, Hawthorne, and Melville.

1-4 credits each

569 THEORY OF WAGES AND EMPLOYMENT
3 credits
Analysis and approach to integration of economic theory with observed labor market phenomena. Discussion of wage and employment theories, effects of unions, collective bargaining theories and effects of government regulation.

664 SEMINAR ON ECONOMIC GROWTH AND DEVELOPMENT
3 credits
Review of main theories of economic growth since age of classical economics. Problems in development of emerging countries. Discussion of aggregate macromodels of capital formation and saving, investment, technology, and external trade.

666 SEMINAR ON REGIONAL ECONOMIC ANALYSIS AND DEVELOPMENT
3 credits
Study of a particular national or international regional development. Any one or a combination of following regions may be considered: Middle East, North Africa, areas within Latin America, Southern Europe, Southeast Asia or Eastern Europe.

670 INTERNATIONAL MONETARY ECONOMICS
3 credits

671 INTERNATIONAL TRADE
3 credits
Traditional trade theory. Recent developments in trade theory, policy implications in trade relations among developed and developing economies.

683 MONETARY ECONOMICS
3 credits
Intensive study of important areas of monetary theory. Emphasis on integration of money and value theory among other topics, plus some pressing policy issues.

695 GRADUATE INTERNSHIP IN ECONOMICS
3 credits
Prerequisites: Eighteen credit hours of economics graduate courses. Career application of student's graduate coursework. Supervisor reports and assignments required. May be repeated for a maximum of three credits.

692 READING IN ADVANCED ECONOMICS
1-4 credits each
(a maximum of six credits may be applied toward the master's degree in economics.) Intensive investigation of selected problem area in advanced economics under supervision of instructor. Since the subject matter is decided upon in each case, the course may be taken repeatedly for credit.

699 MASTER'S THESIS
3 credits
(May be repeated for a total of six credits)

500 ANGLO SAXON
3 credits
Studies in Old English language and Old English prose and poetry, including Beowulf

503 DEVELOPMENT OF THE ARTHURIAN LEGEND
3 credits
Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characteristics, themes, and the treatment.

506 CHAUCER
3 credits
Close study of Chaucer's major works – The Canterbury Tales and Troilus and Criseyde in Middle English.

507 MIDDLE ENGLISH LITERATURE
3 credits
Study of genres, topics, styles and writers of the Middle English literary works from 12th to 16th centuries. Readings in Middle English.

521 SWIFT AND POPE
3 credits
An intensive study of the major satires of Swift and Pope. Concentration on the rhetorical strategies of each author within the context of the shifting intellectual and cultural milieu at the end of the 17th and beginning of the 18th Centuries.

524 EARLY ENGLISH FICTION
3 credits

530 VICTORIAN POETRY AND PROSE
3 credits
Poetry, prose of the late 19th Century, excluding fiction, with attention to Tennyson, Browning, Arnold, Trollope, Ruskin and other major writers.

531 VICTORIAN FICTION
3 credits
Reading major novels of Victorian era, of varying length, by Emily Bronte, Dickens, Eliot, Thackeray, and Hardy. Characterization, theme, and attitude toward life emphasized.

535 20TH CENTURY BRITISH POETRY
3 credits
Concentrated study of major poets of Yeats, Eliot, and Auden with attention also to Hardy, Housman, Spender, C. Day Lewis, Dylan Thomas and others.

536 BRITISH FICTION: 1900-1925
3 credits
Study ofjones, Joyce, D.H. Lawrence, and Virginia Woolf with attention to their innovations in narrative and style, their psychological realism and symbolism.

537 BRITISH FICTION SINCE 1925
3 credits
Study of prominent British novelists since 1925, excluding Lawrence, Joyce, and Woolf. Attention to development of British short story from 1925 to present.

458 AMERICAN ROMANTIC FICTION
3 credits
Examination of early American fiction, tracing its genesis, romantic period and general movement toward realism. Writers discussed include Cooper, Poe, Hawthorne, and Melville.

459 AMERICAN FICTION: REALISM AND NATURALISM
3 credits
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.

1-4 credits each

550 MODERN AMERICAN FICTION
3 credits
Study of significant American short and long fiction from World War I to the present.

553 AMERICAN WOMEN POETS
3 credits
Studies modern poets' uses and revisions of tradition, women's relationships, constructions of art and of the artist-as-woman, and the debate between "public" and "private" poetry.

556 THOREAU, EMERSON, AND THEIR CIRCLE
3 credits
A study of the work and life of Henry David Thoreau, Ralph Waldo Emerson, and other key figures of the American Renaissance.

560 FILM AND LITERATURE
3 credits
Analysis of literary texts and their film adaptations. Emphasis on genre, structure, and visual elements as counterparts to written texts.

567 MODERN EUROPEAN FICTION
3 credits
Representative European writers from about 1850 to present, in translation. Focus on fiction written by such writers as Zola, Tolstoy, Dostoevsky, Mann, Proust, Kafka and Saltefanu.

568 INTERNATIONAL POETRY
3 credits
This survey of world poetry focuses on the stylistic and social consequences of literary movements toward realism. Writers discussed include Cooper, Poe, Hawthorne, and Melville.
505 GEOGRAPHIC INFORMATION SYSTEMS 3 credits
Introduction to the principles and concepts underlying geographic information systems (GIS) and their application in professional practice and academic research. Laboratory.

506 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS 3 credits
Prerequisite: 505 or permission. Advanced concepts and methodologies in geographic information systems (GIS) including hands-on experience with both raster and vector GIS. Laboratory.

507 REMOTE SENSING 3 credits
Prerequisite: 505 or permission. Laboratory. Investigation of remote-sensing data for analyzing geographic, geological, and other earth phenomena. Laboratory. Laboratory.

520 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.

522 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.

524 MILITARY GEOGRAPHY 3 credits
Influence of physical and human geography on military operations and military history. Role played by geography in international conflicts.

532 LAND USE PLANNING LAW 3 credits
Application of law and regulations to land use and development. Includes environmental, economic, political, and legal aspects of land use planning.

533 PRACTICAL APPROACHES TO PLANNING 3 credits
Introduction to the primary analytic techniques for planning and decision-making.

537 PLANNING ANALYSIS AND PROJECTION METHODS 3 credits
Practical applications of planning analysis and projection methods.

538 LAND USE PLANNING METHODS 3 credits
Application of GIS and other computer-based tools to the preparation, implementation, and evaluation of comprehensive land use plans.
GEOLOGY

505 ARCHAEOLOGICAL GEOLOGY 3 credits includes lab Prerequisite: Admission to the Geology master’s program or permission. Provides background in geologic principles and techniques relevant to archaeologists. Topics include stratigraphy, absolute dating, dating, loci assessment, zooarchaeology, taphonomy, and remote sensing. Required lab and field trips.

507 ARCHAEOGEOPHYSICAL SURVEY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Advanced instruction in subsurface geophysical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrical resistivity techniques, image processing and geological and archaeological interpretation. Field trips.

510 REGIONAL GEOLOGY OF NORTH AMERICA 3 credits Prerequisites: Admission to the Geology master’s program or permission. Examination of physiographic provinces of North America emphasizing physical and historical geography, stratigraphy and processes responsible for landforms in each province. Laboratory. Field trips.

511 GLACIAL GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and worldclimate. Field trips.

521 COASTAL GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Study of the origins and evolution of coasts and coastal deposits with particular attention paid to the interaction of waves and currents with sediment, and the development of associated sedimentary features. Field trips.

525 PRINCIPLES OF SEDIMENTARY BASIN ANALYSIS 3 credits Prerequisites: Admission to the Geology master’s program or permission. Primarily the study of depositional systems, regional and global stratigraphic cycles, and sedimentation and plate tectonics.

532 OPTICAL MINERALOGY-INTRODUCTORY PETROGRAPHY 3 credits Prerequisites: Admission to the Geology master’s program or permission. Optical techniques for identification, characterization, and classification of minerals and rocks using the petrographic microscope. Laboratory. Field trips.

533 ADVANCED PETROGRAPHY 3 credits Prerequisite: 532. Petrogenetic of igneous, metamorphic and sedimentary rocks as determined with the petrographic microscope. Laboratory. Field trips.

535 PETROLEUM GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Natural occurrences of petroleum. Characteristics, origin, entrapment, and exploration methods. Laboratory. Field trips.

536 COAL GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Origin, composition, and occurrence of coal with emphasis on depositional environments, coalification processes, exploration, evaluation, and exploitation. Laboratory. Field trips.

537 ECONOMIC GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory. Field trips.

541 FUNDAMENTALS OF GEOPHYSICS 3 credits Prerequisites: Admission to the Geology master’s program or permission. Fundamental concepts in solid earth geophysics, planetary physics, geodesy, and geomagnetism. Contributions of geophysics to recent major developments in geoscience.

544 ENVIRONMENTAL MAGNETISM 3 credits Prerequisite: Admission to the Geology master’s program or permission. Introduction to the theory and methods of environmental magnetism and the application of environmental magnetism to interpreting sedimentary deposits.

545 ENVIRONMENTAL AND ENGINEERING GEOPHYSICS 3 credits Prerequisite: Subsurface exploration using ground penetrating radar and multi-channel electrical resistivity. Applications in environmental assessment, civil engineering, and geotechnical engineering. Field trips.

546 EXPLORATION GEOPHYSICS 3 credits Prerequisites: Admission to the Geology master’s program or permission. Basic principles and techniques of geophysics with emphasis on gravimetric, magnetic, seismic, and electrical methods and application to geological problems. Laboratory. Field trips.

550 ADVANCED STRUCTURAL GEOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory. Field trips.

551 FIELD/LAB STUDIES IN ENVIRONMENTAL SCIENCE 3 credits Prerequisite: permission. A field/laboratory inquiry into a specific interdisciplinary, environmental science topic. Students complete a research project involving collecting, analyzing, and interpreting real world data. May be repeated for a maximum of six credit hours.

552 GEOLOGY AND ENVIRONMENTAL SCIENCE SERVICE LEARNING 1-3 credits Graduate students gain experience as project managers for class projects by designing research plans, supervising data collection, lab analyses, and preparing final project reports.

553 KOREA FIELD CAMP 1-3 credits Prerequisite: Admission to the Geology master’s program and permission. Introduction to collection and interpretation of field data and construction of geological maps.

554 GEOLOGY FIELD CAMP 1-3 credits Prerequisite: Admission to the Geology master’s program and permission. Advanced techniques and methods of field geology necessary for interpreting detailed geological maps.

555 FIELD STUDIES IN GEOLOGY 3 credits Prerequisite: Permission of instructor. Field trip emphasizing such aspects of geology as were neatly studied in Ohio. Includes pre-trip preparation and post-trip examination. Student will bear all expenses. (May be repeated for up to four credits)

561 MACROEVOLUTION 3 credits Prerequisite: Admission to the Geology master’s program or permission. Provides a comprehensive treatment of macroevolutionary theory, focusing on evidence from the fossil record. Topics include evolution of species, speciation, development, and fossil/eivolutionary rates.

563 ENVIRONMENTAL MICROPALAEONTOLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Introduction to techniques of micropaleontology as proxy indicators for environmental and climate change.

565 GEOMICROBIOLOGY 3 credits Prerequisite: Graded pass/fail standing. A course addressing the physiology, ecology, and activities of microorganisms that mediate important biogeochemical processes, and the interdisciplinary approaches to studying them.

570 GEOCHEMISTRY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Application of chemical principles to the study of geologic processes. Laboratory. Field trips.

572 STABLE ISOTOPE GEOCHEMISTRY 3 credits Prerequisites: Admission to the Geology master’s program or permission. Application of stable isotope geochemistry to the study of the hydrologic and carbon cycles, modern sedimentary environments, and the interpretation of sedimentary rocks.

574 GROUNDWATER HYDROLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Origin, occurrence, regime, and utilization of groundwater. Qualitative and quantitative presentation of geological and geochemical aspects of groundwater hydrology. Laboratory. Field trips.

580 SEMINAR IN ENVIRONMENTAL STUDIES 1-2 credits May be repeated for a maximum of 2 credits. Prerequisite: Graduate status. Discussion of specific environmental topics from an interdisciplinary viewpoint; resource persons are drawn from the University and the community.

581 ANALYTICAL METHODS IN GEOLOGY 2 credits Prerequisites: Admission to the Geology master’s program or permission. A survey of analytical methods used to solve geologic problems with emphasis on method selection, proper sample collection, analysis of data and data presentation.

584 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.

585 INDIVIDUAL READINGS IN GEOLOGY 1-4 credits Prerequisite: permission of graduate advisor. (May be repeated for a total of 8 credits; credits may not be used to meet degree requirements.) Directed reading to fit individual student programs. Credit/Noncredit.

590 WORKSHOP IN GEOLOGY AND ENVIRONMENTAL SCIENCE 1-3 credits May be repeated. Group studies of special topics in geology and environmental science. May not be used to satisfy graduate degree requirements in the department. May be used for elective credit only.

591 GRADUATE INTERNSHIP IN GEOLOGY AND ENVIRONMENTAL SCIENCE 1-3 credits (May be repeated for a maximum of 4 credits) Prerequisite: permission of department chair. Supervised professional experience in geology or geophysics. May only apply three credits toward minimum graduation requirements in Geology and Environmental Science.

631 ROCKS AND MINERALS 4 credits Prerequisites: Admission to the Geology master’s program or permission. Introduction to the study of rocks and minerals, radioactive background and disposal of radioactive wastes. Nuclear analytical techniques will also be discussed; lecture, laboratory and field study.

643 GEOSTATISTICS 3 credits Prerequisite: Admission to the Geology master’s program or permission. Application of statistical methods to geology and geophysics including tests of hypotheses, trend surface analysis, analysis of variance, nonparametric statistics and time series analysis.

655 ADVANCED FIELD STUDIES 1-3 credits May be repeated for a maximum of four credits Prerequisite: permission of instructor. Field trip course studying aspects of geology not seen in Ohio; includes pre- and post-trip academic activities. Students will bear costs.

656 GLOBAL TECTONICS 3 credits Prerequisites: Admission to the Geology master’s program or permission. Theoretical study of physical forces involved in formation and deformation of earth’s crust with emphasis on plate tectonics and associated dextral features.

661 GEOLOGIC RECORD OF PAST GLOBAL CHANGE 3 credits Prerequisite: equivalent of baccalaureate degree in geology or permission of instructor. Study of the geologic record of past global climate and environmental change from geochernical, paleontological, sedimentological and other geological evidence.

674 ADVANCED GROUNDWATER HYDROLOGY 3 credits Prerequisite: Admission to the Geology master’s program or permission. Study of shallow and artesian aquifers under steady and nonsteady state conditions. Collection and evaluation of field data, statistical models, and geostatistical methods to geology and geophysics. (May be repeated for a maximum of four credits) Prerequisite: permission of instructor. Field trip course studying aspects of geology not seen in Ohio; includes pre- and post-trip academic activities. Students will bear costs.

680 SEMINAR IN GEOLOGY 2 credits (May be repeated for a total of six credits) Selected topics with reference material from original sources.

684 SELECTED TOPICS IN GEOLOGY 3 credits (May be repeated for a total of eight credits) Prerequisite: permission. Topics not regularly offered as formal courses, generally of classic current importance. Entails lectures, readings, discussions and/or guided laboratory work.

685 ADVANCED INDIVIDUAL READINGS IN GEOLOGY 1-4 credits Prerequisite: Permission of graduate advisor. Directed readings to fit individual student programs. May be repeated for a maximum of nine credits.

688 GEOLOGY TEACHING PRACTICUM 2 credits Corequisite: graduate assistantship. Training and experience in college teaching of geology under supervision of experienced faculty. May be repeated for a maximum of six credits. Credit/Noncredit. May not be used to meet degree requirements. Credit/Noncredit.

696 GEOLOGY COLLOQUIUM 1 credit Lecture on current topics in geological sciences and thesis proposal and defenses by graduate students. May be repeated. Does not satisfy degree requirements.

698 GRADUATE RESEARCH PROBLEMS 1-3 credits (May be repeated for a total of six credits) Prerequisite: permission. Directed reading and research in an aspect of geology chosen by student in consultation with an instructor.

699 MASTER’S THESIS 16 credits Independent and original investigation. Must be successfully completed, report written and defended before a committee.

HISTORY

3400:

500 GENDER AND CULTURE IN CHINA 3 credits Prerequisites: Graduate standing. This course examines the dynamic between gender and culture from late imperial to post-socialist China, with connections drawn to public policies in different countries.

504 STUDIES IN ROMAN HISTORY
3 credits
Prerequisite: completion of 6 hours of History courses at the 200 or 300 level. Concentrated in examination of selected topics such as imperialism in middle and late Republic, the age of Augustus, or the fall of western Empire.

509 IMPERIAL SPAIN, 1469-1700
3 credits
Prerequisites: For M.A. and Ph.D. students only. This course examines the rise and fall of Spain as the first world power. It covers Spanish political, social, and cultural history.

510 HISTORY AND FILM
3 credits
Examines films as historical experiences, historical events, and artifacts of history. Themes and film will vary. Repeatable once with permission.

516 MODERN INDIA
3 credits
History of the Indian subcontinent from c.1600 with emphasis on Indian society and culture, British imperialism, and the emergence of Indian nationalism.

517 LATIN AMERICA AND THE UNITED STATES
3 credits

518 HISTORY OF BRAZIL SINCE 1500
3 credits
Survey of the economic, political, social, and cultural history of Brazil since 1500 to the present; the course also examines historiographical debates in Brazilian history.

524 THE RENAISSANCE
3 credits
The age of transition from the Middle Ages to modern times (1050-1600). Special emphasis on cultural trends, developments of humanism, and the fine arts.

525 THE REFORMATION
3 credits
Europe in 16th Century, its religious, cultural, political and diplomatic development, with special emphasis on the Protestant Reformation.

529 EUROPE IN THE FRENCH REVOLUTIONARY ERA, 1789-1815
3 credits
Development of Revolution; Napoleon's regime and satellites.

538 NAZI GERMANY
3 credits
This course covers the social, economic, and political history of Germany from World War I to 1945 with emphasis on the Third Reich.

540 TUDOR AND STUART BRITAIN, 1485-1714
3 credits
An examination of the development of the British nation-state, and increasing links between the British kingdoms in the early modern period, with emphasis on culture, politics, and religion.

543 CHURCHILL'S ENGLAND
3 credits
An examination of the changes that Britain experienced during the life of Winston Churchill, especially on cultural, social, and political developments.

551 COLONIAL AMERICAN HISTORY
3 credits
This course covers the history of colonial America from the First European encounter in the Americas in 1492 to the onset of the American Revolution.

552 THE AMERICAN REVOLUTIONARY ERA: POLITICAL, MILITARY, AND CONSTITUTIONAL ASPECTS
3 credits
The struggle for the rights of Englemeth and independence; the impact of war on American society and the creation of republican institutions.

553 THE EARLY AMERICAN REPUBLIC
3 credits
Prerequisite: Graduate student status. 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.

554 THE CIVIL WAR AND RECONSTRUCTION, 1850-1877
4 credits
Sectionalism, slavery and the causes of the Civil War; wartime activities of the Union and Confederacy; leading personalities; problems of reformation and the new Union.

555 THE ORIGINS OF MODERN AMERICA, 1877-1917
3 credits
United States from World War I to World War II. Emphasis on political developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.

556 AMERICA IN WARS AND DEPRESSION, 1917-1945
3 credits
World War I through the 1920s, the Great Depression and the New Deal; World War II.

557 THE UNITED STATES SINCE 1945
3 credits
Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political, constitutional, economic, social and cultural developments since 1945.

561 THE UNITED STATES AS A WORLD POWER
3 credits
This course analyzes the emergence and functioning of the United States as a world power, with particular emphasis on the twentieth century.

562 LATIN AMERICAN CONSTITUTIONAL HISTORY SINCE 1870
3 credits
This course will examine the evolution of constitutional government as well as civil liberties and individual rights from the Civil War to the present.

565 AMERICAN ECONOMY SINCE 1900
3 credits
Economic developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.

567 HISTORY OF AMERICAN POP CULTURE
3 credits
This course examines cultural phenomena and the social experiences of Americans in the twentieth century. Special emphasis on role of big business and evolution of monetary and fiscal policy.

568 AFRICAN-AMERICAN SOCIAL AND INTELLECTUAL HISTORY
3 credits
Examination of black thought and activities reflective of African-American culture, conditions facing black people within America and efforts toward coordinated black activity.

569 AFRICAN-AMERICAN WOMEN'S HISTORY
3 credits
Study of black American women's lives from colonial times to the present featuring autobiographical, fictional, and secondary works authored by black women.

570 OHIO HISTORY
3 credits
Various periods of Ohio's history, with special emphasis on Ohio's political, social, economic and intellectual development.

571 AMERICAN ENVIRONMENTAL HISTORY
3 credits
Features natural and human history of Ohio, with special emphasis on human activity and its relation to the environment.

573 MEXICO
3 credits
History of Mexico from Indian civilizations to present with emphasis on relations with United States; social and political developments of the 20th Century Mexican revolution.

574 LATIN AMERICA AND THE CARIBBEAN
3 credits
Selected aspects of the history of Central America and Caribbean countries with emphasis on populism and peasant movements, political reform, rural social revolution, economic underdevelopment, and relations with the United States.

582 WAR AND WESTERN CIVILIZATION
3 credits
War and society in Europe. America and beyond from ancient world to present with special emphasis on period since 1450.
545 INTRODUCTION TO TOPOLOGY 3 credits
Prerequisite: Departmental permission. Introduction to topological spaces and topologies, connectivity, cardinality, homorphisms, connected spaces, metric spaces.

559 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.

591 WORKSHOP IN MATHEMATICS 1-4 credits
May be repeated. Group of special topics in mathematics and applied mathematics. May not be used to meet undergraduate or graduate credit requirements in mathematics and statistics. May be used elective only credit.

611 TOPICS IN ALGEBRA 3 credits
Prerequisite: 522 or departmental permission. Advanced study of selected topics in some of the following areas: semigroups, groups, rings, modules and fields.

621 REAL ANALYSIS 3 credits
Prerequisite: 522 or departmental permission. In-depth study of real analysis – metric spaces, uniform convergence, integration theory, Hilbert spaces.

625 ANALYTIC FUNCTION THEORY 2 credits
Prerequisite: 522 or departmental permission. Complex number system, holomorphic functions, continuity, differentiability, power series complex function, residue theory, singularities, analytic continuation, asymptotic expansions.

627 ADVANCED NUMERICAL ANALYSIS I 3 credits
Prerequisites: 522 and knowledge of C++, FORTRAN, or MATLAB or departmental permission. Error propagation, theory of numerical methods in interpolation, integration, and ordinary differential equations.

628 ADVANCED NUMERICAL ANALYSIS II 3 credits
Prerequisite: 522 and knowledge of C++, FORTRAN, or MATLAB or departmental permission. Theoretical analysis of numerical methods in linear algebra.

631 CALCULUS OF VARIATIONS 3 credits
Prerequisite: Departmental permission. Problems with fixed and movable endpoints, problems with constraints, generalization to several variables, the maximality principle, linear time-variant problems, the connective between classical theory and the maximality principle.

632 ADVANCED PARTIAL DIFFERENTIAL EQUATIONS 3 credits
Prerequisite: 522 or departmental permission. Existence, uniqueness and stability of solutions to general classes of partial differential equations. Methods for solving these classes introduced, emphasizing both analytical and numerical techniques.

633.4 METHODS OF APPLIED MATHEMATICS I AND II 3 credits each
Prerequisite: 539 or departmental permission. Methods of applied mathematics concentrating on techniques for analysis of differential and integral equations – applied complex analysis, integral transforms, partial differential equations, and integral equations.

635 OPTIMIZATION 3 credits
Prerequisite: 522 or departmental permission. Unconstrained and constrained optimization theory and methods in applied problems.

636 ADVANCED COMBINATORICS AND GRAPH THEORY 3 credits
Prerequisite: Departmental permission. Theory and techniques of combinatorics as applied to network problems and graph theoretical problems.

638 THEORY AND APPLICATION OF WAVELETS 3 credits
Prerequisite: Permission of instructor. Theory of wavelets and applications to signal and image analysis. Topics include time-frequency representations, filter-bands, discrete and continuous wavelet transforms, wavelet packets, and applications.

689 ADVANCED TOPICS IN MATHEMATICS 1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of advisor. Seminar-type discussion on topics in mathematics leading to supervised research project. No more than 2 credits apply to major requirements.

692 SEMINAR IN MATHEMATICS 3 credits
Prerequisite: permission of advisor. Seminar-type discussion on topics in mathematics leading to supervised research project.

695 PRACTICUM IN MATHEMATICS 1-3 credits
(May be repeated. Prerequisite: graduate teaching assistant or permission. Training and experience in college teaching of mathematical sciences. May not be used to meet degree requirements. Credit/No credit.

697 INDIVIDUAL READING 1-3 credits
(May be repeated for a total of four credits) Prerequisites: standing and permission. Directed studies in mathematics at graduate level under guidance of selected faculty member.

699 MASTER’S RESEARCH 1-6 credits
(May be repeated for a total of 12 credits) Prerequisite: permission of advisor. Research in suitable topics in mathematics or applied mathematics culminating in a research paper. May not be used to meet master’s degree requirements for mathematics or applied mathematics.

699 MASTER’S THESIS 3 credits
Prerequisite: permission. Properly qualified candidate for master’s degree may obtain three credits for research that culminates in a public oral presentation of the faculty-supervised thesis.

721.2 FUNCTIONAL ANALYSIS I AND II 3 credits each
Prerequisites: 530 and 621 or departmental permission. These courses are sequential. Study of normed linear spaces and transformations between them with an emphasis on the formulation and analysis of differential and integral equations as operator equations on these spaces.

728 MATRIX ITERATIVE ANALYSIS 3 credits

730 ADVANCED NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS 3 credits
Prerequisites: 522 and 628, or 621, or departmental permission. Derivation, analysis, and implementation of difference and variational-based methods for the solution of partial differential equations and systems of differential equations.

732 ADVANCED PARTIAL DIFFERENTIAL EQUATIONS II 3 credits
Prerequisites: 522 and 532 or departmental permission. Well-posedness of elliptic, hyperbolic and parabolic problems. Variational Methods for Elliptic problems, Conservation Laws and numerical methods, potential theory and integral equations.

733.4 ASYMPTOTIC METHODS AND NONLINEAR ANALYSIS I AND II 3 credits each
Prerequisites: 630/634 or equivalent. Survey of asymptotic and perturbation methods as applied to integrals and differential equations. Topics: bifurcation and stability with applications from the physical sciences and engineering.

736 DYNAMICAL SYSTEMS 3 credits
Prerequisite: 522 or departmental permission. The study of mathematical models of systems which evolve over time. An introduction to maps and applications to ordinary differential equations.
501 FUNDAMENTALS OF DATA STRUCTURES 3 credits
Prerequisite: programming experience in C. Basic data structures and algorithms: stacks, queues, linked lists, trees, hash tables, and graphs; sorting and searching algorithms. Introduction to data abstraction and algorithm analysis. (May not be used to meet computer science requirements)

506 INTRODUCTION TO C AND UNIX 3 credits
Prerequisite: Programming experience in C. Language programming. UNIX shell program file structure, system calls, and interprocess communication. (May not be used to meet computer science requirements)

508 WIRELESS PROGRAMMING 3 credits
Prerequisites: Admission to Computer Science master's program or permission. Windows operating systems, integrated development environment, event-driven programming, graphical user interface design. Object libraries, component object model, object linking and embedding, client-server objects.

518 INTRODUCTION TO DISCRETE STRUCTURES 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Introduction to algebraic structures of particular use in computer science. Topics include algebra and finite sets, number systems, language, graphs and digraphs, trees, lattices codes. (May not be used to meet computer science master's degree requirements)

521 INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Object-oriented design, analysis, and programming using different development models. Comparison with other programming paradigms.

526 OPERATING SYSTEMS 3 credits
Prerequisites: Admission to Computer Science master's program or permission. Introduction to various types of operating systems: batch processing systems, multiprogramming systems and interacting processes: storage management, process and resource control, deadlock. Course is independent of any particular operating system. (May not be used to meet computer science master's degree requirements)

529 UNIX SYSTEM PROGRAMMING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. An overview of the UNIX operating system. Shell programming. Process management, processor management, storage management, scheduling algorithms, resource allocation, and system programming.

530 THEORY OF PROGRAMMING LANGUAGES 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Advanced concepts underlying programming languages and their applications, formal definitions of programming languages, Böhm-Jacopini's Normal Form, semantics. Alternative programming paradigms including functional programming. (May not be used to meet computer science master's degree requirements)

535 ANALYSIS OF ALGORITHMS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.

540 COMPILER DESIGN 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Techniques used in writing and modifying compilers including translation, loading, execution, symbol table management, error message generation, documentation, and debugging. Case study of a compiler for handling lexical scan, syntax scan, object code generation, error diagnostics and compiler optimization.

545 INTRODUCTION TO BIOINFOMATIC 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Introduction to major themes in bioinformatics. Topics include concepts of molecular genetics, biological databases, database searching, sequence alignments, phylogenetic trees, structure prediction, and microarray data analysis.

546 INTRODUCTION TO BIOINFOMATIC LABORATORY 1 credit
Prerequisite: Admission to the Computer Science master's program or permission. Corequisite: SF 376. Laboratory course, designed to support the study of biological databases, database searching, sequence alignments, phylogenetic tree construction, protein structure prediction, and microarray data analysis.

553 COMPUTER SECURITY 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Principles of computer security: cryptography, authentication, secure network protocols, intrusion detection and countermeasures.

555 DATA COMMUNICATIONS AND COMPUTER NETWORKS 3 credits
Prerequisites: Admission to Computer Science master's program or permission. ISO/OSI, TCP/IP, data communication protocols, error control, routing, topology, Network layers, network taxonomies, and socket-based programming.

557 COMPUTER GRAPHICS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Topics in vector and raster graphics, interactive graphics languages, scan conversion, clipping, geometric transformations, projection, shading, animation, and virtual reality.

560 ARTIFICIAL INTELLIGENCE AND HEURISTIC PROGRAMMING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.

563 PERVERSIVE COMPUTING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Computing from a wireless perspective. Topics include protocols, algorithms, security and sensor network design.

565 COMPUTER ARCHITECTURE 3 credits
Prerequisite: Admission to Computer Science master's program or permission. An introduction to the hardware organization of the computer at the register, processor and system level. An in-depth study of the architecture of a particular computer systems family. (May not be used to meet computer science master's degree requirements)

568 MOBILE ROBOTS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Introduction to history, hardware and software components, and design of autonomous mobile robots. Multiple robots, developing physical robots and software simulation.

575 DATABASE MANAGEMENT 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Fundamentals of data organization, processing and representation, data integrity, privacy, and concurrency.

577 INTRODUCTION TO PARALLEL PROCESSING 3 credits
Prerequisites: Admission to Computer Science master's program or permission. Commercial parallel processing system and parallel programming models, models of parallel computation. Emphasis on parallel algorithm design and performance evaluation. A broad study of parallel paradigms and relation to real world applications.

580 INTRODUCTION TO SOFTWARE ENGINEERING AND FORMAL METHODS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Study of formal software specification and validation. Introduction of methodologies and tools of design, development, validation, and maintenance.

589 TOPICS IN COMPUTER SCIENCE 1-3 credits
May be repeated. Prerequisite: permission of instructor. Selected topics in computer science at an advanced level.

597 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.

598 RESEARCH METHODOLOGY 3 credits
Prerequisite: Admission to Computer Science graduate program or permission of instructor. Research process overview; literature review; formulation of problems, research design, writing proposals, data collection, data processing and analysis, evaluation, writing reports, and presenting results.

626 ADVANCED OPERATING SYSTEMS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Advanced topics in operating system design and implementation, synchronization mechanisms, performance evaluation, security, distributed operating systems.

630 ADVANCED THEORY OF PROGRAMMING LANGUAGES 3 credits
Prerequisites: Admission to Computer Science master's program or permission. In-depth study of various issues in the design and implementation of programming languages, such as object-oriented and type systems, operational semantics, and verification.

635 ADVANCED ALGORITHMS AND COMPLEXITY THEORY 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Advanced graph algorithms, matrix multiplication, fast Fourier transforms, lower bound theory, complexity hierarchies, NP-complete and intractable problems, approximation techniques.

641 OPTIMIZATION FOR PARALLEL COMPILERS 3 credits
Prerequisites: Graduate standing and permission of instructor. Advanced analysis and transformation techniques to support automatic vectorization and parallelization of code, emphasizing restructuring to improve instruction scheduling.

655 COMPUTER NETWORKS AND DISTRIBUTED PROCESSING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Interconnection technologies, protocol layering models, datagram and stream transport services, client-server paradigm, principles and protocols of interconnected networks operating as unified communication systems, and TCP/IP technology.

658 VISUALIZATION 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Visualization pipeline, data representation in visualization, visualization algorithms, object-oriented visualization, scientific visualization, volume visualization, visualization applications and research topics.

660 EXPERT SYSTEMS 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Study of expert systems concepts related to computability. Topics include nondeterministic automata, recursive function theory, the Chomsky hierarchy, Turing machines and undecidability.

676 DATA MINING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Study fundamental data mining algorithms and their applications in the process of Knowledge Discovery from Databases. Study data warehousing systems and architectures.

677 PARALLEL PROCESSING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Advanced concepts in parallel architectures, theories of parallel computing, system resources optimization, efficient programming languages and language requirements of cost-effective computer systems. Classical results and practical insights into implementing parallel algorithms on actual parallel machines.

680 SOFTWARE ENGINEERING 3 credits
Prerequisite: Admission to Computer Science master's program or permission. Introduction to current techniques and methodologies in software design, development, validation, and maintenance.

689 ADVANCED TOPICS IN COMPUTER SCIENCE 1-3 credits
May be repeated. Prerequisite permission of instructor. At most, six credits may be applied to degree requirements. Selected topics in computer science at an advanced level. (Department consent required for application to computer science master's degree requirements).

695 PRACTICUM COMPUTER SCIENCE 1-3 credits
Prerequisite: graduate teaching assistant or permission. Training and experience in college teaching of computer science under the supervision of an experienced faculty member. May not be used to meet degree requirements. Credit/No credit.

697 INDIVIDUAL STUDY IN COMPUTER SCIENCE 1-3 credits
May be repeated. Can apply to degree only with departmental approval. Prerequisite: permission of instructor. Directed studies designed as introduction to research problems under guidance of designated faculty member.

699 MASTER'S RESEARCH 1-6 credits
May be repeated. Prerequisite: permission of advisor. Research in computer science topic culminating in a research paper. No more than three credits may be applied to the minimum degree requirements.

699 MASTER'S THESIS 1-6 credits
Prerequisite: permission. (May be repeated for a total of 15 credits.) A properly qualified candidate for a master's degree may enroll for research experience which culminates in presentation of a faculty-supervised thesis.

550 PROBABILITY 3 credits
Prerequisite: Appropriate background is one semester of calculus or equivalent. Introduction to probability models, random variables, probability distributions, expected value, sums of random variables, Markov processes. May not be used to meet graduate major requirements in statistics.

STATISTICS 3470:

550 PROBABILITY 3 credits
Prerequisite: Appropriate background is one semester of calculus or equivalent. Introduction to probability models, random variables, probability distributions, expected value, sums of random variables, Markov processes. May not be used to meet graduate major requirements in statistics.
551.2 THEORETICAL STATISTICS I AND II
3 credits each

Sequential. Prerequisite: Appropriate background is three semesters of calculus or equivalent. Elements of probability theory, sampling distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs. May not be used to meet graduate major requirements in statistics.

560 STATISTICAL METHODS
4 credits

Application of statistical methods to the social sciences including description statistics, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs. May not be used to meet graduate major requirements in statistics.

561 APPLIED STATISTICS
4 credits

Prerequisite: Appropriate background is two semesters of calculus or equivalent. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, estimation, hypothesis testing (parametric and nonparametric), regression and confidence intervals, linear and non-linear regression and correlation. May not be used to meet graduate major requirements in statistics.

562 APPLIED REGRESSION AND ANOVA
4 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Applications of the techniques of regression and multifactor analysis of variance. May not be used to meet graduate major requirements in statistics.

565 DESIGN OF SAMPLE SURVEYS
Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Design and analysis of frequently used sample survey techniques.

569 RELIABILITY MODELS
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.

571 ACTUARIAL SCIENCE I
3 credits

Prerequisite: Appropriate background is two semesters of calculus 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.

572 ACTUARIAL SCIENCE II
Pre-require: Appropriate background is prerequisite to Actuarial Exam 3 (Practical Applications) or equivalent. Applications of the techniques of regression and multifactor analysis of variance. May not be used to meet graduate major requirements in statistics.

575 FOUNDATIONS OF STATISTICAL QUALITY CONTROL
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.

580 STATISTICAL DATA MANAGEMENT
Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Students learn data organization and structures, design of statistical databases, statistical software analysis, importing and exporting of data between software, and missing data analysis.

589 TOPICS IN STATISTICS
May not 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.

591 WORKSHOP IN STATISTICS
May not 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.

593 STATISTICAL CONSULTING
3 credits

Prerequisite: 580 or permission. Students will be assigned to work with an instructor on current projects in the Center for Statistical Consulting. May be repeated for a total of 4 credits; however, only 2 credits will count toward major requirements. Does not count for elective credit for math science department majors.

595 ADVANCED PROBABILITY AND STOCHASTIC PROCESSES
Prerequisite: 565 Probability distributions, distribution functions, order statistics, means and variances of functions of random variables, limiting theorems, Markov chains and stationary processes.

597 PROBABILITY AND STATISTICS
4 credits

Prerequisite: Appropriate background is three semesters of calculus or equivalent. Probability, random variables, expectations and generating functions, random vectors, special distributions, limit theorems, sampling, point estimation, hypothesis testing, confidence estimation.

598 ADVANCED MATHEMATICAL STATISTICS
Prerequisite: Appropriate background is one semester of calculus or equivalent. Probability distributions, functions of random variables, the Central Limit Theorem; theory of estimation; hypothesis of testing; the multivariate normal density, introduction to linear models; Bayesian statistics.

596 LINEAR MODELS
2 credits

Prerequisite: Appropriate background is linear algebra or 651 or equivalent. General linear model in matrix notation, general linear hypothesis, regression models, experimental design models, analysis of variance and covariance, variance components.

600 ADVANCED STATISTICAL METHODS
Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Theory and applications of the techniques of regression and multifactor analysis of variance.

601 STATISTICS FOR THE LIFE SCIENCES
3 credits

Prerequisite: college level algebra or equivalent. Data description and presentation, probability applications in the life sciences (including sensitivity, specificity, relative risk), principles and application of statistical inference, ANOVA, correlation and regression. May not be used to meet graduate major requirements in statistics.

603 EXPERIMENTAL DESIGN
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Selected topics in experimental design including random and fixed effects, nested designs, split plots, randomized blocks, Latin squares, and analysis of covariance.

604 STATISTICS FOR THE HEALTH SCIENCES
4 credits

(May not be used to meet degree requirements for mathematical sciences majors.) Prerequisite: college level algebra or equivalent. Descriptive statistics, probability and probability distributions, tests of hypotheses and confidence intervals, linear and multiple regression, correlation. May not be used to meet graduate major requirements in statistics.

605 REGRESSION
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Correlation, simple and multiple linear regression: least squares, matrix notation, model building and diagnostic tests, estimation, hypothesis testing, outliers, influence, multicollinearity, transformations, categorical regressors. Logistic regression.

606 NONPARAMETRIC STATISTICS-METHODS
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Theory and practice using techniques requiring less restrictive assumptions. Nonparametric analogues to t- and F-tests, ANOVA, regression and correlation. Computer applications.

667 FACTOR ANALYSIS
3 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Theory and practice using techniques for identifying variables through use of principal components and factor analysis. Identification of groups using cluster analysis. Computer applications.

668 MULTIVARIATE STATISTICAL METHODS
3 credits

Prerequisite: Appropriate background is two semesters of applied statistics or equivalent. Multivariate techniques including distance concept, Hotelling’s T2, multivariate ANOVA, regression and correlation, linear contrasts, factorial experiments, nested and repeat measure designs, multivariate ANOVA, MANOVA, GLM, repeated measures, MANCOVA, repeated measures MANCOVA, MANOVA, MANCOVA. Computer applications.

670 BIOSTATISTICS
Prerequisite: Appropriate background is one semester of applied statistics or equivalent. Statistical issues and methods for biological, medical and health sciences including: clinical trials, sample size, power, log-linear models, survival analysis, and bioassy. Computer applications.

675 RESPONSE SURFACE METHODOLOGY
2 credits

Prerequisite: Appropriate background is one semester of applied statistics or equivalent. First and second order response design, efficient experimental plans, methods for the analysis, and optimization of response functions.

689 ADVANCED TOPICS IN STATISTICS
1-3 credits

May be repeated for a total of eight credits. Prerequisite: 651. Selected topics in statistical methodologies including: concepts in order, statistics, advanced inference, sequential analysis, stochastic processes, reliability theory, Bayesian statistics and regression.

692 STATISTICS MASTERS PAPER
(May be repeated) Prerequisite: permission of advisor. Supervised writing of paper for Masters of Science in Statistics Nonthesis Option.

695 PRACTICUM IN STATISTICS AND MATHEMATICS
1-3 credits

Prerequisite: graduate teaching assistant or permission. Training and experience in college teaching of statistics. May not be used to meet degree requirements. Credit/noncredit.

697 INDIVIDUAL READING
1-2 credits

(May be repeated for a total of four credits) Prerequisites: graduate standing and permission. Directed studies in statistics under guidance of selected faculty member.

698 MASTER’S RESEARCH
1-6 credits

(May be repeated) Prerequisite: permission of advisor. Research in suitable topics in statistics culminating in a research paper. No more than 2 credits applicable to major requirements.

699 MASTER’S THESIS
2 credits

(May be repeated for a total of 4 credits) Prerequisite: Permission. Properly qualified candidates for master’s degree may obtain 2-4 credits for research experience which culminates in presentation of faculty-supervised thesis.

ENGINEERING APPLIED MATHEMATICS
3490:

790 ADVANCED SEMINAR IN APPLIED MATHEMATICS
1-4 credits

Prerequisite: Permission. May be repeated for a total of 2 credits. For students seeking graduate degrees in Applied Mathematics. Advanced projects and studies in various areas of applied mathematics.

898 PRELIMINARY RESEARCH
3-16 credits

Prerequisite: Permission. (May be repeated.) Completion of qualifying examination and admission to student Advisory Committee. Preliminary investigation of Ph.D. dissertation topic.

899 DOCTORAL DISSERTATION
1-16 credits

Prerequisite: Permission. (May be repeated.) Completion of Candidacy examination and approval of Student Advisory Committee. Original research by a Ph.D. candidate.

MODERN LANGUAGES
3500:

1-4 credits

THE GENERAL DESIGNATION OF 3500 IS USED FOR LANGUAGES THAT DO NOT HAVE A SPECIFIC DEPARTMENT NUMBER

590 WORKSHOP
1-4 credits

Prerequisite: Graduate status or permission of department. (May be repeated for a maximum of eight credits) Group studies of special topics in modern languages.

597 INDIVIDUAL READINGS IN MODERN LANGUAGES
1-4 credits

Prerequisite: Graduate status or permission of instructor and department chair. (May be repeated with departmental permission) Individual study under the guidance of professor who directs and coordinates student’s reading and research.

ARABIC
3501:

1-4 credits

592 SPECIAL TOPICS IN ARABIC
Prerequisite: Graduate status, permission of instructor and department chair. 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 total of eight credits.

597 INDIVIDUAL READING IN ARABIC
1-4 credits

Prerequisite: Graduate status, permission of instructor and department chair. Individual study under the guidance of a professor. May be repeated with departmental permission for a total of eight credits.

CHINESE
3502:

1-4 credits

592 SPECIAL TOPICS IN LANGUAGE, SKILLS, OR CULTURE IN LITERATURE
Prerequisite: Graduate status, permission of instructor and department chair. 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 total of four credits.

597 INDIVIDUAL READING IN CHINESE
1-4 credits

Prerequisite: Graduate status, permission of instructor and department chair. Individual study under the guidance of a professor who directs and coordinates student’s reading and research. May be repeated with departmental permission for a total of eight credits.

LATIN
3510:

3 credits

5978 LATIN READING AND RESEARCH
Prerequisite: Graduate status or permission of department. General Latin epigraphy, prosa composition or philology; mumismatics or certain other archaeological topics may be offered. May be repeated for credit with change of subject.
FRENCH 3520:
502 ADVANCED FRENCH GRAMMAR 3 credits
Prerequisite: Graduate status or permission of department. Advanced study of normative French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles.

513 FRENCH CINEMA 3 credits
Prerequisite: Graduate status or permission of department. Study and discussion of various aspects of French culture and civilization as characterized in movies.

522 SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS OR CULTURE OR LITERATURE 1-4 credits
Prerequisite: Graduate status or permission of department. (May be repeated.) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

527 20TH CENTURY FRENCH LITERATURE 4 credits
Prerequisite: Graduate status or permission of department. Reading and discussion of the most representative works of period. Conducted in French.

530 CONTEMPORARY QUEBEC 3 credits
Historical, political, sociological, and cultural overviews of Quebec, offering an in-depth examination of questions of identity through the study of literature and popular culture.

531 FRANCOPHONE LITERATURE 3 credits
The politics of identity (race, class) in a postcolonial context, studied through literary texts by authors from Africa, Caribbean, and Quebec.

560 SELECTED THEMES IN FRENCH LITERATURE 3 credits
(May be repeated.) Conducted in French. Prerequisite: Graduate status or permission of department. Reading and discussion of literary works selected according to an important theme.

5978 INDIVIDUAL READING IN FRENCH 1-4 credits
Prerequisite: Graduate status or permission of department. Individual reading in French, offered at the graduate level. (May be repeated for a total of eight credits.)

6978 INDIVIDUAL READING AND RESEARCH IN FRENCH 1-4 credits each
Prerequisite: Graduate status or permission of department. Independent study and research in specific areas. Considerable reading and writing required.

GERMAN 3530:
5978 INDIVIDUAL READING IN GERMAN 1-4 credits
Prerequisite: Graduate status or permission of department. Individual reading in German, offered at the graduate level. (May be repeated for a total of eight credits.)

ITALIAN 3550:
597 INDIVIDUAL READING IN ITALIAN 1-4 credits
Prerequisite: Graduate status or permission of department. Individual study under guidance of professor who directs and coordinates student's reading and research.

SPANISH 3580:
503 ADVANCED GRAMMAR 3 credits
Prerequisite: Graduate status or permission of department. Advanced study of Spanish syntax and grammatical analysis. Does not count toward the M.A. in Spanish. Conducted in Spanish.

504 INTRODUCTION TO SPANISH LINGUISTICS 4 credits
Prerequisite: Graduate status or permission of department. 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.

505 SPANISH LINGUISTICS: PHONOLOGY 4 credits
Prerequisites: Graduate status or permission of department. Descriptive study of Spanish phonetics and phonology; comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.

506 SPANISH LINGUISTICS: SYNTAX 4 credits
Prerequisite: Graduate status or permission of department. Descriptive study of Spanish syntax; introduction to theories of grammar; overview of Spanish semantics and pragmatics. Conducted in Spanish.

507 SURVEY OF HISPANIC LITERATURE: SPAIN 4 credits
Prerequisite: Graduate status or permission of department. Historical overview of representative works and literary movements in Spain. Does not count toward M.A. in Spanish. Conducted in Spanish.

508 SURVEY OF HISPANIC LITERATURE: SPANISH AMERICA 4 credits
Prerequisites: Graduate status or permission of department. Historical overview of representative works and literary movements in Spanish America. Does not count toward M.A. in Spanish. Conducted in Spanish.

509 CULTURAL MANIFESTATION IN MEDIEVAL AND RENAISSANCE SPAIN 4 credits
Prerequisite: Graduate status or permission of department. Comparative study of representative artistic and literary works of the Medieval and Renaissance periods. Conducted in Spanish.

510 SPANISH APPLIED LINGUISTICS 4 credits
Prerequisite: Graduate status or permission of department. This course discusses current theories of second language acquisition and their implications for the learning of problematic Spanish structures.

511 SPAIN DURING THE BAROQUE PERIOD 4 credits
Prerequisite: Graduate status or permission of department. A comparative study of the different cultural manifestations during the 17th century in Spain. Conducted in Spanish.

512 CERVANTES: DON QUIJOTE 4 credits
Prerequisite: Graduate status or permission of department. Reading and analysis of Don Quijote as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.

513 THE DON JUAN MYTH IN SPANISH CULTURE 4 credits
Prerequisite: Graduate status or permission of department. Study of the evolution of the Don Juan myth from its origins to its latest versions in the 20th century. Conducted in Spanish.

514 CULTURAL POLITICS IN THE RIVER PLATE 4 credits
Prerequisite: Graduate status or permission of department. This course will examine the initiatives of the seventies and eighties in Argentina and Uruguay by looking at how these regimes affect culture.

515 REPRESENTING REALITY IN 19TH CENTURY SPAIN 4 credits
Prerequisite: Graduate status or permission of department. A comparative study of the major literary and artistic movements in Spain from Realism to Modernism. Conducted in Spanish.

518 20TH CENTURY SPAIN: THE AVANT-GARDE IN LITERATURE AND ART 4 credits
Prerequisite: Graduate status or permission of department. A comparative study of the major literary and artistic movements in Spain which illustrate the primary cultural changes of the century. Conducted in Spanish.

519 THE SPANISH CIVIL WAR AND ITS CULTURAL IMPACT 4 credits
Prerequisite: Graduate status or permission of department. Study of the impact of the Civil War on Spanish culture.

522 SPECIAL TOPICS IN SPECIALIZED LANGUAGE SKILLS OR CULTURE OR LITERATURE 1-4 credits
Prerequisite: Graduate status or permission of department. (May be repeated.) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

525 20TH CENTURY SPANISH-AMERICAN NOVEL 4 credits
Prerequisite: Graduate status or permission of department. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.

527 LATINO CULTURES IN THE USA 4 credits
Prerequisites: Graduate status or permission of department. Inquiry into the Latino experience of displacement and marginality through the analysis of cultural manifestations in the USA. Conducted in Spanish.

530 WOMEN IN 20TH CENTURY HISPANIC LITERATURE 4 credits
Prerequisite: Graduate status or permission of department. 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.

531 HISPANIC CULTURE: SPAIN 4 credits
Prerequisite: Graduate status or permission of department. Study of society, customs, history, art, music, etc. of Spain, from a Hispanic perspective. Does not count toward the MA in Spanish. Conducted in Spanish.

532 HISPANIC CULTURE: SPANISH AMERICA 4 credits
Prerequisites: Graduate status or permission of department. Study and discussion of various works from the 20th Century that depict women in Hispanic countries. Student teaching experiences are periodically reviewed and evaluated. These credits may not be applied toward degree requirements.

PHILOSOPHY 3600:
511 PLATO 3 credits
Prerequisite: 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.

514 AQUINAS 3 credits
Prerequisite: 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.

515 AUGUSTINE 3 credits
Prerequisite: 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.

518 20TH CENTURY ANALYTIC PHILOSOPHY 3 credits
Prerequisite: Permission of instructor. Study of ideal and ordinary language movements in 20th Century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austin.

521 PHILOSOPHY OF LAW 3 credits
Prerequisite: Permission of instructor. Identification and critical evaluation of classic and contemporary theories and assumptions of law, including legal reasoning, justice, natural law, jurisprudence, etc.

524 EXISTENTIALISM 3 credits
Prerequisite: 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.

526 PHENOMENOLOGY 3 credits
Prerequisite: Permission of instructor. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.

531 ARISTOTE 3 credits
Prerequisite: Permission of instructor. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.

534 KANT 3 credits
Prerequisite: Permission of instructor. Study of Kantian system of thought and its relation to modern philosophy. Includes thorough investigation of one or more of Kant’s philosophical works.

561 NEUROETHICS 3 credits
Prerequisite: Permission of instructor. Discussion and evaluation of contemporary theories of moral agency arising from developments in neuroscience.

562 THEORY OF KNOWLEDGE 3 credits
Prerequisite: Permission of instructor. Examination of nature of knowledge; theories of perception and truth; problem of induction and relation of knowledge to language.

564 PHILOSOPHY OF SCIENCE 3 credits
Prerequisites: Permission of instructor. Nature of scientific inquiry, types of explanations, laws and causality, theoretical concepts and reality. Also considers critics of hypothetico-deductive theory of science, e.g., Hanson and Kuhn.

571 METAPHYSICS 3 credits
Prerequisite: Permission of instructor. Theories about ultimate nature and ultimate explanation of reality. Uses readings from classical and contemporary sources.

580 SEMINAR 3 credits
May be repeated with change of topic. Prerequisite: Permission of instructor. Varying philosophical topics not covered in regular course offerings.

581 PHILOSOPHY OF LANGUAGE 3 credits
Prerequisites: 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.

665 ETHICS OF SCIENCE 3 credits
Examination of the foundational issues surrounding ethics and science as well as consideration of applied ethical issues of scientists, science, new technologies, and society.
PHYSICS

3650:

501 EVERYDAY PHYSICS 4 credits
Prerequisite: Admission to the physics master's program or permission. College-level physics content for future teachers. Inquiry, discovery, activities, discussion, and experimental learning taking place in a laboratory/engaged-learning environment.

506 PHYSICAL OPTICS 3 credits
Prerequisite: Admission to the physics master's program or permission. Propagation, reflection, and refraction of electromagnetic waves, superposition, polarization, interference and interferometry, Fresnel and Fraunhofer diffraction, Fourier optics, coherence theory, and quantum optics.

5310 ELECTROMAGNETICS I 3 credits
Prerequisites: Admission to the physics master's program or permission. Mechanics at intermediate level. Newtonian mechanics, motion of a particle in one dimension, central field problems, system of particles, conservation laws, rigid bodies, gravitation.

5320 MECHANICS II 3 credits
Prerequisite: Admission to the physics master's program or permission. Advanced mechanics at the intermediate level, moving coordinate systems, mechanics of continuous media. Lagrange's equations, tensor algebra and stress analysis, rotation or rigid bodies, vibrational theory.

5360 ELECTROMAGNETICS II 3 credits
Prerequisites: Admission to the physics master's program or permission. Electricity and magnetism at intermediate level. Electrostatics and magnetostatics, electric field, scalar potential, electrostatics, Laplace's and Poisson's equations, current, magnetic field, vector potential, magnetic materials, inductance.

5370 ELECTROMAGNETICS III 3 credits
Prerequisite: Admission to the physics master's program or permission. Special relativity, four vectors, Maxwell's equations in covariant form; propagation, reflection and refraction of electromagnetic waves, blackbody radiation.

5410 QUANTUM PHYSICS I 3 credits
Prerequisites: Admission to the physics master's program or permission. Introduction to quantum theory. Schroedinger equation, observables, angular momentum, perturbation theory, variational bound state calculation, scattering theory, radioactive interactions, spin and the Pauli exclusion principle.

5420 QUANTUM PHYSICS II 3 credits
Prerequisite: Admission to the physics master's program or permission. Applications of quantum mechanics to atomic and solid state physics. Tunneling, and alpha decay, periodic potential, Hydrogen and Helium atoms, interacting forces, quantum statistics.

5510 ADVANCED LABORATORY I 3 credits
Prerequisites: Admission to the physics master's program or permission. Experimental projects applicable to research-type projects in contemporary physics. FTIR spectroscopy, optical spectroscopy, lasers, SEM, and thin-film growth and characterization.

5520 ADVANCED LABORATORY II 3 credits
Prerequisite: Admission to the physics master's program or permission. Experimental projects applicable to contemporary physics. Diode and dye lasers, laser feedback, chaos, NMR, electronic tunneling, and fiber optics.

5560 TECHNIQUES OF PHYSICS INSTRUCTION 1 credit
Prerequisite: Admission to the physics master's program or permission. Teaching assistants are introduced to current research in learning physics, shown applications for their laboratory training, and trained in skills needed as a laboratory teaching assistant.

5700 INTRODUCTION TO SOLID-STATE PHYSICS 3 credits
Prerequisite: Admission to the physics master's program or permission. Account of basic physical processes occurring in solids, with emphasis on fundamental relation between these processes and periodicity of crystalline lattice.

581.3 METHODS OF MATHEMATICAL PHYSICS I AND II 3 credits
Prerequisites: Admission to the physics master's program or permission. 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.

588 SELECTED TOPICS: PHYSICS 1-4 credits
May be repeated. Prerequisite: Admission to the physics master's program or permission. Consideration of selected topics, procedures, techniques, materials or apparatus of current interest in physics.

5900 WORKSHOP 1-4 credits
May be repeated. Prerequisite: Admission to the physics master's program or permission. Further investigations of various selected topics in physics, under guidance of faculty member.

5970 INDEPENDENT STUDY 1-4 credits
May be repeated. Prerequisite: Admission to the physics master's program or permission. Further investigations of various selected topics in physics, under guidance of faculty member.

5980 PHYSICS COLOQUIUM 1 credit
Prerequisite: Admission to the physics master's program or permission. Lectures on current research topics in physics by invited speakers. May be repeated, but only one credit counts toward M.S. degree. Credit/No Credit.

6050 INTERMEDIATE PHYSICS: NUMERICAL SOLUTIONS TO PHYSICS PROBLEMS I 3 credits
Prerequisite: Admission to the physics master's program or permission. Review of FORTRAN and basic topics in computer science. Numerical solutions to physics problems, including Newton's and Schroedinger's equations. Treatment and reduction of experimental data, plotting, simulation.

6060 COMPUTER PHYSICS: NUMERICAL SOLUTIONS TO PHYSICS PROBLEMS II 3 credits
Prerequisites: Admission to the physics master's program or permission. Data reduction, Calcomp plotting, comparison of theoretical models with data, linear and non-linear least squares curve-fitting. May accommodate scientific problems of individual interest.

6100 SURFACE PHYSICS 3 credits
Prerequisite: Admission to the physics master's program or permission. An interdisciplinary course stressing the fundamentals and applications of physics at surfaces, including chemical and physical adsorption, and surface phenomena.

6150 ELECTROMAGNETIC THEORY I 3 credits
Prerequisite: Admission to the physics master's program or permission. Electrodynamics and magnetostatics at advanced level for graduate students, boundary value problems, dielectrics, and polarizations. Diffraction and scattering, plasma physics, special theory of relativity, dynamics of relativistic particles in fields, collisions of charged particles, radiation from moving charges, bremsstrahlung, multipole fields.

6160 ELECTROMAGNETIC THEORY II 3 credits
Prerequisite: Admission to the physics master's program or permission. Scattering and diffraction, plasma physics, special theory of relativity, dynamics of relativistic particles in fields, collisions of charged particles, radiation from moving charges, radiative transport, waveguides and cavities.

6250 QUANTUM MECHANICS I 3 credits
Prerequisites: Admission to the physics master's program or permission. Basic concepts of quantum mechanics, representation theory, particle in a central field, addition of angular momentum and spins, Clebsh-Gordan coefficients, perturbation theory, scattering, transition probabilities.

6260 QUANTUM MECHANICS II 3 credits
Prerequisite: Admission to the physics master's program or permission. Foundations of relativistic quantum mechanics. Klein-Gordon and Dirac equations, spin-zero and spin-one half particles in electromagnetic field, second quantization of bosons and fermions, superfluidity and superconductivity.

6410 LAGRANGIAN MECHANICS 3 credits
Prerequisite: Admission to the physics master's program or permission. Principles of least action and Lagrangian equation of motion, conservation laws, integration of equation of motion, collisions, small oscillations, Hamilton's equations, canonical transformations.

6610 STATISTICAL MECHANICS 3 credits
Prerequisite: Admission to the physics master's program or permission. Fundamental principles of statistical mechanics, Gibbs, Fermi and Bose Statistics, solids, liquids, gases, phase equilibrium, chemical reactions.

6690 CRITICAL PHENOMENA AND PHASE TRANSITIONS 3 credits

6850 EXPERIMENTAL PHYSICS I 3 credits
Prerequisites: Admission to the physics master's program or permission. Theory of physics of crystalline solids. Properties of reciprocal lattice and Bloch's theorem. Lattice dynamics and specific heat. Electron states; cellular method; tight-binding method, Green's function method.

6860 SOLID-STATE PHYSICS II 3 credits
Prerequisite: Admission to the physics master's program or permission. Orthogonalized plane wave and pseudo potentials. Electron-electron interaction; screening by impurities. Friedel sum rule and plasma oscillations. Dynamics of electrons, transport properties and Fermi surface.

6890 SPECIAL PROBLEMS IN THEORETICAL PHYSICS 1-3 credits
May be repeated. Prerequisite: Admission to the physics master's program or permission. Intended to facilitate expansion of particular areas of interest in theoretical physics, by contact with a large number of faculty members.

6910 SEMINAR IN THEORETICAL PHYSICS 1 credits
May be repeated. Prerequisite: Admission to the physics master's program or permission. Seminar topics will be announced during the preregistration period.

6990 MASTER'S THESIS 1 credits
Prerequisite: Admission to the physics master's program or permission. With approval of department, one credit may be earned by candidate for M.S. degree upon satisfactory completion of a master's thesis.

7900 DOCTORAL RESEARCH 1-15 credits
May be repeated. Prerequisite: Approval of the Student Advisory Committee for Ph.D. research in physics, physical chemistry, polymer science, applied mathematics or electrical engineering. Original research by a Ph.D. candidate in various disciplines under the guidance of physics faculty.

POLITICAL SCIENCE

3700:

502 POLITICS AND THE MEDIA 3 credits
Examination of relationships between the press, the news media and political decision makers.

503 MEDIA, CRIME, AND PUBLIC OPINION 3 credits
Examines the social construction of crime in mass media and how it impacts public opinion, including fear of crime, beliefs about crime causation, and crime policy.

510 INTERNATIONAL SECURITY POLICY 3 credits
Introduction to political uses of military forces. Major focus on methodological, conceptual, and methodological dilemmas confronted in developing and implementing defense policy.

513 GLOBAL PUBLIC HEALTH THREATS 3 credits
An introduction to comparative global biological and public health security policy. Topics include infectious disease outbreaks, terrorism, and potential "nano-terrorism".

522 UNDERSTANDING RACIAL AND GENDER CONFLICT 3 credits
This is the core course for the Certificate in Racial and Gender Conflict, providing students with an opportunity to intensively examine racial and gender conflict.

527 GOVERNMENT VERSUS ORGANIZED CRIME 2 credits
The course gives a history of organized crime and the government's responses to fight it. Newly emerging international crime groups are also discussed.

540 SURVEY RESEARCH METHODS 3 credits
Study of the survey research methods as applied to the analysis of public opinion, political behavior and public policy formation.

541 THE POLICY PROCESS 3 credits
Intensive study of policy making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.

542 METHODS OF POLICY ANALYSIS 3 credits
Examines the variety of methods available for analyzing public policies. Techniques of content analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.

545 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.

546 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.

550 ADMINISTERING PRISONS, PROBATION, AND PAROLE 3 credits
This course examines the dynamics of correctional institutions' governance and inter-prison power relations, electoral politics' and correctional policies, and political imprisonment.
561 THE SUPREME COURT AND CONSTITUTIONAL LAW 3 credits
Interpretation of the Constitution by the Supreme Court with emphasis on federal judicial, leg- islative and executive powers, and federalism.

562 THE SUPREME COURT AND CIVIL LIBERTIES 3 credits
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.

563 HUMAN RIGHTS IN WORLD POLITICS 3 credits
Attention to human rights from a comparative perspective; topics include: development and human rights with attention paid to government interaction and wartime.

570 CAMPAIGN MANAGEMENT I 3 credits
Reading, research and practice in campaign management.

571 CAMPAIGN MANAGEMENT II 3 credits
The second course in campaign management. Focus is on timing, coalition building, candidate positioning, event planning, internal organization, and other elements of campaign strategy.

572 CAMPAIGN FINANCE 3 credits
Reading and research in financial decision making in political campaigns.

573 VOTER CONTACT AND ELECTIONS 3 credits
Introduction to major practical strategies to gaining votes in all types of political campaign.

574 POLITICAL OPINION, BEHAVIOR AND ELECTORAL POLITICS 3 credits
Advanced analysis of psychological, cultural and group processes of opinion formation and change. Attention given to the impact of opinion change on electoral outcomes.

575 AMERICAN INTEREST GROUPS 3 credits
Reading and research on the development, structure and function of interest groups in the United States.

576 AMERICAN POLITICAL PARTIES 3 credits
Prerequisite: six credits of political science or permission. Reading and research on the development, structure and function of parties in the United States.

577 LOBBYING 3 credits
Duties of the lobbying profession in the political process. Topics include theories of lobbying, tools of lobbying, the lobbying process, and types of lobbying.

580 POLICY PROBLEMS 3 credits
May be repeated for a total of six credits! Intensive study of selected problems in public policy.

581 THE POLITICS OF POLICING 3 credits
Analysis of various political dimensions underlying the study of politics and policing in the context of police reform, crime, and the community.

582 CURRENT ISSUES (CU TOPIC) 3 credits
Study and critical analysis of current issues, programs, and policies relating to political science and criminal justice at the federal or state level.

583 CONSTITUTIONAL PROBLEMS IN CRIMINAL JUSTICE 3 credits
Analyzes Supreme Court policymaking regarding problems of criminal justice, including search and seizure, self-incrimination, right to counsel, jury selection, and post-appeal prisoner rights.

590 WORKSHOP IN POLITICAL SCIENCE 3 credits
Students enrolled for a total of nine credits. Timely workshops on varying subjects to address the changing needs of our students in response to new and emerging political issues and concerns.

600 SCOPE AND THEORIES OF POLITICAL SCIENCE 3 credits
Prerequisite: Admission to a Political Science graduate program or permission. Emphasis on the nature, scope and content of political theory; theory construction and validation in political science.

601 RESEARCH METHODS IN POLITICAL SCIENCE 3 credits
Prerequisites: 600 or permission. Techniques of quantitative research methodology in political science; utility and limitations of quantitative analysis.

610 SEMINAR IN INTERNATIONAL POLITICAL 3 credits
Prerequisite: Admission to a Political Science graduate program or permission. Analysis of current issues in theory and practice of politics and organization.

620 SEMINAR IN COMPARATIVE POLITICAL 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Research on topics in comparative politics. Comparative method.

622 SEMINAR IN ALTERNATIVES TO VIOLENCE AT HOME AND ABROAD 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. An interdisciplinary analysis of the nature of violence-from interpersonal to international—to enhance our capacity to reduce violence and other threats to liberty.

630 SEMINAR IN NATIONAL POLITICS 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Reading and research on formulation, development and implementation of national policy in one or more areas of contemporary significance.

650 SEMINAR ON LAW, PUNISHMENT AND POLITICS: U.S. AND THE WORLD 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Reading and research on the multiple and contingent interconnections between law, punishment, politics, and American and global affairs.

655 CAMPAIGN AND ELECTION LAW 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Examines the legal environment for political campaigns. Topics include historical background, legal foundations, voting rights, filing requirements, campaign finance, and political advertising.

660 SEMINAR IN PUBLIC POLICY AGENDAS AND DECISIONS 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Reading and research on the development of public policy issues and modes of decision making used by policy makers.

672 SEMINAR: POLITICAL INFLUENCE AND ORGANIZATIONS 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Examination of how public concerns and demands are resolved or diffused. A theoretical and applied look at interest groups, public opinion, media, and policy making.

690 SPECIAL TOPICS IN POLITICAL SCIENCE 3 credits
Prerequisites: Admission to a Political Science graduate program or permission. Graduate-level examination of selected topics in American politics, comparative politics, international politics, or political theory.

695 INTERNSHIP IN GOVERNMENT AND POLITICS 3 credits
(Any may be repeated for a total of six credits.) Prerequisite: Admission to a Political Science graduate program or permission. Supervised individual placement with political office holder, party groups, governmental agencies, law firms and other organizations providing professional-level work.

696 TOPICS IN MASTER’S RESEARCH 3 credits
Prerequisite: Admission to a Political Science graduate program or permission. May be repeated, but no more than six credits may be applied to degree requirements. Research in suitable topics in political science or applied political science culminating in an Essay of Distinction. Credit/No credit.

697 INDEPENDENT RESEARCH AND READINGS 1-3 credits
May be repeated, but no more than six credits toward the master’s degree in political science.

699 MASTERS THESIS 2 credits
Prerequisite: Admission to a Political Science graduate program or permission.

PSYCHOLOGY 3750:

500 PERSONALITY 4 credits
Prerequisite: admission to the Graduate School. Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.

510 PSYCHOLOGICAL TESTS AND MEASUREMENTS 4 credits
Prerequisites: Admission to a Political Science graduate program or permission. Examination 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.

520 ORGANIZATIONAL PSYCHOLOGY 4 credits
Prerequisite: admission to the Graduate School. Survey of syndromes, etiology, diagnoses and treatments of major psychological conditions ranging from transient maladjustments to psychosis.

530 PSYCHOLOGICAL DISORDERS OF CHILDREN 4 credits
Prerequisite: admission to the Graduate School. Survey of syndromes, etiologies and treatments of behavioral disorders in children from the standpoint of developmental psychology. Behavioral data and treatment approaches emphasized.

543 HUMAN RESOURCE MANAGEMENT 4 credits
Prerequisite: admission to the Graduate School. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.

544 ORGANIZATIONAL THEORY 4 credits
Prerequisite: admission to the Graduate School. The application of psychological theory to macro-level processes in organizations including leadership, motivation, task performance, organizational theories and development.

545 PSYCHOLOGY OF SMALL GROUP BEHAVIOR 4 credits
Prerequisite: admission to the Graduate School. Intensive investigation of factors affecting behavior and performance in small groups including effects of personality, social structures, task, situation and social-cognitive variables.

550 COGNITIVE DEVELOPMENT 4 credits
Prerequisite: admission to the Graduate School. Theory and research on life-span changes in cognitive processes including concept formation/categorying, information processing and Piagetian assessment tasks.

560 HISTORY OF PSYCHOLOGY 3 credits
Prerequisites: Admission to the Graduate School. Psychology in pre-scientific period and details of development or systematic viewpoints in 18th and 19th Centuries.

601,2 PSYCHOLOGICAL RESEARCH USING QUANTITATIVE AND COMPUTER METHODS I AND II 4 credits each
Sequential prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or special course work in psychology. Psychological research problem applying quantitative and computer methods. Topics include research design, sampling, controls, threats to validity, hypothesis testing, psychological measurement, error, robustness and power.

610 CORE I: SOCIAL PSYCHOLOGY 2 credits
Prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or permission of instructor. Introduction to empirical research and theories on the psychological processes related to interpersonal behavior, focusing on topics like attitude change, social influence, and prosocial behavior.

620 CORE II: COGNITIVE PSYCHOLOGY 2 credits
Prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or permission of instructor. Survey of theories, concepts, empirical phenomena and methodological issues related to psychological processes affecting attention, cognitive capacity, learning, memory, categorization, skill acquisition/expertise, and training effectiveness.

630 CORE III: INDIVIDUAL DIFFERENCES 2 credits
Prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or permission of instructor. Survey of theoretical perspectives on individual differences in personality and behavior and of literature on between- and within-group cultural variables influencing personality development and assessment.

640 CORE IV: BIOPSYCHOLOGY 2 credits
Prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or permission of instructor. Survey of nervous system structure/function including neuroanatomy, neurophysiology, and synaptic transmission. Also overview bio- logical bases of learning, memory, consciousness, intelligence, psychopharmacology, behavior or genetics.

650 CORE V: SOCIAL-COGNITIVE PSYCHOLOGY 2 credits
Prerequisite: graduate standing in psychology or the collaborative doctoral program in counseling psychology or permission of instructor. Social and cognitive theory/research applied to the issue of how people understand and experience the social world. Topics include: person perception, attribution, social categorization, social inference.

660 SCIENCE AND ETHICS OF INDUSTRIAL PSYCHOLOGY 4 credits
Survey of Industrial Psychology including coverage of selection and performance manage- ment. Also, discusses professional and scientific guidelines regarding the ethics of Industrial Psychology.

672 COUNSELING PRACTICUM LAB 2 credits
Prerequisites: graduate standing in psychology and permission of instructor. Corequisite: 672. Application of theoretical skills and intervention techniques to work with clients in the Psycho- logical Department Counseling Clinic, including small group supervision of clinical work. (May be repeated for a total of 8 credits.) Credit/No credit.

673 COUNSELING PRACTICUM LAB 2 credits
Prerequisites: graduate standing in psychology and instructor’s permission. Corequisite: 672. Application of theoretical skills and intervention techniques to work with clients in the Psychology Department Counseling Clinic, including small group supervision of clinical work. (May be repeated for a total of 8 credits.) Credit/No credit.
674 PERSONNEL PRACTICUM 1-4 credits
(May be repeated.) Prerequisites: 660, graduate standing in psychology. 14 credits of graduate psychology and permission of the instructor. Supervised field experience in industrial/organizational psychology in settings including business, government, or social organizations. The field experience requires the application of industrial/organizational psychological theories and techniques.
Credition/honored.

675 APPLIED COGNITIVE AGING PRACTICUM 1-4 credits
(May be repeated.) Prerequisites: 727, graduate standing in psychology. 14 credits of graduate psychology and permission of the instructor. Supervised field experience in applied cognitive aging psychology to provide the student with opportunity to apply skills and knowledge acquired in academic pursuits to understanding and to obtain knowledge about community programs and agencies which focus on development processes. Credit/No credit.

680 EXTERNAL SPECIAL TOPICS 1-4 credits
(May be repeated for a maximum of 16 credits.) Prerequisite: permission of area chair. Graduate coursework taken at Kent State, Youngstown State, and/or Cleveland State Universities to apply toward a UA degree either as a required or an elective course.

699 MASTER’S THESIS 1-4 credits
(May be repeated.) Prerequisite: permission of the instructor. Research analysis of data and preparation of thesis for master’s degree.

700 SURVEY OF PROJECTIVE TECHNIQUES 4 credits
Prerequisite: 630 or instructor permission. Introduction to rationale, assumptions and ethics, and research of projective testing. Elementary administration, scoring and interpretation of Rorschach; and survey of other important contemporary projective instruments.

701 PSYCHODIAGNOSTICS 4 credits
Prerequisite: 700. Application of psychological testing to problems of diagnosis and evaluation. Practical experience in administration, scoring and interpretation. Integration of projective data with other assessment techniques in a variety of settings.

707 SUPERVISION IN COUNSELING PSYCHOLOGY I 4 credits
Prerequisite: doctoral standing or permission of instructor. Instruction and experience in supervising graduate students in counseling.

710 INTRODUCTION TO COUNSELING PSYCHOLOGY 2 credits
Prerequisite: graduate standing in the Collaborative Program in Counseling Psychology. Introduction to theoretical foundations and recent developments in counseling psychology, with an emphasis on contemporary research literature in the field.

717 ISSUES OF DIVERSITY IN PSYCHOLOGY 4 credits
Prerequisite: 630 or permission of instructor. Theories and research on vocational behavior and counseling. Topics include major theories of vocational behavior, empirical research on these theories, application of vocational counseling and applied research.

719 THEORIES OF COUNSELING AND PSYCHOTHERAPY 4 credits
Prerequisite: 630 or permission of the instructor. Major systems of individual psychotherapy explored within a philosophical and historical framework. Freudian, behavioral, Rogerian, cognitive and other. Includes research, contemporary problems and ethics.

711 VOCATIONAL BEHAVIOR 4 credits
Prerequisite: 630 or permission of instructor. Theories and research on vocational behavior and counseling. Topics include major theories of vocational behavior, empirical research on these theories, application of vocational counseling and applied research.

712 PRINCIPLES AND PRACTICE OF INTELLIGENCE TESTING 4 credits
Prerequisites: 630 or graduate standing in school psychology, and instructor’s permission. History, principles and methodology of intelligence testing, supervised practice in administration, scoring and interpretation of individual intelligence tests for children and adults.

713 PROFESSIONAL, ETHICAL AND LEGAL ISSUES IN COUNSELING PSYCHOLOGY 4 credits
Prerequisite: doctoral standing or permission of the instructor. Examination of major issues in the field such as the counselor as a professional and as a person, and issues, problems and trends in counseling.

714 OBJECTIVE PERSONALITY EVALUATION 4 credits
Prerequisites: completion of 630 or 402/650, and 420/620, and 5600-646. Study of the development, administration, and interpretation of objective instruments for personality assessment (MMPI, CPI, MBTI, VIP and selected additional inventories).

715 RESEARCH DESIGN IN COUNSELING I 3 credits
Prerequisite: doctoral standing or permission of the instructor. Study of research designs, evaluation of research reports, and review of research in counseling.

717 ISSUES OF DIVERSITY IN COUNSELING PSYCHOLOGY 4 credits
Prerequisites: 630, one semester of practicum work. Critical examination and application of research in diversity theory in counseling diverse populations, focusing on race/ethnicity, sex/gender, sexual orientation, age, disability, and spirituality.

718 HISTORICAL AND SYSTEMS IN PSYCHOLOGY 2 credits
Prerequisite: 630. Philosophical and scientific antecedents of psychology and details of the development of systematic views in the 19th and 20th centuries.

727 PSYCHOLOGY OF ADULTHOOD AND AGING 4 credits
Prerequisites: graduate standing in psychology or in the collaborative program in clinical psychology or permission of the instructor. Aspects of development, aging with emphasis on life-span methodology and research design. Age-related changes in intelligence, personality, sensation, perception, learning, memory, and socialization and intervention approaches.

731 PERCEPTION, ATTENTION, AND AGING 4 credits
Prerequisites: graduate standing in adult development and aging program or permission of instructor. Overview of theory, methods, and data on attention and perception and how aging affects these phenomena.

732 COGNITION AND AGING 4 credits
Prerequisites: graduate standing in psychology or permission of instructor. Survey of selected topics in cognitive aging including memory, problem-solving, decision-making, and expertise.

735 APPLIED COGNITIVE AGING PSYCHOLOGY: COGNITIVE NEUROPSYCHOLOGY 4 credits
Prerequisites: 640 or instructor’s permission. Advanced course that acquaints students with the most recent literature in cognitive neuropsychology within the context of aging research.

736 PSYCHOPHARMACOLOGY AND ADULTHOOD 4 credits
Prerequisite: 640. Pharmacology addresses a diverse range of drugs that act in the brain. Drug mechanisms are discussed in the context of emotional, cognitive, and behavioral effects.

738 APPLIED DEVELOPMENTAL PSYCHOLOGY 4 credits
Prerequisites: 727, graduate standing in psychology, or permission of instructor. Examination of methods, evaluation, child abuse, early intervention, day care, kinship, social networks, subcultural variations, and hospice/dying.

740 INDUSTRIAL GERONTOLOGY 4 credits
Prerequisites: 660, graduate standing in psychology, or permission of instructor. Study of age-related work involving adult and older adult workers. Topics include person-environment interac- tion, training, motivating and appraising older employees; health and safety; job design, vocational guidance, and retirement.

750 ADVANCED PSYCHOLOGICAL TESTS AND MEASUREMENTS 2 credits
Prerequisite: graduate standing in psychology or in the collaborative program in counseling psychology. An in-depth analysis of test construction techniques. Statistical analyses of tests with review of published tests and measurements used in psychology. Study of psychometric theory and principles.

751 ORGANIZATIONAL PSYCHOLOGY 4 credits
Prerequisites: 660, graduate standing in psychology, or permission of the instructor. Applies the general systems theory framework to the study of the relationships between organizational characteristics and the internal processes of organizations, and the relationships between organizations and their environment.

752 PERSONNEL SELECTION AND ADVANCED APPLIED TESTING ISSUES 4 credits
Review of strategies of personnel psychologists, psychological principles and methods, and specific application to psychology. Topics include data collection, validity, reliability, use of general linear model and its alternatives and power analysis.

753 COMPUTER APPLICATIONS IN PSYCHOLOGICAL RESEARCH 4 credits
Prerequisite: graduate standing in psychology or permission of instructor. Practicum in applied computer technology on projects of research interest. Also covers computer simulation of decision making including use of different models.

754 ROLE OF ATTITUDES AND VALUES IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY 4 credits
Prerequisites: 660 and graduate standing in psychology or permission of instructor. Consid- eration of the role of attitudes and values in the prediction of behavior including consumer psychologies, explanations of attitude changes, measurement of attitudes and the use of survey methodology.

755 ORGANIZATIONAL MOTIVATION AND LEADERSHIP 4 credits
Prerequisite: 660. Graduate standing in psychology, or permission of instructor. Survey of theories of motivation specifying both the intrinsic and extrinsic determinants of worker motiva- tion. The leadership process and its relation to motivation, group performance and attributions is also analyzed.

759 JOB EVALUATION AND EQUAL PAY 4 credits
Prerequisite: 660. Major job evaluation systems will be reviewed and critiqued. Issues such as minimum qualifications for a job will be reviewed. Advantages and disadvantages of various job evaluation systems will be compared. Issues concerning federal regulation including the Equal Pay Act, comparable worth and other issues will be discussed. Regression approaches to job evaluation and applicable court cases will be reviewed.

760 ORGANIZATIONAL CHANGE AND TRANSFORMATION 4 credits
Prerequisites: 660 or permission of instructor. Survey of theories and introduction to practical methods of organizational change and transformation used to increase organizational effec- tiveness and improve employee quality of work life.

761 INFORMATION PROCESSING AND INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY 4 credits
Prerequisite: 660. Coverage of current theories in cognitive psychology is applied to tradition- al concerns of industrial/organizational psychology such as performance appraisal or motiva- tion.

762 PERSONNEL PSYCHOLOGY AND THE LAW 4 credits
Prerequisite: 660. Issues in personnel psychology which have legal implications are reviewed. The impact of recent court decisions are evaluated in staffing and compensation.

763 PERFORMANCE FEEDBACK AND EVALUATION 4 credits
Prerequisite: 660, graduate standing in psychology, or permission of instructor. Examines cur- rent research and practice in the area of performance appraisal. Topics include: criterion development, rater training, appraisal effectiveness, feedback processes, and performance measurement.

780 GRADUATE SEMINAR IN PSYCHOLOGY 4 credits
(May be repeated.) Prerequisite: permission of the instructor. Seminar in advanced topics under supervision of faculty member with whom specific arrangements have been made.

784 ADVANCED COUNSELING PRACTICUM 4 credits
(May be repeated.) Prerequisites: 671, 672, 673 and permission of instructor. This course provides graduate students in counseling with actual client contacts and supervisory experiences under faculty supervision. Credit/No credit.

787 COUNSELING PSYCHOLOGY PRACTICUM 4 credits
(May be repeated.) Prerequisites: 796 (eight hours) or 5600/675 (five hours). Advanced counsel- ing psychology students will have supervised training with clients in a variety of settings and will focus on supervised development of specialized theoretical applications. Credit/No credit.

797 INDEPENDENT READING AND/OR RESEARCH 1-3 credits
(May be repeated.) Prerequisite: permission of the instructor. Individual readings and/or research on a topic under supervision of faculty member with whom specific arrangements have been made.

889 DOCTORAL DISSERTATION 1-2 credits
Prerequisite: open to properly qualified students. Required minimum 12 credits, maximum subject to departmental approval. Supervised research on topic deemed suitable by the dis- sertation committee.

3850: 510 SOCIAL STRUCTURES AND PERSONALITY 3 credits
Interactions between personal and social system, personality characteristics. Personality treated as both result and determinant of social structure and process. Lecture.

511 SOCIAL INTERACTION 3 credits
Investigating the social psychological aspects of the development of interaction and social and cultural requirements necessary to function in new roles, changing roles and soci- ety in general.

512 SOCIALIZATION: CHILD TO ADULT 3 credits
Theories of socialization and empirical analysis of socialization process by which infant, child, adolescent and adult acquire the social and cultural requirements necessary to function in new roles, changing roles and soci- ety in general.

521 RACIAL AND ETHNIC RELATIONS 3 credits
Analysis of structure and dynamics of race and ethnic relations from a variety of perspective, emphasizing both historical and contemporary issues. Lecture.
664 SOCIOLOGY OF CRIMINAL BEHAVIOR
Prerequisite: Graduate standing in Sociology or permission of instructor. Analysis of relationship of crime and delinquency to social structure and social processes. Responses by criminal justice agencies. Seminar.

665 JUVENILE DELINQUENCY: THEORY AND RESEARCH
Prerequisite: Graduate standing in Sociology or permission of instructor. Analysis of theories of delinquency; ecological, class structural, subcultural, etc. Review of relevant research also presented. Seminar.

666 SOCIOLOGY OF CORRECTIONS
Prerequisite: Graduate standing in Sociology or permission of instructor. Analysis of correctional institution as social system; its formal structure and informal dynamics. Analysis of present state of corrections research. Seminar.

677 FAMILY ANALYSIS
Prerequisite: Graduate standing in Sociology or permission of instructor. Analysis and evaluation of sociological theory and research in the family. Concentration on techniques of theory construction and research design in sociological study of the family. (Same as KSU 72638) Seminar.

678 SOCIAL GERONTOLOGY
Prerequisite: Graduate standing in Sociology or permission of instructor. Impact of aging upon individuals and society. Reactions of individuals and society to aging. (Same as KSU 72877)

679 POLITICAL SOCIOLOGY
Prerequisite: Graduate standing in Sociology or permission of instructor. Description, analysis and interpretation of political behavior through application of sociological concepts. (Same as KSU 72544) Seminar.

686 POPULATION
Prerequisite: Graduate standing in Sociology or permission of instructor. Analysis of basic population theory and methods. Trends and differentials in fertility, mortality, migration and selected social demographic variables also considered. (Same as KSU 72656) Seminar.

687 SOCIAL CHANGE
Prerequisite: Graduate standing in Sociology or permission of instructor. Advanced seminar in theories of social change. (Same as KSU 73230) Seminar.

696 MASTER'S RESEARCH PAPER
1-6 credits (Must be repeated for a minimum of six credits.) Prerequisite: Graduate standing in Sociology or permission of instructor. Supervised writing of a paper for Master's Research Paper credit.

810 VOYAGING IN CONTEMPORARY SOCIOLOGICAL LITERATURE
1-3 credits (May be repeated) Prerequisite: Graduate standing in Sociology, seven credits of sociology, and permission of advisor, instructor, and chair of the department. Intensive reading and interpretation of written material in student's chosen field of interest. Regular conferences with instructor.

818 DIRECTED RESEARCH
1-3 credits (May be repeated) Prerequisite: Graduate standing in Sociology or permission of instructor. Empirical research to be conducted by the student under graduate faculty supervision.

819 MASTER'S THESIS
1-6 credits (Must be repeated for a minimum of six credits) Prerequisite: Graduate standing in Sociology or permission of instructor. Supervised thesis writing.

700 COLLEGE TEACHING OF SOCIOLOGY
3 credits Prerequisite: Teaching assistant in Sociology or permission of instructor. Training and experience in college teaching of sociology. Approved for credit toward the Ph.D. degree. Not approved as credit toward the degree. (Same as KSU 67284) Seminar.

706 MULTIVARIATE TECHNIQUES IN SOCIOLOGY
3 credits Prerequisites: 604 or permission. Sociology graduate student only. Methodological problems using advanced multivariate techniques in analysis of sociological data. Topics include nonparametrical causal analysis such as recursive and nonrecursive path analysis. (Same as KSU 72217).

709 ADVANCED DATA ANALYSIS
3 credits Prerequisite: 706 or equivalent. Graduate standing in Sociology or permission of instructor. Critical examination of data analysis techniques having particular relevance to research problems in sociology. (Same as KSU 72218) Seminar.

710 SOCIAL SAMPLING
3 credits Prerequisite: 604 or permission. Theory and methods of sampling in sociology. Topics includes sample design, sampling efficiency, nonresponse, mortality in longitudinal designs, survey organizations, and stratification, sampling, stratified and cluster sampling. Seminar.

711 SURVEY RESEARCH METHODS
Prerequisite: 604 or permission. In-depth study of design and administration of social survey. (Same as KSU 72220) Seminar.

714 QUALITATIVE METHODOLOGY
3 credits Prerequisites: 604 or permission. Theoretical and methodological problems using advanced qualitative techniques for analysis of sociological data. Topics include interview techniques, participant observation, case study analysis, creative writing, and the like. Seminar.

722 EARLY SOCIOLOGICAL THOUGHT
Prerequisite: 722, graduate standing in Sociology, or permission. Intensive, critical analysis of current scholarship in a broad range of contemporary sociological theories. Virtually all required reading will be from primary sources. (Same as KSU 72510) Seminar.

723 CONTEMPORARY SOCIOLOGICAL THOUGHT
Prerequisite: 722, graduate standing in Sociology, or permission. Intensive, critical analysis of current scholarship in a broad range of contemporary sociological theories. Virtually all required reading will be from primary sources. (Same as KSU 72519) Seminar.

726 STRATIFICATION AND HEALTH
Prerequisite: Graduate standing in Sociology or permission of instructor. Race, social class, and gender differences in physical and mental health status, help-seeking behavior, and health care utilization. Focus on race, class, and gender stratification of health care availability. (Same as KSU 72238)

727 SOCIOLOGY OF OCCUPATIONS, PROFESSIONS AND HEALTH CARE
3 credits Prerequisite: Graduate standing in Sociology or permission of instructor. Sociological examination of the organization of work in the health care field with emphasis on occupations, foci, and health care delivery. (Same as KSU 72327)

728 SOCIOLOGY OF MENTAL HEALTH AND MENTAL DISORDERS
3 credits Prerequisite: Graduate standing in Sociology or permission of instructor. Sociological examination of the social processes that affect mental health, that frame cultural ideas of normality and illness, and that define clinical pathology. (Same as KSU 72228)
641 URBAN ECONOMIC GROWTH AND DEVELOPMENT 3 credits
Prerequisite: permission. Examination of urban economic unit and its susceptibility to social, economic, political and physical change.

642 PUBLIC BUDGETING 3 credits
Prerequisite: permission. Current professional practice and theoretical issues in public budgeting and management of capital and operating budgets.

643 INTRODUCTION TO PUBLIC POLICY 3 credits
Prerequisite: permission. Introduction to models of public policy formulation; identification of major policy issues; and the analysis of policy implementation and policy impact.

644 PUBLIC SECTOR FUND MANAGEMENT 3 credits
Prerequisite: 640, 642. Provides an overview of theoretical approaches for selecting and reporting data related to public projects or programs and reviews methods for investing project funds.

645 PUBLIC SECTOR LABOR RELATIONS 3 credits
Prerequisite: 616. This course examines fundamental issues and principles of public sector labor relations with particular attention to the collective bargaining processes and to administration of labor contracts.

647 AGING POLICY 3 credits
In this course students will examine political institutions that impact the adoption and implementation of programs for the aged, including Medicare, Medicaid, and Social Security.

650 COMPARATIVE URBAN SYSTEMS 3 credits
Prerequisite: permission. Conceptual schemes and methodology for comparative urban analysis.

651 INTRODUCTION TO CITY MANAGEMENT 3 credits
Prerequisite: completion of 611 or waiver by advisor. This course examines the historical role of city management in professionalizing local government operations and examines trends in management practice that affect the city manager.

654 MANAGING INFORMATION AND TECHNOLOGY IN THE PUBLIC SECTOR 3 credits
Prerequisite: permission. Focus on issues that confront public managers in utilizing information as an organizational asset.

658 RESEARCH FOR FUTURES PLANNING 3 credits
Prerequisite: 600 and 601 and completion of eight credits of core curriculum in urban studies. An overview of the techniques associated with the field of futures research and their application to long-term urban plans.

659 PROGRAM EVALUATION IN URBAN STUDIES 3 credits
Prerequisite: 600 or equivalent. Major considerations appropriate for conducting evaluations of a wide variety of human service programs and policies affecting urban and metropolitan areas.

662 ALTERNATIVE URBAN FUTURES 3 credits
Overview of topics and issues associated with alternative urban futures and their implications for planning and public policy in urban environments.

663 COMPUTER APPLICATIONS IN PUBLIC ORGANIZATIONS 2 credits
Prerequisite: 600 and 601. Introduction to microcomputer applications in the public sector, including data entry, statistical analysis, report writing, graphical representation and spreadsheets.

664 ANALYTICAL TECHNIQUES FOR PUBLIC ADMINISTRATORS 3 credits
Prerequisite: 600. Public sector applications of mathematical, decision analysis, queuing theory, mathematical programming, and simulation.

665 ADVANCED TECHNIQUES IN POLICY ANALYSIS 3 credits
Prerequisites: 600, 601. Public sector application of techniques for analyzing policy proposals including decision analysis and simulations.

669 URBAN STUDIES SEMINAR 1 credit
This course is required for masters students on assistantships. The course reviews programmatic, research, and curricular issues in the masters program.

671 1-credit supervised work experience for “pre-service” students participating in policy planning and administration in public and non-profit organizations.

673 SOCIAL SERVICES PLANNING 2 credits
Prerequisite: 16 credits of urban studies core plus quantitative methods. Urban research methods applied to specific urban research area. Comprehensive paper required.

674 INDIvidUAL STUDIES 1-3 credits
Prerequisites: permission. May be repeated for a total of six credits) Directed individual readings or research on specific area or topic.

675 MASTER’S THESIS 1-9 credits
Prerequisite: permission. Supervised thesis writing. (May be repeated for a total of nine credits, however, only six credits apply toward degree. Replaces two courses in specialization.)

676 ADVANCED RESEARCH METHODS I 3 credits
Prerequisite: master’s level statistics or permission. Introduction to statistical techniques and methodologies in doctoral and postdoctoral research. Emphasis on conceptual and methodological interrelationships.

677 ADVANCED RESEARCH METHODS II 3 credits
Prerequisite: 676 or equivalent. Continuation of 676. Emphasis placed upon conceptual and methodological interrelationships of multivariate statistical techniques as well as application of these techniques through computer analysis of urban data sets.

678 URBAN THEORY I 3 credits
Prerequisite: permission. Review of major theoretical tradition examining urban problems; for students entering the doctoral program in urban studies (first in two-course sequence).

680, 1-SELECTED TOPICS IN URBAN STUDIES 3-6 credits each
Prerequisite: permission. Topics selected in specific areas of urban planning, in varied developmental processes of cities, or in various urban policy and administrative issues. (A maximum of 27 credits may be earned in 680 and 681)

681 URBAN ORGANIZATION THEORY 3 credits
Prerequisite: permission. Examines the development of public organizational theory and the current status of theoretical developments in the field of public administration.

683 ETHICS AND PUBLIC SERVICE 3 credits
Prerequisite: permission. (May be repeated for a maximum of 30 credits) Dissertation. (Same as KSU 8299)

685 PERSONNEL MANAGEMENT IN THE PUBLIC SECTOR 3 credits
Prerequisite: permission. Major federal policies that relate to urban problems examined in regard to public sector personnel management and implementation.

686 INTERGOVERNMENTAL MANAGEMENT 3 credits
Prerequisite: permission. Examines the role of intergovernmental relations as it affects urban administration and management.

687 ETHICS IN PUBLIC SERVICE 3 credits
Prerequisite: 18 credit hours in the MPA program or permission. Examination of the ethical problems and implications of decisions and policies made by those whose actions affect the public and public policy.

689 NATIONAL URBAN POLICY 3 credits
Prerequisite: permission. Major federal policies that relate to urban problems examined in regard to public sector personnel management and implementation.

691 LEADERSHIP AND DECISION-MAKING 3 credits
Prerequisites: 600, 642. Provides an in-depth analysis of the public sector decision-making process.

692 URBAN AND REGIONAL POLICY 3 credits
Prerequisite: permission. Examination of the basic theoretical rationale and implications of public decision-making.

693 SOCIAL PLANNING AND PUBLIC POLICY 3 credits
Prerequisite: permission. Analysis of social welfare and public policy, with emphasis on policy implementation.

694 URBAN SOCIETY AND SERVICE SYSTEMS 3 credits
Prerequisite: permission. Overview of existing theories and the practice of public administration.

695 HEALTH PLANNING AND PUBLIC POLICY 3 credits
Prerequisite: permission. Analysis of the role of health services in urban society.

696 COMMUNITY ORGANIZING 3 credits
Prerequisite: permission. Examination of the role of organizations in urban communities.

697 SOCIAL SERVICES PLANNING 3 credits
Prerequisite: permission. Examination of the role of social services planning.

698 URBAN SOCIETY AND SERVICES 3 credits
Prerequisite: permission. Analysis of the role of health services in urban society.

699 FISCAL ANALYSIS 3 credits
Prerequisite: permission. Study of revenue and expenditure patterns of the city's government.

700 ADVANCED RESEARCH METHODS II 3 credits
Prerequisite: master’s level statistics or permission. Introduction to statistical techniques and methodologies in doctoral and postdoctoral research. Emphasis on conceptual and methodological interrelationships.

701 ADVANCED RESEARCH METHODS III 3 credits
Prerequisite: 676 or equivalent. Continuation of 676. Emphasis placed upon conceptual and methodological interrelationships of multivariate statistical techniques as well as application of these techniques through computer analysis of urban data sets.

702 URBAN THEORY I 3 credits
Prerequisite: permission. Review of major theoretical tradition examining urban problems; for students entering the doctoral program in urban studies (first in two-course sequence).

703 ADVANCED RESEARCH AND STATISTICAL METHODS 3 credits
Prerequisite: permission. (May be repeated for a maximum of six credits) Group studies of special topics in public administration.

704 HISTORICAL PERSPECTIVES IN URBAN ADMINISTRATION 3 credits
Prerequisite: permission. (May be repeated for a maximum of six credits) Group studies of special topics in public administration.

705 ETHICS AND PUBLIC SERVICE 3 credits
Prerequisite: permission. (May be repeated for a maximum of six credits) Group studies of special topics in public administration.

706 BASIC QUANTITATIVE RESEARCH 3 credits
Prerequisite: permission. Examines basic framework of social science research methodologies and the complementary statistical techniques, including probability and sampling.

709 DOCTORAL DISSERTATION 1-10 credits
Prerequisite: permission. (May be repeated for a maximum of 30 credits) Dissertation. (Same as KSU 8299)
CHEMICAL REACTION ENGINEERING
Prerequisite: Permission. Kinetics of homogeneous and heterogeneous systems. Reactor design for ideal and non-ideal flow systems.

CLASSICAL THERMODYNAMICS
Discussion of laws of thermodynamics and their application. Predication and corollary of thermodynamic data. Phases and reaction equilibria.

SURFACE SCIENCE IN CHEMICAL ENGINEERING
Prerequisite: Permission of instructor. This course emphasizes the basics of surface science (surface energy, wetting, adhesion); surface characterization techniques (contact angle, ellipsometry, x-ray; and surface engineering methods (SAMs, soft-lithography).

BIODIESEL ENGINEERING
Application of chemical engineering principles to biological processes which produce desirable compounds or destroy unwanted or hazardous substances.

PHYSICAL PROPERTIES OF STRUCTURAL BIOPOLYMERS
Prerequisite: Permission of instructor. Examination of the physical properties of biological tissues and materials from a perspective leading to a national design of biomaterials.

CHEMICAL PROCESS DYNAMICS
Prerequisite: 600. Development and solutions of mathematical models for chemical processes including models based on transport phenomena principles, population balance methods and systems analysis.

CHEMICAL ENGINEERING ANALYSIS
Mathematical analysis of problems in transport processes, chemical kinetics and control systems. Solution techniques for transport problems and their practical significance are stressed. Heuristic proofs will be given for necessary theory developments.

NONLINEAR DYNAMICS AND CHAOS
Description and analysis of complex behavior exhibited by nonlinear equations. Emphasis is on the numerical methods to quantify chaos.

COLLOIDS—PRINCIPLES AND PRACTICE
Prerequisite: permission of instructor. Colloid science and applications in chemical and bio-materials engineering: dispersive systems, interfacial forces, surface tension, interfacial thermodynamics, colloid applications, biomaterials applications and characterization techniques.

APPLIED SURFACANT SCIENCE
Prerequisite: 610. The basics of surfactant science, the chemical engineering applications of surfactants including use in polymerization media, separations, emulsion, microemulsion, and a rheology modifier.

ADVANCED POLYMER ENGINEERING
Prerequisite: 600 or permission. Reactors for polymerization, polymer characterization, polymer processing, polymer rheology.

ADVANCED PLANT DESIGN
Prerequisite: permission. Topical treatment of process and equipment design, scale-up, optimization, process synthesis, process economics. Case problems.

RENEWABLE RESOURCES FOR ENVIRONMENTALLY BENIGN CHEMICAL PRODUCTION
Prerequisite: permission of instructor. Focus is on chemical and biochemical processing technologies for the preparation of fuels, polymeric materials, and specialty chemicals from renewable resources.

HETEROGENEOUS CATALYSIS
Kinetics and mechanisms of heterogeneous and homogenous catalytic reactions; characterization and design of heterogeneous catalysts.

TOPICS IN CHEMICAL ENGINEERING
(Varies as stated in the catalog.) 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.

CHEMICAL ENGINEERING REPORT
Prerequisite: permission of advisor. A relevant problem in chemical engineering is studied. Required course for students electing non-thesis option. Final report must be approved by advisor and advisory committee.

MASTER’S THESIS
(Varies as stated in a maximum of six credits.) For properly qualified candidate for Master’s degree. Supervised original research in specific area of chemical engineering selected on basis of availability of staff and facilities.

ADVANCED TRANSPORT PHENOMENA
Prerequisite: 600. Advanced theory of transport phenomena such as applied tensor analysis, constitutive equations, multicomponent reactive transport and multiphase transport. Illustrative practical examples presented.

MULTIPHASE TRANSPORT PHENOMENA
Prerequisite: 600. General transport theorem, kinematics, Cauchy’s theorems and the jump boundary conditions are developed follows the theory of volume averaging. The single phase equations are then volume averaged to obtain the multiphase equations of change. The technique of using these equations and their practical significance is also covered.

ADVANCED REACTION ENGINEERING
Prerequisite: 605. Kinetics of heterogeneous systems, steady and unsteady state mathematical modeling of chemical reactors, fluidization and additional topics drawn from current literature.

ADVANCED CHEMICAL ENGINEERING THERMODYNAMICS
Prerequisite: 610. Advanced topics in thermodynamics, including phase and reaction equilibria at high pressures, phase equilibrium for multiphase systems, reaction equilibria in multiphase systems, thermodynamics of surfaces, thermodynamics of systems under stress, non-equilibrium thermodynamics and current topics from literature.

MOMENTUM TRANSPORT
Prerequisite: 600. Discussion of potential flow, boundary layer formation and turbulent flow phenomena for Newtonian fluids.

NON-NEWTONIAN FLUID MECHANICS

ENERGY TRANSPORT
Prerequisite: 600. Conduction, natural and forced convection, and radiation heat transfer starting with equations of continuity, momentum and energy.

TOPICS IN ENERGY TRANSPORT
Prerequisite: 720. Advanced analytical and graphical methods for solving complex heat transfer problems found in chemical engineering.

MASS TRANSFER
Prerequisite: 600. Theory of mass transfer with applications to absorption, adsorption, distillation and heterogeneous catalysis.

PROCESS CONTROL
Prerequisite: 630. Introduction to modern control theory of chemical processes including cascade control, multivariable and state space sampled control.

POLYMER ENGINEERING TOPICS
Prerequisite: permission. Selected topics of current interest in polymer engineering, such as modeling of reactors or processes, multiphase materials, multiphase flow, artificial fiber engineering, etc.

CHEMICAL PROCESSING OF ADVANCED MATERIALS
Prerequisite: 605. Advanced materials such as ceramics, optical materials, sensors, catalysts; application of reaction engineering to sol-gel processing, ceramic processing, modified chemical vapor deposition.

ADVANCED CATALYST DESIGN
Prerequisite: 630. Development of catalysis theory and its application to the design of practical catalysts.

ADVANCED POLLUTION CONTROL
Prerequisite: Permission. Development of current environmental research in analytical instrumentation, air and water, pollution control, hazardous waste treatment, and nuclear waste disposal.

ADVANCED BIOCATALYSIS AND BIOTRANFORMATIONS
Prerequisite: 715-401,601, or permission of instructor. Focuses include: (a) high performance enzymes via chemical modification, recombinant technology, evolution, xenophobes; (b) applications of enzymes in biosynthesis, bioprocessing, biosensing, and bioremediation.

CHEMICAL ENGINEERING SEMINAR
(1 credit) Prerequisite: Permission of instructor. Intended for students seeking a Ph.D. in engineering.

ADVANCED RESEARCH TECHNIQUES FOR ENGINEERING
(May be repeated for a maximum of six credits.) Prerequisite: permission of department chair. Advanced projects, readings and other studies in various areas of chemical engineering intended for students seeking Ph.D. in engineering.

PRELIMINARY RESEARCH
(May be repeated for a maximum of 15 credits.) Prerequisite: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

DOCTORAL DISSERTATION
(1 credit) Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

CIVIL ENGINEERING 4300:

DESIGN OF Earth STRUCTURES
Prerequisite: Permission. Design of earth structures; dams, highway fills, cofferdams, etc. Emphasis on design 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.

SOIL AND ROCK EXPLOURATION
Prerequisite: 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.

ENVIRONMENTAL ENGINEERS
3 credits (2 lecture - 1 lab) 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.

ENVIRONMENTAL ENGINEERING DESIGN
3 credits An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design and analysis.

WATER QUALITY MODELING AND MANAGEMENT
3 credits 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.

HAZARDOUS AND SOLID WASTES
Prerequisite: Permission. Hazardous and solid waste quantities, properties and sources are presented. Handling, processing, storage and disposal methods are discussed with non-technical constraints outlined.

APPLIED HYDRAULICS
3 credits Review of design principles; urban hydraulics, stream channel mechanics, sedimentation, coastal engineering.

COMPUTER METHODS OF STRUCTURAL ANALYSIS
3 credits Structural analysis using microcomputers; finite element software, beam stiffness concepts and matrix formulation; simple and complex structural systems modeling; vibration analysis.

OPTIMUM STRUCTURAL DESIGN
3 credits Basic concepts in structural optimization. Mathematical programming methods including unconstrained minimization, multidimensional minimization and constrained optimization.

ADVANCED MECHANICS OF MATERIALS
3 credits Three-dimensional state of stress and strain analysis. Unsymmetric 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.

TRANSPORTATION PLANNING
3 credits 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.

HIGHWAY DESIGN
3 credits Study of modern design of geometrical and pavement features of highways. Design problem and computer use. Graduate students will produce a more complete design.

Pavement Engineering
3 credits Thelogy of elasticity, of viscoelasticity and of layered systems as applied to pavements. Pavement materials characterization; pavement design, pavement restoration for rigid and flexible pavements.

TRAFFIC ENGINEERING
3 credits 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.
Graduate Courses

567 ADVANCED HIGHWAY DESIGN
Prerequisite: 664. Autocad, or permission. Computationally oriented design of highways in terms of data input, digital terrain modeling, cross-section templates, horizontal and vertical roadway design, earthwork computations, and advanced topics.
3 credits

568 HIGHWAY MATERIALS
3 credits
Prerequisites: Permission. Properties of aggregates, manufacture and properties of Portland cement, properties of asphaltic materials, design and testing of rigid mix asphalt pavement mixtures and of surface treatments. Laboratory preparation of specimens and determination of physical properties. Graduate student requirement: Graduate students will be required to perform an additional eight-hour asphalt laboratory (Aubin recovery of asphalt from solution) and to prepare a paper on a highway materials topic.

574 UNDERGROUND CONSTRUCTION
2 credits
Description of practices and techniques of underground construction. Selection of proper method for individual job. Design of underground openings, support systems and linings.

604 DYNAMICS OF STRUCTURES
3 credits

606 STRUCTURAL STABILITY
3 credits

608 ENERGY METHODS AND ELASTICITY
3 credits

609 PRESTRESSED CONCRETE
3 credits
Basic concepts. Design of double-tie roof girder; shear; development length; columns; piles; design of highway bridge girder; pretensioned, posttensioned; continuous girders; corbels; volume-change forces; connections.

610 MULTISTORY BUILDING DESIGN
3 credits
Floor systems; staggered truss system; brace frame design; unbraced frame design; drift in braced frames (tub and partial tub) systems; earthquake design; fire protection. Analysis by STRUDL.

611 FUNDAMENTALS OF SOIL BEHAVIOR
2 credits
Inelastic deformation and non-linear physical-chemical and mechanical properties of engineering soils viewed as particulate matter.

612 ADVANCED SOIL MECHANICS
3 credits
Study of mechanics of behavior of soil as continuum. Principles of stress, strain, deformation, consolidation and pore water pressure as applied to mechanical behavior of soil and foundation problems.

613 ADVANCED GEOTECHNICAL TESTING
Prerequisite: 518, 618. Theory and practice of static and dynamic in situ and laboratory soil testing. Testing procedures, applicability, limitations. General evaluation of geotechnical parameters for routine and special site conditions. One lecture, two laboratories per week.

614 FOUNDATION ENGINEERING
3 credits
Prerequisite: Foundation bearing capacity and settlement analysis. Design of shallow and deep foundation systems. Pile driving and load test procedures and analysis. Theory and design of earthstructures including retaining walls, tiebacks and bulkheads.

615 PRESTRESSED CONCRETE II
3 credits
Prerequisite: 664 or permission. Soil-structure interaction theory and applications to ground structures including conduits, tunnels and shafts. Advanced foundation construction methods and problems including dewatering, soil stabilization, underpinning and caissons. Slope stability analysis.

616 SOIL IMPROVEMENT
3 credits
Advanced stabilization, precompression with vertical drains, blasting, vibrocompaction, injection and grouting, thermal methods, electro-osmosis, soil reinforcement, case studies.

617 NUMERICAL METHODS IN GEOTECHNICAL ENGINEERING
3 credits

618 ROCK MECHANICS
3 credits
Prerequisite: 664 or permission. Mechanical nature of rocks; linear elasticity and application to rock problems; inelastic behavior of rocks; time effect and dependence of physical properties, experimental characterization of rock properties; failure theory and crack propagation.

620 SANITARY ENGINEERING PROBLEMS
2 credits
Application of both laboratory methods and theory to solution of sanitary engineering problems involving water pollution, storm drainage, regeneration of industrial wastes, dengue and others.

621 ENVIRONMENTAL ENGINEERING PRINCIPLES
4 credits
Corequisite: 523. Provide the basic principles of chemical reaction engineering, microbiology, environmental regulations and containment migration required for the understanding and solving environmental problems.

622 AQUATIC CHEMISTRY
3 credits
Prerequisites: Permission. Quantitative treatment of variables that govern the chemistry of aquatic systems. Empphasis on carbonate in open systems. Metal complexing and solubility, and oxidation-reduction reactions.

623 PHYSICAL/Chemical TREATMENT PROCESSES
3 credits
Prerequisite or corequisite: 261. Theory, current research associated with physical/chemical processes, the impact on design-activatedsludge systems, carbonaceous removal, filtration, absorption processes and their treatment.

624 BIOLOGICAL WASTEWATER TREATMENT PROCESSES
3 credits
Prerequisite or corequisite: 621. Theory, current research associated with biological processes, related physical/chemical processes, the impact on design-activated sludge, fixed film processes, biological nutrient removal, denitrifiers, nitrifiers, design-activated sludge and sludge digestion processes emphasis.

625 WATER TREATMENT PLANT DESIGN
3 credits
Prerequisite: 523. Design of water treatment plants for potable, industrial and commercial use. Development of water sources, treatment methods and financing used to design best practical methods in terms of cost-benefits.

626 WASTEWATER TREATMENT PLANT DESIGN
3 credits
Prerequisite: 624. Application of theory and fundamentals to design of wastewater treatment plants. Microbiological and chemical stabilization of wastewater to meet water quality criteria. Economic analyses made to determine best practical designs to be utilized.

627 ENVIRONMENTAL OPERATIONS LABORATORY
2 credits
Prerequisite: Permission of instructor. Conduction of laboratory experiments related to the design and operation of water and wastewater treatment processes. Experimental design, data analysis, report preparation, and interpretation.

628 ADVANCED CHEMICAL OXIDATION PROCESS
3 credits
Prerequisites: Permission. Qualitative and quantitative treatment of variables that govern process chemistry and kinetics in water. Emphasis on oxygen, hydrogen peroxide, and ultraviolet light (UV).

631 SOIL REMEDIATION
3 credits
Prerequisite: 621 or permission. Provides a thorough understanding of site characterization, traditional soil remediation technologies, as well as present new and emerging remediation technologies.

635 AIR POLLUTION CONTROL
3 credits
Prerequisite: 621 or permission. Introduction to air pollution control philosophies, approaches, regulations, and modeling. Also contains an in-depth evaluation/design approach for the control of particulate matter, SOx and NOx.

640 ADVANCED FLUID MECHANICS
3 credits

644 OPEN CHANNEL HYDRAULICS
3 credits
Application of basic principles of fluid mechanics to flow in open channels. Criteria for analysis of uniform, gradually varied and rapidly varied flows. Study of movement and transport of sediments. Design problems utilizing numerical techniques.

645 APPLIED HYDROLOGY
3 credits
Discusses principles of water cycle such as precipitation, evaporation, stream flows, floods, infiltration. Methods of analysis and their application to studies of water demand, storage, transportation including mathematical modeling of urban runoff and statistical hydrology.

646 COASTAL ENGINEERING
3 credits
Characteristics of linear and nonlinear wave theories. Interaction of structures, waves; design analysis of shore, offshore structures. Movement, transportation of sediments in lake shore and ocean environments.

653 ADVANCED TRANSPORTATION ENGINEERING I
3 credits
Prerequisite: Permission. Highway and parking facility design, transportation planning, highway capacity estimates, signal systems and optimization, incident detection and management, freeway ramp metering, and highway traffic safety.

654 ADVANCED TRANSPORTATION ENGINEERING II
3 credits
Prerequisite: Permission. Highway and parking facility design, transportation planning, highway capacity estimates, signal systems and optimization, incident detection and management, freeway ramp metering, and report preparation.

655 TRAFFIC DETECTION AND DATA ANALYSIS
3 credits
Prerequisite: Permission. Theory and application of pressure tube, loop detectors, and imaging sensing, microwave, infrared, ultrasonic, laser detectors, parameter estimation, reliability, and data mining for traffic analysis.

658 ADVANCED ENGINEERING MATERIALS
3 credits
Selected topics on principles governing mechanical behavior of materials with respect to elastic, plastic and creep responses, stress rupture, low and high cycle thermal fatigue. Failure theories and fracture phenomena in brittle and ductile materials. Crack propagation and life prediction of engineering materials.

678 ELASTICITY
3 credits

681 PROPERTIES OF MATERIALS
3 credits

684 ADVANCED REINFORCED CONCRETE DESIGN
3 credits

685 ADVANCED STEEL DESIGN
3 credits
Properties of steel, fasteners, bearing, friction joints, Gusset plates, bolts in tension, end moment. Butt welds, joint type, weld joints, cyclic loads, fatigue analysis, types of detail, torsion, stability design, buckling.

686 EXPERIMENTAL METHODS IN STRUCTURAL MECHANICS
3 credits
Prerequisite: 682. Electrohydraulic closed-loop test systems. Methods for specimen testing. Static measurement techniques for room and elevated temperatures. Design of computer controlled experiments investigating deformation and failure under complex stress states.

687 LIMIT ANALYSIS IN STRUCTURAL ENGINEERING
3 credits

689 ADVANCED SEMINAR IN CIVIL ENGINEERING
1-3 credits
Prerequisite: Permission. Advanced projects, reading, studies, or experimental in various areas of civil engineering.

690 ENGINEERING REPORT
2 credits
Prerequisite: Permission of advisor. A relevant problem in civil engineering for students electing the non-thesis option. The final engineering report must be approved by the advisor and the advisory committee.

691 MASTER'S RESEARCH
1-6 credits
Prerequisite: Permission of advisor. (May be repeated.) Research on a suitable topic in civil engineering culminating in a master's thesis.

692 MASTER'S THESIS
1-6 credits
Prerequisite: permission. Research and thesis on some suitable topic in civil engineering approved by department. Defense of thesis is by final examination.

701 EARTHQUAKE ENGINEERING
3 credits
702 PLATES AND SHELLS

703 VISCOELASTICITY AND VISCOPLASTICITY

704 ELEMENTARY ANALYSIS II

710 ADVANCED COMPOSITE MECHANICS

720 DYNAMIC PLASTICITY
Prerequisites: 683 or 703. Impulsive and transient loading of structural elements (beams, plates, shells, etc.) in which inelastic deformation occurs. Topics include: longitudinal and transverse plastic wave propagation in thin rods, propagation of plastic hinges, rate-dependent viscoplastic waves, transverse impact on beams and plates, high-rate forming, blast loading, impact perforation, shock waves in solids.

717 SOIL DYNAMICS
Prerequisite: 681 or permission. Vibration and wave propagation theory relating to soils, structure of soils, and design of foundations. Design of foundations for dynamic loading impact, pulsating and blast loads.

711 BIOREMEDIATION
Prerequisites: 501, 509, 702 or permission. Provide the fundamentals required for understanding and successfully implementing the bioremediation of hazardous compounds coupled with the design and operational techniques of bioremediation systems.

745 DEEPWELL DRILLING
2 credits
Prerequisite: Discussion of parameters determining permeability of various soils. Analytical, numerical and experimental methods to determine two- or three-dimensional movement of groundwater. Unactuated systems.

898 PRELIMINARY RESEARCH
1-15 credits
(May be repeated for a total of 15 credits.) Prerequisite: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the interdepartmental Doctoral Committee.

899 DOCTORAL DISSERTATION
1-15 credits
(May be taken more than once.) Prerequisite: acceptance of research proposal by the interdepartmental Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

ELECTRICAL ENGINEERING

4400:

548 OPTICAL COMMUNICATION NETWORKS
3 credits
Optical waveguides and optical integrated components, optical transmitters and receivers, optical communication network design.

549 DIGITAL COMMUNICATION
3 credits
Introduction to digital communication theory and systems; coding of analog and digital information; digital modulation techniques. Introduction to information theory.

553 ANTENNA THEORY
3 credits

555 MICROWAVES
4 credits
Dynamic fields, Maxwell’s equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.

557 WIRELESS COMMUNICATIONS
3 credits
Prerequisite: 549. Theory and analysis of wireless communication systems, wireless propagation, multiple access, modulation, demodulation, multipath channel characterization, diversity, cellular, and PCS services and standards.

561 OPTICAL ELECTRONICS AND PHOTONIC DEVICES
3 credits
Lightwave engineering, photonic principles and optical electronic technology.

565 PROGRAMMABLE LOGIC
Electronic circuitry considerations in logic circuits, methods of sequential, threshold logic logic analysis, synthesis, development of computer arithmetic elements; memory, storage devices, state variables.

570 EMBEDDED SYSTEMS INTERFACING
3 credits
Prerequisites: permission by instructor. Microcontroller structures and embedded peripherals. Interfaces to physical environments. Software access to peripherals, timers, ADCs and DACs. Synchronous and asynchronous communications. Interrupts. Real-time operating systems.

572 CONTROL SYSTEMS
2 credits
State variable analysis, design of control systems. Discrete systems, analysis, digital computer control. Experiments include hybrid, ZC control system, digital computer control.

575 SYSTEM IDENTIFICATION
Computer simulation of dynamic systems. Discrete system stability, linear multistep and Runge-Kutta methods, nonlinear systems, stiff systems, distributed systems and real-time computing.

583 POWER ELECTRONICS I
2 credits
Elements of power electronics. Rectifiers, converters, inverters analysis and design.

584 POWER ELECTRONICS LABORATORY AND DESIGN PROJECT
2 credits
Prerequisite: 583. Experiments on different types of power electronic converters: AC/DC, DC/DC, DC/AC, and AC/AC. Design project to include design, simulation, building, and testing of a power electronic circuit.

588 ELECTRO MECHANICAL MOTOR DRIVES
2 credits
Application of electronic machines, choice of motor for particular drive. Application of power semiconductor circuits in electric machines.

589 DESIGN OF ELECTRIC AND HYBRID VEHICLES
3 credits

599 SPECIAL TOPICS: ELECTRICAL ENGINEERING
1-3 credits
(May be taken more than once.) Prerequisite: permission of department chair. Special topics in electrical engineering.
775 ROBUST CONTROL
Prerequisite: 674. Input-output and state-space characterizations of robust control systems, and design techniques based on the algebraic Riccati equation. Decentralized and reliable control design methodologies.

3 credits

777 OPTIMAL CONTROL II
Prerequisite: 677 Advanced state-feedback optimal control. Output-feedback issues, including linear-quadratic regulator, observer design, reduced-order controllers, frequency weighting, and decentralized control.

3 credits

788 ADAPTIVE CONTROL
Prerequisite: 671 or permission of instructor. This course will provide the advanced graduate student with the techniques required for the control of time-varying nonlinear and stochastic systems. Topics include minimum prediction error control, least squares estimation, certain equivalence adaptive control, Kalman filtering, minimum variance control, LQG control and stochastic adaptive control.

3 credits

789 ADVANCED TOPICS IN CONTROL
Prerequisite: 786. Discussions of recent advances in control systems.

3 credits

794 ADVANCED SEMINAR
(May be taken more than once) Prerequisite: permission of instructor. Advanced level coverage of specialized topics. For student seeking Ph.D. in engineering.

1-3 credits

898 PRELIMINARY RESEARCH
(May be repeated) Prerequisite: approval of dissertation director. Preliminary investigations prior to submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

1-6 credits

899 DOCTORAL DISSERTATION
(May be repeated) Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

3 credits

COMPUTER ENGINEERING 4450:

510 EMBEDDED SCIENTIFIC COMPUTING
Prerequisite: Permission by instructor. Organization of scientific and engineering problems for computer solutions. Analysis of error and convergence properties of algorithms.

3 credits

520 OBJECT-ORIENTED DESIGN I
Prerequisite: Permission by instructor. Introduction to the design and development of frames based expert systems.

3 credits

530 VLSI CIRCUITS AND SYSTEMS
Graduate level introduction to VLSI design. MOSTFET structures, design rules, and fabrication. Static, dynamic CMOS, PLAs, ROMs, and RAMs. Layout methodologies and tools. System architecture.

3 credits

590 SPECIAL TOPICS: COMPUTER ENGINEERING
(May be taken more than once) Prerequisite: permission of department chair. Special topics in computer engineering.

1-3 credits

606 COMPUTER ARCHITECTURE
Prerequisite: 608 or equivalent.的历史和概念的计算机体系结构。历史和概念的计算机体系结构。

3 credits

609 PARALLEL COMPUTER ARCHITECTURE
Prerequisite: 609. Discussion of parallel computer architectures and parallel processing based on a single instruction, message-passing, or shared memory.

3 credits

630 REALTIME SCHEDULING
Prerequisite: 630. Theory of fixed priority scheduling for real-time systems. Aperiodic, Periodic, and Sporadic Task scheduling.

3 credits

642 ADVANCED KNOWLEDGE ENGINEERING
Prerequisite: Permission of instructor. Advanced study of knowledge acquisition and expert system project management.

3 credits

663 VLSI DESIGN AND AUTOMATION

3 credits

693 SPECIAL PROBLEMS
(May be taken more than once) Prerequisite: permission of department chair. For a qualified graduate student. Supervised research or investigation in student's major field. Credit depends upon nature and extent of project.

1-3 credits

794 ADVANCED SEMINAR
(May be taken more than once) Prerequisite: permission of department chair. Advanced level coverage of various topics. Intended for student seeking Ph.D. in engineering.

1-3 credits

MECHANICAL ENGINEERING 4600:

500 THERMAL SYSTEM COMPONENTS
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. Current techniques for analysis and design.

3 credits

510 HEATING AND AIR CONDITIONING
Thermodynamics of gas mixtures. Design and selection of air conditioning equipment. Control of gas mixtures, heating, cooling, and humidity.

3 credits

511 COMPRESSIBLE FLUID MECHANICS

3 credits

512 FUNDAMENTALS OF FLIGHT
Introduction to basic aerodynamics, airplane performance, stability and control, aeronautics and propulsion. Design considerations are emphasized.

3 credits

513 INTRODUCTION TO AERODYNAMICS
Introduction of aerodynamic concepts, conformal transformations, theory of thin airfoil, 2-dimensional airfoil theory, optimal wings of finite span, lifting line theories, lumped-vortex, vortex-lattice, and panel methods.

3 credits

514 INTRODUCTION TO AEROSPACE PROPULSION
Introduction to the propulsion systems currently used in aerospace fields; propulsion principles for turbojets, chemical rockets, and electric rocket propulsion.

3 credits

515 ENERGY CONVERSION
Topics from fields of internal combustion engines, cycle analysis, modern conversion devices.

3 credits

516 HEAT TRANSFER PROCESSES
Analysis, design of extended surfaces. Natural convection and mixed convection, combined modes of heat transfer with emphasis on convective heat transfer.

3 credits

522 EXPERIMENTAL STRESS ANALYSIS I
Experimental methods of determining stress or strain: brittle fracture, strain gage, photoelasticity, full field thermal techniques.

3 credits

530 MACHINE DYNAMICS
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 including reaction forces and dynamic stability.

3 credits

531 FUNDAMENTALS OF MECHANICAL VIBRATIONS
Undamped and forced vibrations of systems having one or two degrees of freedom.

3 credits

532 VEHICLE DYNAMICS

3 credits

540 SYSTEM DYNAMICS AND CONTROL

4 credits

541 CONTROL SYSTEMS DESIGN
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.

3 credits

542 INDUSTRIAL AUTOMATIC CONTROL
Applications to industrial and process systems. 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.

3 credits

543 OPTIMIZATION METHODS IN MECHANICAL ENGINEERING
Development and method of solution of optimization problems in mechanical engineering. The use of dynamic programming in design and operational research methods for optimization including computer utilization and applications.

3 credits

544 ROBOT DESIGN, CONTROL AND APPLICATION
Robotics and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics, control and sensing in robotics. The automated factory with robot applications.

3 credits

550 INTRODUCTION TO COMPUTATIONAL FLUID FLOW AND CONVECTION
Numerical modeling of fluid thermsystems, numerical solution of the momentum and thermal boundary layer equations; flow simulation using advanced heat transfer/fluids packages.

3 credits

562 PRESSURE VESSEL DESIGN
Introduction to modern pressure vessel technology. Topics include basic structural considerations, materials and their environment and design-construction features.

3 credits

563 COMPUTER AIDED DESIGN AND MANUFACTURING
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.

3 credits

564 GAS DYNAMICS

3 credits

568 THERMODYNAMICS
Extension and generalization of basic laws of thermodynamics with application to a variety of physical and biological systems. Introduction to irreversible thermodynamics, the third law and statistical thermodynamics.

3 credits

569 FINITE ELEMENT ANALYSIS
Prerequisite: 622. Introduction of finite element method as applied to various topics from continuum mechanics. Areas covered include plane; axisymmetric and 3-D stress analysis; fracture; fluid mechanics; transient problems and geometric and material nonlinearities.

3 credits

570 DYNAMICS OF VISCOS FLOW I
Derivation and solution of equations governing laminar viscous flow. Applications include unsteady flows, slow viscous flows, parallel flows, lubrication theory and laminar boundary layers.

3 credits

571 COMPUTATIONAL FLUID DYNAMICS I
Prerequisite: 620 or permission of instructor. Study of numerical methods in fluids; numerical errors and stability, finite difference; numerical convergence and image comparison techniques, Poison equations, boundary conditions, turbulence, spectral and finite element techniques.

3 credits

575 CONDUCTION HEAT TRANSFER
Study of one-, two- and three-dimensional conduction. Development of analytical techniques for analysis and design.

3 credits

580 HEAT TRANSFER
Heat transfer from laminar, turbulent internal, external flows. Convective heat transfer at high velocities. Heat transfer to liquid metals, high Prandtl number fluids.

3 credits

580 RADATION HEAT TRANSFER
Study of governing radiation laws. Black and real systems, geometric factors, gray enclosures, non-gray systems, gaseous radiation, radiation equipment.

3 credits

580 BOILING HEAT TRANSFER AND TWO-PHASE FLOW
Current techniques to determine heat transfer and pressure drop in components such as boilers, heat exchangers, and steam generators, with boiling. Boiling mechanism, slip ratio, critical heat flux and instabilities in boiling flow systems.

3 credits

580 EXPERIMENTAL STRESS ANALYSIS II
Prerequisite: 522. Dynamic strain gage methods, transducer design, More fringe techniques and topics in photoplasticity.

2 credits

581 INTRODUCTION TO TIRE MECHANICS
Contact pressure, friction. Traction and wear as vehicle component, tire traction and wear, laminated structures, tire stress and strains and advanced tire models.

3 credits

582 CONTINUUM MECHANICS
Analysis of stress and deformation at a point. Derivation of fundamental field equations of fluid and solid mechanics by applying basic laws of dynamics, conservation of mass and energy. Development of constitutive laws.

3 credits

583 APPLIED STRESS ANALYSIS I
Prerequisite: 582. Continuum mechanics and 622 with specific application to solid mechanics. Development of energy theorems due to Reissner, Washizu and generalized Hamilton’s principle. Solutions to static and dynamic problems.

3 credits
624 FUNDAMENTAL OF FRACTURE MECHANICS  
Prerequisite: 622 or permission of instructor. Methods of stress analysis in elastic media containing cracks and cracks in solids with defects of finite length. Theories of dynamic crack propagation. Fatigue fractures. Finite element approaches to fracture mechanics.

625 ANALYSIS OF MECHANICAL COMPONENTS  
3 credits
Theories of failure and plastic flow. Fatigue, creep analysis and introduction to fracture mechanics.

626 FATIGUE OF ENGINEERING MATERIALS  
Prerequisite: 624 or permission. Quasi-static and cyclic behavior, dislocation networks and their interactions; consideration of dislocation interactions; crack initiation, crack propagation; short cracks; crack closure; environmental effects.

627 ADVANCED MATERIALS AND MANUFACTURING PROCESSES  
3 credits
Manufacturing process systems, classification of manufacturing; technological aspects of bulk deformation, casting, joining, forming, machining, molding, powder metalurgy, rapid solidification, economic aspects; technical activity.

628 MECHANICAL BEHAVIOR OF MATERIALS  
3 credits
Mechanical behavior of engineering materials; metallurgy of deformation; dislocation effects and deformation; strengthening mechanisms; thermomechanical processing; mechanical testing.

629 NONLINEAR ENGINEERING PROBLEMS  

630 VIBRATIONS OF DISCRETE SYSTEMS  
3 credits
Study of vibrations of multidegree of freedom systems exhibiting free and forced vibrations, damped and transient response, normal mode vibrations and matrix iteration techniques. Application to seismic design and shock design.

631 KINETIC DESIGN  
3 credits

632 RELIABILITY IN DESIGN  
Prerequisite: 6470:565. The reliability determination of mechanical components and systems and their related design. Decision; reliability determination, normal and lognormal theories; Weibull theory, life spectrum analysis, renewal theory and confidence limits.

633 COMPUTERIZED MODAL ANALYSIS OF STRUCTURES  
3 credits
Prerequisite: 633 or equivalent. Modulation analysis theory and measurement techniques, and the computer analysis of the single natural processing concepts, structural dynamic theory, modality parameter estimation with "hands-on" experience in the application of modal measurement methods in vibration analysis.

634 ADVANCED DYNAMICS OF ROTATING MACHINERY  
3 credits
Prerequisites: 520 or equivalent. Dynamic modeling and simulation of complex rotating machinery. Steady state, transient and stability analysis with inertia, gyroscopic, imbalance, stiffness, disk-skew and impeller stiffness interaction effects.

635 STRESS WAVES IN SOLIDS AND FLUIDS  

642 SYSTEMS ANALYSIS AND CONTROL DESIGN  
3 credits
Uniform methods of modeling and response analysis, controllability and observability, stability theory, and analysis and synthesis of linear and nonlinear engineering processes. Design of feedback controls for optimum performance for multivariable real-time control application.

643 PROCESS IDENTIFICATION AND COMPUTER CONTROL  
3 credits
Prerequisite: Permission. Obtaining mathematical models of processing from noisy observations. Methods of digital control design. Case studies on computer control of selected processes.

646 EXPERT SYSTEMS IN CONTROLS AND MANUFACTURING  
3 credits
Prerequisite: 640 or equivalent or by permission. Expert system methodologies for process control, computer integrated flexible manufacturing and robotics.

647 NEURAL AND FUZZY CONTROL SYSTEMS  
3 credits
Prerequisite: 640 or permission of instructor. Analysis and design of intelligent control systems. Neural networks and fuzzy sets for process identification and controller design. Applications and case studies in industry.

650 TRIBOLOGY  
3 credits
Fundamentals of friction lubrication and wear treated; includes basic theory, advanced topics, applications and bearings. Specific topics include adhesive and abrasive wear, boundary lubrication, fluid film lubrication and bearings, rolling element bearings, and tribology of advanced materials.

655 MICRO- AND NANO-FLOW DYNAMICS  
Prerequisite: 610 or permission of instructor. This course includes fundamentals of the analytical and numerical solutions of the problems pertinent to fluid mechanics on nano- and micro-fluid scales. Applications will include micro-engines, MEMS, micro-filters, and synthesis of nanomaterials.

660 ENGINEERING ANALYSIS  
3 credits
Prerequisite: B.S. in engineering. Study of analysis techniques as applied to specific engineering problems. Applications include beam deflections, acoustics, heat conduction and hydrodynamic stability.

661 FAILURE ANALYSIS OF MECHANICAL SYSTEMS  
Prerequisite: 625 or permission. This course emphasizes engineering techniques for predicting, yielding, buckling, fracture and fatigue of mechanical systems. Students will be taught how to link theory with practice by examining case studies of structural and mechanical failures and will obtain practical experience in modeling real complex systems in an end-of-term project.

662 MICROSCALE HEAT AND MASS TRANSFER  
3 credits
Prerequisites: 608 and 615 or permission. Kinetics theory, classical and quantum statistics, structure of solids, phonons in solids, free electrons in metals, Boltzmann transport theory, hypersensitive heat conduction, thermal conductivity of thin films, laser material processing.

663 WEB-BASED SOLID MODELING AND E-MANUFACTURING  
3 credits
Prerequisite: 650 or equivalent. Team-based collaborative design with a web-based solid modeling library, feature-based manufacturing analysis, and process planning using cross-platform interoperable tools including JAVA, VML, for optimized product realization.

664 FUNDAMENTALS OF CRYSTALIZATION AND SOLIDIFICATION  
3 credits
Prerequisite: 608 or equivalent, or permission. Fundamental theories of crystalline nucleation and growth, interface stability and morphology, microstructure formation, and microsegregation. Applications in casting, welding, laser processing, and single crystal growth.

667 INTEGRATED FLEXIBLE CELLULAR MANUFACTURING SYSTEMS  
ANALYSIS AND DESIGN  
3 credits
Prerequisite: 663 or equivalent or by permission of instructor. The analysis of integrated and computer-aided manufacturing systems, design of automated manufacturing components and simulations of flexible cellular manufacturing systems.

671 FUNDAMENTALS AND APPLICATIONS OF MICRO ELECTRO MECHANICAL SYSTEMS  
3 credits
Fundamentals of MEMS based sensors and actuators, MEMS materials, bulk and surface micro machining and MEMS device testing. Application in optics, automotive, and biomedical instrumentation.

672 DESIGN OF MICROSYSTEMS AND NANO DEVICES  
3 credits
Design of arrays of various sensors and actuators, microfluidics devices, microstructure analysis and simulation, microfabrication process design rule. Applications in MEMS, lab-on-a-chip devices, BioMEMS and NEEMS.

673 MEASUREMENTS METHODS AND EXPERIMENTAL ERROR IN THERMOFLUID SCIENCES  
3 credits
The course will incorporate elements of experimental error analysis, optics, and optical ray tracing, principles of testing, methods and devices for fluid flow quantization and temperature measurements. Laboratory work with hands-on experience.

674 DEFORMATION AND FAILURE OF POLYMERS AND SOFT MATERIALS  
3 credits
This course introduces the concepts of deformation, fracture, and failure analysis of engineering polymers, soft, and biological materials.

696 SPECIAL TOPICS IN MECHANICAL ENGINEERING  
1-4 credits
Prerequisites: Permission of advisor. Relevant problem in mechanical engineering. Course credit varies for graduate degree. Supervised research in the student’s major field of training or experience. Credit depends upon nature and extent of project as determined by advisor and department chair.

697 ENGINEERING REPORT  
2 credits
Prerequisite: Permission of advisor. Relevant problem in mechanical engineering. Course credit varies for graduate degree. Supervised research in the student’s major field of training or experience. Credit depends upon nature and extent of project as determined by advisor and department chair.

698 MASTER’S RESEARCH  
3 credits
Prerequisite: Permission of advisor. (May be repeated.) Research on a suitable topic in mechanical engineering culminating in a master’s thesis.

699 MASTER’S THESIS  
1-15 credits
Prerequisite: permission of advisor. (May be repeated) Supervised research in a specific area of mechanical engineering.

704 FINITE ELEMENT ANALYSIS I  

705 FINITE ELEMENT ANALYSIS II  
3 credits
Prerequisite: 633 or equivalent. Practical methods of solution of boundary layer problems. Transition process.

710 DYNAMICS OF VISCOUS FLOW II  
3 credits
Prerequisite: 610. Introduction to turbulence. Turbulence modeling and turbulent boundary layers. Practical methods of solution of boundary layer problems. Transition process.

711 COMPUTATIONAL FLUID DYNAMICS  
3 credits
Prerequisite: 611 or permission of instructor. Development of advanced computational techniques for convection-dominated flows. Higher order explicit and implicit schemes including nonoscillatory front-capturing methods applied to benchmark problems.

715 HYDRODYNAMIC STABILITY  
3 credits

718 ADVANCED HEAT TRANSFER  
3 credits
Prerequisite: 650, 660. Topics include nonhomogeneous or nonlinear boundary value problems of heat conduction, heat transfer with melting, solidification and sublimation, heat transfer in porous systems and hydrodynamically and thermally unsteady convection.

723 APPLIED STRESS ANALYSIS II  
3 credits
Prerequisite: 622. Continuation of 622. Development of approximate solution techniques including finite elements, area-weighted residuals (Rayleigh-Ritz, Galerkin, Trefftz, collocation, least squares, etc.) and finite differences.

726 NONLINEAR CONTINUUM MECHANICS  
3 credits
Prerequisite: 622. Finite deformation theory; strain, stress, constitutive equations, strain energy functions. Solution of finite deformation problems in hypoelasticity, coupled thermoelasticity and plasticity, electroelasticity and micropolar theories.

730 VIBRATIONS OF CONTINUOUS SYSTEMS  
3 credits
Prerequisite: 633. Analysis of continuous vibrating systems, using separation of variables, energy, vanishing, Rayleigh-Ritz and other approximate techniques. Concepts and solutions of integral equations as applied to continuous systems.

732 ADVANCED MODAL ANALYSIS OF STRUCTURES  
3 credits

741 OPTIMIZATION THEORY AND APPLICATIONS  
3 credits
Prerequisite: Permission by instructor. Theory of optimization in engineering systems, development and method of solution of optimization problems for physical processes, large systems. Use of dynamic programming, operational research methods of system optimization, control.

763 ADVANCED METHODS IN ENGINEERING ANALYSIS  
3 credits
Prerequisite: Permission by instructor. Some finite difference and finite element methods, variational methods, integral methods and similarity transforms to engineering problems in heat transfer, fluid mechanics and vibrations.

780 ADVANCED SEMINAR IN MECHANICAL ENGINEERING  
1-4 credits
Prerequisite: Permission by instructor. Advanced topics in mechanical engineering. Intended for student seeking Ph.D in engineering degree.

898 PRELIMINARY RESEARCH  
1-5 credits
Prerequisite: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

899 DOCTORAL DISSERTATION  
1-5 credits
Prerequisite: approval of dissertation director. Supervised research leading to original research in the doctoral student.
656 EXPERIMENTAL TECHNIQUES IN BIOMECHECINES 3 credits
Prerequisites: Permission. Principles of testing and measuring devices commonly used for biofluid and biosolid mechanics studies. Laboratories for demonstration and hands-on experience.

650 HUMAN FACTORS ENGINEERING 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.

600 BIOMEDICAL ENGINEERING COLLOQUIUM 1 credit
May be repeated for a maximum of 16 credits. The Biomedical Engineering Colloquium is a seminar series designed to introduce students to current topics in biomedical engineering research, design, and business.

601 BIOMEDICAL INSTRUMENTATION I 4 credits
Prerequisites: 3100:561 or equivalent. Clinical instrumentation to measure and display physiological and anatomic parameters. Basic concepts of instrumentation including design criteria and operational analysis. Practical experience gained through the use of instrumented mammalian models.

611 BIOMETRI 3 credits
Statistics and experimental design topics for the biomedical and biomedical engineering disciplines including sampling distributions, hypothesis testing and estimation, ANOVA, probit analysis and nonparametric statistics.

620 NEURAL NETWORKS 3 credits
Examination of highly parallel, distributed architectures for computing that are, to varying degrees, derived from structures observed in biological nervous systems. After an overview of how real neurons operate, the course will examine both classical and modern computational architectures. Comparisons will be made with traditional serial machines and applications for which neural networks seem most promising will be examined.

621 SENSORY SYSTEMS ANALYSIS 3 credits
Prerequisite: Permission. Study of various sensory modalities from a systems engineering perspective. Techniques from linear and nonlinear signal analysis are applied to aspects of vision, hearing, touch, and position sensing in humans. Comparisons are made with artificial emulations of these senses.

623 PROCESSING OF BIOMEDICAL SIGNALS 3 credits
Prerequisites: Graduating standing in the College of Engineering and 611 or equivalent. This course provides an introduction for the analysis of biological continuous signals and point processes including discriminant and principal component analysis, histograms, correlograms and data display.

624 IMAGE PROCESSING FOR BIOMEDICAL DATA 3 credits
Image sampling, quantization, and transforms. Enhancements including smoothing and sharpening. Restoration using inverse and Wiener filters. Edge detection and thresholding with applications for segmentation and recognition.

627 ADVANCES IN DRUG AND GENE DELIVERY SYSTEMS 3 credits
This course will examine technological innovations for the delivery of drugs and genes. Methods of conjugating drugs and genes into the body, modeling drug transport, and metabolic responses of cells and organs will be analyzed.

630 BIOMEDICAL COMPUTING 3 credits
Computational tools in health care, clinical laboratories, AI/ML, medical records, direct order entry, A/D, D/A conversion, patient monitoring, peripherals and interfaces, diagnostic algorithms, automated EEG, ECG systems.

632 DIAGNOSTIC IMAGING TECHNIQUES 3 credits
Advanced diagnostic imaging techniques as applied to Digital Radiography, Computed Tomography (CT), nuclear medicine, ultrasound imaging, magnetic resonance imaging (MRI), and optical confocal microscopy.

633 BIOMEDICAL OPTICS 3 credits
Application of lightwave principles and optical fibers on the engineering design and development of instrumentation, techniques, and applications for medical diagnostic imaging, and treatment of disease.

634 MEDICAL IMAGING DEVICES 3 credits
Imaging modalities including radiation, magnetic resonance, and sound. The formation of images. Specific devices including computer tomography, magnetic resonance, ultrasound, gamma cameras and PET.

635 BIOMEDICAL NANOTECHNOLOGY 3 credits
Prerequisite: permission of instructor. Engineering principles of nanotechnology as applied to the design of instrumentation, systems and techniques, aimed to explore biomolecules and biotissues at the microscopic level, at one billionth of a meter.

636 SPINE MECHANICS 3 credits

641 SOFT CONNECTIVE TISSUE BIOMECHANICS 3 credits
Prerequisites: 3000:561 or equivalent; or permission. Physical properties and functional biomechanics of the human body joints, tendons, ligaments, fascia, and muscles. Mechanics of the intervertebral disc, ligaments of the knee, and tendons. Fundamentals of muscle and joint function.

642 HARD CONNECTIVE TISSUE BIOMECHANICS 3 credits
Prerequisites: 3000:561 or equivalent; or permission. Physical properties and functional biomechanics of bone. Biomechanics and mechanics of fracture and fracture healing. Mechanics of external and internal fixators. Total joint implants and reconstruction techniques.

644 MUSCLE MECHANICS AND OPTIMIZATION 3 credits
Prerequisite: Graduate standing in the College of Engineering or by permission. Human body joint kinesthetics, muscle mechanics and modelling. The principles of optimization as applied to muscle forces, along with muscle anatomy and physiology.

645 MECHANICS IN PHYSIOLOGY AND MEDICINE 3 credits
Physical and mechanical properties of the human body, including skin, bone, muscle and joint. The biomechanics of physiology and medicine.

646 THERAPEUTIC BIOMATERIALS 3 credits
Prerequisites: permission of instructor. Study of various biomaterials and biocomposites including the manufacturing processes of these materials.

647 BIOMEDICAL ENGINEERING 4800: 3 credits
Prerequisite: Graduate standing in the College of Engineering or by permission. Analytical methods used to model and analyze human body motion. Three-dimensional kinematics, joint coordinate systems, functional anatomy, segment center of mass and joint centers.

650 CARDOVASCULAR DYNAMICS 3 credits
Prerequisites: 560 and 660. Cardiovascular disease conditions, instrumentation and techniques (both invasive and noninvasive) used for diagnosis. Direct interaction with active clinical laboratories.

651 CARDIOVASCULAR DIAGNOSTIC TECHNIQUES 3 credits
Prerequisites: 3000:561 or equivalent. Cardiovascular disease conditions, instrumentation and techniques (both invasive and noninvasive) used for diagnosis. Direct interaction with active clinical laboratories.

652 CARDIOVASCULAR THERAPEUTIC TECHNIQUES 3 credits
Prerequisite: 661. Cardiovascular therapeutic devices and procedures for correction of congenital defects, valve repair, and heart and lung assist devices.

653 TRANSPORT PHENOMENA IN BIOLOGY AND MEDICINE 3 credits
Basic definitions, cardiovascular mass and momentum transport, compartment modeling, mass transfer in physiological systems and artificial kidney and lung devices. Design optimization. Analysis of human thermal system.

654 REHABILITATION ENGINEERING 3 credits
Prerequisites: 3100:561 and 562 or equivalent. Rehabilitation engineering and technology, including prosthetics and orthotics. Comparisons and applications of traditional and emerging technologies.

660 BIOMATERIALS AND LABORATORY 3 credits
Corequisite: Biomedical Laboratory. Material uses in biological applications. Effect of physiologic environment and sterilization on materials. Controlled and uncontrolled degradation. Effect of materials on soft tissue, hard tissue and blood. Laboratory experiments using materials designed for biomedical use and demonstrations of biological/materials interactions.

661 ADVANCED BIOMATERIALS 3 credits
Prerequisites: 660 or permission of instructor. The objective of this course is to provide fundamental understanding of the host responses when exposed to various implantable devices and biomaterials. Methods for testing biocompatibility will be analyzed.

663 ARTIFICIAL ORGANS 3 credits
Prerequisites: graduate standing in the College of Engineering or permission of instructor. Study of the rationale for the engineering and clinical aspects required for the design and variety of artificial organs, with emphasis on the artificial heart and artificial kidney.

665 BIOMATERIALS AND TISSUE ENGINEERING METHODS 3 credits
Prerequisites: 660 or permission of instructor. Corequisite: 661 or permission of instructor. This course is designed to equip students with knowledge and skills to evaluate biomaterials and to design scaffold for tissue engineering. Analytical techniques include principles of microscopy, cell culture techniques, and biocompatibility testing.

670 MATHEMATICAL MODELING IN BIOLOGY AND MEDICINE 3 credits
Prerequisites: graduate standing in engineering, mathematics, or physics; or permission of instructor. Modeling of pharmacokinetic, cardiovascular, neural, and immune systems, and artificial organ interactions. Deterministic and stochastic approaches.

685 MEDICAL DEVICES AND ARTIFICIAL ORGANS 3 credits
Prerequisites: graduate standing in engineering, mathematics, or science; or permission of instructor. Design of medical devices and artificial organs, requirements, safety consideration, design constraints, optimization techniques, government regulations, and legal liability.

687 SPECIAL TOPICS IN BIOMEDICAL ENGINEERING 1-4 credits
May be repeated. Specialized areas of study as defined by the instructor.

698 MASTER’S RESEARCH 1-6 credits
Prerequisite: Permission of advisor. (May be repeated.) Research on a suitable topic in biomedical engineering culminating in a master’s thesis.

699 MASTER’S THESIS 1-6 credits
Prerequisite: permission of advisor. (May be repeated.) Supervised research in the specific area of biomedical engineering.

730 FABRICATION AND DESIGN OF MICROSENSORS 3 credits
Prerequisites: graduate standing in engineering, mathematics, or science; or permission of instructor. Design of medical devices and artificial organs, requirements, safety consideration, design constraints, optimization techniques, government regulations, and legal liability.

735 IMAGE DETECTORS AND SENSORS 3 credits
An introductory course designed to develop a deep knowledge of detector and sensing systems for Medical Imaging and Diagnostic Applications.

988 PRELIMINARY RESEARCH 1-5 credits
(May be repeated) Prerequisite: Approval of the dissertation director. Preliminary investigations for students requiring a dissertation proposal to the Interdisciplinary Doctoral Committee.

999 DOCTORAL DISSERTATION 1-5 credits
Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. (May be repeated) Original research by the doctoral student.

Graduate Courses

5100: EDUCATIONAL FOUNDATIONS AND LEADERSHIP

520 INTRODUCTION TO INSTRUCTIONAL COMPUTING 3 credits
Prepares students for the use of instructional computing in educational and business settings. Segments of the course are offered in an online format.

590, 12 WORKSHOP 1-3 credits
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units. Delivered in face-to-face web-enhanced format and fully online format.

600 PHILOSOPHIES OF EDUCATION 3 credits
Teaches students about the philosophical problems underlying broad educational questions that confront society. Intended to provide a foundation for understanding of questions of modern society and education.
602 COMPARATIVE AND INTERNATIONAL EDUCATION 3 credits
Comparative study of selected national school systems with reference to forces that shape their characteristics. Different theoretical approaches used in study of comparative education also investigated.

604 TOPICAL SEMINAR IN THE CULTURAL FOUNDATIONS OF EDUCATION 3 credits
Issues and subjects related to study of educational institutions, theories and/or ideas. Different topical seminars will be offered each section to section. Delivered in face-to-face/web-enhanced format and fully online format.

614 PLANNING FOR TECHNOLOGY 3 credits
Emphasis on the processes required for the use of the technology in the school. Includes plans for faculty support and alternative arrangements of computer set ups.

620 PSYCHOLOGY OF INSTRUCTION FOR TEACHING AND LEARNING 3 credits
Current theories and research in the areas of cognition and learning, development, and motivation that underlay approaches to teaching in any context.

624 SEMINAR: EDUCATIONAL PSYCHOLOGY 3 credits
In-depth study of areas of research in educational psychology. Offered in face-to-face and online formats.

629 FUNDAMENTAL IN E-LEARNING 1 credit
The nature, purpose, history and philosophy of e-learning will be explored through examination of associated trends and issues. Establishment of a learning community will be addressed in the face-to-face course component. E-learning course/credit overview will be discussed.

630 SEMINAR IN COMPUTER-BASED EDUCATION 3 credits
(May be repeated for a total of six credits. Advanced topics related to development, implementation, research and evaluation in C.B.E. Student involvement emphasized, required. Knowledge of programming language recommended).

631 INSTRUCTIONAL DESIGN 3 credits
The theory and practice of Instructional Design (ID) involves a systematic approach to the analysis, design, development, evaluation, and implementation of effective instruction.

632 WEB-BASED LEARNING SYSTEMS 3 credits
The purpose of this course is to help students become proficient in the design and development of web-based learning systems for training and education. Delivered in face-to-face/web-enhanced format and fully online format.

633 HYPERMEDIA 3 credits
The purpose of this course is to introduce students to a variety of Hypermedia tools (both web-based and CD-ROM). Students will also be introduced to a variety of authoring paradigms.

636 VISUAL LITERACY 3 credits
This course will combine a basic understanding of design principles and concepts with research findings on the use of visuals in the learning process.

637 EMERGING TECHNOLOGIES FOR INSTRUCTION 3 credits
This course examines emerging technologies (hardware, software, systems) that support teaching/learning, and methods for assessing the utility of any technology used for instructional purposes.

638 TOPICAL SEMINAR IN EDUCATIONAL TECHNOLOGY 3 credits
(Repeatable for up to nine credits.) Current trends and practices in educational technology: computer authoring software, tools and processes for instructional video production, presentation systems.

639 PHILOSOPHIES OF EDUCATIONAL TECHNOLOGY 3 credits
To introduce students to the many philosophies of educational technologies and the manner in which information technology especially influences our pedagogy.

640 INTEGRATING AND IMPLEMENTING TECHNOLOGY 3 credits
This course is designed to equip teachers with tools, resources, and strategies to support the integration and implementation of effective use of technology in the classroom.

641 STRATEGIES FOR ON-LINE LEARNING 3 credits
This course will prepare instructors to make the transition from teaching in a physical classroom to facilitating learning in an increasingly virtual classroom. Delivered in face-to-face/web-enhanced format and fully online format.

642 TOPICS IN RESEARCH METHODS AND TECHNIQUES 3 credits
This course surveys research methods and techniques commonly used in education and behavioral sciences. Prerequisites: preparation of research reports. Includes library, historical, survey and experimental research and data analysis. Delivered in face-to-face/web-enhanced format and fully online format.

643 SEMINAR IN MEASUREMENT AND EVALUATION 3 credits
(May be repeated for a total of six credits) Topics of current interest and need will be emphasized. The student will develop extended competence with contemporary measurement and evaluation techniques.

644 MULTICULTURAL COUNSELING 3 credits
Prerequisites: 5600:643 or permission of instructor. An examination of multicultural counseling theory and research necessary to work with culturally diverse people.

645 INDIVIDUAL AND FAMILY DEVELOPMENT ACROSS THE LIFESPAN 3 credits
An exploration of individual and family development. Emphasis will be placed on understanding the relationship between the individual and his/her family.

655 FIELD EXPERIENCE: MASTER'S 3 credits
Prerequisites: permission of department chair and instructor. Area determined in accordance with student’s program and professional goals.

656 CRITICAL THINKING IN EDUCATION 3 credits
Prerequisite: permission of advisor. Prepare and test a technology learning package that includes any combination of text, graphics, sound, color, motion, and the provision for interaction by the target students.

657 INDEPENDENT STUDY 3 credits
(May be repeated for a total of six credits) Prerequisites: permission of department chair and instructor. Specific area of study determined in accordance with student’s program and professional goals.

658 MASTER'S PROBLEM 3 credits
Prerequisites: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with problems in educational foundations.

659 MASTER'S THESIS 4 credits
Prerequisites: permission of department chair and instructor. In-depth study of research problem within humanistic and behavior foundation.

701 HISTORY OF EDUCATION IN AMERICAN SOCIETY 3 credits
Historical development of education in American social order, with special emphasis on social, political and economic settings.

702 SEMINAR: HISTORY AND PHILOSOPHY OF HIGHER EDUCATION 3 credits
Prerequisite: 600 or equivalent. History and philosophy related to genesis and development of higher education in the Western world, with special emphasis given to higher education’s development in United States. Delivered in face-to-face/web-enhanced format and fully online format.

703 SEMINAR: SOCIO-PHILOSOPHICAL FOUNDATIONS OF EDUCATION 3 credits
(May be repeated for a total of six credits) Prerequisites: Admission to a College of Education doctoral program or permission. Emphasis on understanding the philosophy of education, major philosophers, and their influence on the development of educational thought. Focus on understanding the role of higher education in the socio-cultural context.

710 ADULT LEARNING, DEVELOPMENT, AND MOTIVATION 3 credits
Prerequisites: Admission to a College of Education doctoral program or permission. Emphasis on emerging themes of intelligence; theories of adult learning; stage theories of adult cognitive, conceptual and moral development; life cycle development; adult-likes transitions.

730 LEARNING PROCESSES 3 credits
Prerequisites: Admission to a College of Education doctoral program or permission. Study of principles underlying classroom learning processes with particular emphasis on teaching as means of modifying pupil behavior; cognitive, motor, social and affective.

731 TEACHER BEHAVIOR AND INSTRUCTION 3 credits
Prerequisite: 5600:200. Intensive survey of theoretical and empirical literature involving teacher and student behavior. Instruction and research topics.

736 RESEARCH DESIGN 3 credits
Prerequisites: Admission to a College of Education doctoral program or permission. Topics include problem statement, research questions, literature review, choosing a sample, selecting an appropriate research design and data collection method, and ethical and legal issues.

741 DATA COLLECTION METHODS 3 credits
Prerequisites: 740 and admission to a College of Education doctoral program or permission. Emphasis on selecting, developing, administering and administering common data collection methods in education and social science research including standardized tests, inventories, questionnaires, focus groups, and content analysis.

742 STATISTICS IN EDUCATION 3 credits
Prerequisites: Admission to a College of Education doctoral program or permission. Statistical methods and techniques used in educational measurement and in educational research. Emphasis on hypothesis testing.

743 ADVANCED EDUCATIONAL STATISTICS 3 credits
Prerequisite: 741 and admission to a College of Education doctoral program or permission. Emphasis on interpreting advanced statistics in education and the social sciences.

744 QUALITATIVE METHODS I 3 credits
Provides an overview of theory about and hands-on experience with methods of qualitative research. Techniques of participant-observation, interviewing, and document collection will be covered.

745 QUALITATIVE METHODS II 3 credits
Prerequisites: 741, 744. Provides more advanced experience with theory and methods of qualitative research. Data collection and analysis will focus on students’ research interests and possible dissertation topics.

749 RESEARCH PROJECT IN SPECIAL AREAS 3 credits
Prerequisite: permission of department chair and instructor. Critical and in-depth study of specific problem in educational foundations.

801 RESEARCH SEMINAR 3 credits
Prerequisites: Admission to a College of Education doctoral program or permission. Intensive study of research methods applicable to education. Emphasis on developing a dissertation proposal.

897 INDEPENDENT STUDY 1-4 credits
(May be repeated for a total of eight credits.) Prerequisites: permission of department chair and instructor. Specific area of inquiry within humanistic and behavioral foundations of education determined in advance by student and faculty advisor.

GENERAL ADMINISTRATION 5170:

590 WORKSHOP 1-3 credits
Individual work under staff guidance on curriculums problems, utilization of community resources, planning of curricula units. Delivered in face-to-face/web-enhanced format and fully online format.

591,3 WORKSHOP 1-3 credits
Individual work under staff guidance on curriculums problems, utilization of community resources, planning of curricula units. Delivered in face-to-face/web-enhanced format and fully online format.

601 ORGANIZATIONAL LEADERSHIP 3 credits
Prerequisite: 5100:640. A perspective of educational leadership and the context in which it operates, with emphasis on the processes, tasks, roles and relationships involved. Field based research required.

602 MANAGEMENT OF PHYSICAL RESOURCES 3 credits
A comprehensive view of the principles, practices, and new dimensions involved in the planning and management of educational facilities. Emphasis on physical plant and building studies.

603 MANAGEMENT OF HUMAN RESOURCES 3 credits
An orientation to the major dimensions of the personnel function.

604 SCHOOL COMMUNITY RELATIONSHIP 3 credits
Prerequisites: 501, 510, and 5100:640. An analysis of the principles, practices, and materials that facilitate the interaction between the school’s internal and external publics. Field based research required.

606 EVALUATION IN EDUCATIONAL ORGANIZATIONS 3 credits
Prerequisites: 601 and 5100:640. An examination of the general concepts, models, practical applications and considerations involved in the evaluation of educational organizations.

607 SCHOOL LAW 3 credits
Prerequisites: 501, 5010, and 5100:640. An examination of the legal principles underlying education in the United States as reflected in statutory provisions, court decisions and administrative orders. Field based research required. Course also available fully online.

608 SCHOOL FINANCE AND ECONOMICS 3 credits
A study of financial operations of school systems, including taxes, other sources of revenue, expenditures, budgeting and the effects of economic factors.

609 PRINCIPLES OF CURRICULUM DEVELOPMENT 3 credits
Prerequisites: 601 and 5100:640. This course is intended to help the student develop the performance competencies necessary to engage in curriculum decision making.
519 ADMINISTRATION IN HIGHER EDUCATION

519 ADMINISTRATION IN HIGHER EDUCATION: 3 credits

In-depth study of administrative roles, functions, knowledge and skills requirements, and administrative behavior. Trends in administrative theory and application also explored. Delivered in face-to-face web enhanced format and fully online format.

521 LAW AND HIGHER EDUCATION

3 credits

Legal aspects of higher education, sources of law and authority presented; impact on, interaction with, and implications of higher education discussed. Delivered in face-to-face web enhanced format and fully online format.

525 TOPICAL SEMINAR: HIGHER EDUCATION

3 credits

(May be repeated.) Topical study in a variety of areas related to public and/or private higher education institutions, organizations. May. Maximum of six credits applied to degree. Delivered in face-to-face web enhanced format and fully online format.

526 STUDENT SERVICES AND HIGHER EDUCATION

3 credits

Examination of issues related to the education and evaluation of student services in higher education. Delivered in face-to-face web enhanced format and fully online format.

527 THE AMERICAN COLLEGE STUDENT

3 credits

Introduction to the sociopolitical literature concerning the impact of college on students and student development theory. Delivered in face-to-face web enhanced format and fully online format.

530 HIGHER EDUCATION CURRICULUM AND PROGRAM PLANNING

3 credits

Study of curriculum planning at the college and university level, factors influencing curriculum design, theories and practices of curricular change and innovation are also explored. Delivered in face-to-face web enhanced format and fully online format.

590 WORKSHOP

1-3 credits

(May be repeated for a total of six credits.) Emphasizing the development and demonstration of leader behavior effective to the college or university setting. Delivered in face-to-face web-enhanced format and fully online format.

600 ADVANCED ADMINISTRATIVE COLLOQUIUM IN HIGHER EDUCATION

3 credits

Prerequisite: permission of advisor and supervisor of the independent study. Area of study chosen by the student and his/her advisor. (May be repeated for a total of six credits.)

695,6 PRINCIPAL INTERNSHIP

3 credits each

Prerequisite: permission of advisor and supervisor of the independent study. Area of study chosen by the student and his/her advisor. (May be repeated for a total of six credits.)

704 ADVANCED ORGANIZATIONAL LEADERSHIP

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. Study of organizations and strengths and weaknesses of common methods of administering them. Practical means by which overcoming bureaucratic weaknesses of bureaucracies are offset or lessened by educational institutions.

705 DECISION MAKING IN EDUCATIONAL ADMINISTRATION

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. Decision making is portrayed as a central function of the educational administrator with a united presentation of the theory, research and practice of decision making.

707 THE SUPERINTENDENCY

3 credits

An orientation to the superintendent’s role and an examination of the strategies for dealing with the major relational and functional aspects of the superintendent.

708 ECONOMICS IN EDUCATION

3 credits

Prerequisites: Admission to a College of Education doctoral program or permission. Issues relating to the changing marketplace of public, private schooling and higher education institutions as they relate to an urban environment.

709 ADVANCED PRINCIPLES OF CURRICULUM DEVELOPMENT

3 credits

A comprehensive study of curriculum development with an emphasis on the performance competencies needed to engage in curriculum planning and decision making.

710 ADVANCED SCHOOL LAW

3 credits

Prerequisites: Admission to a College of Education doctoral program or permission. An in-depth study of the law as it pertains to the function and role of the administrator as instructional leader; disciplinarian; building, facilities, and auxiliary services manager.

711 ADVANCED EVALUATION OF EDUCATIONAL ORGANIZATIONS

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. An evaluation course to help educational leaders plan and assess educational priorities and outcomes.

712 TOPICAL SEMINAR

1-3 credits

(May be repeated with a change of topic for a total of six credits.) Prerequisite: Admission to a College of Education doctoral program or permission. An intensive examination of a particular area of Educational Leadership.

713 RESIDENCY SEMINAR

3 credits

Prerequisites: Admission to a College of Education doctoral program or permission. Focus on recent research in administration and educational administration theory.

714 PUBLIC AND MEDIA RELATIONS IN EDUCATIONAL ORGANIZATIONS

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. A course in educational public relations intended to help educational leaders facilitate the development of a climate for effective supervision.

716 THEORIES OF EDUCATIONAL SUPERVISION

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. An intensive examination of a particular area of Educational Leadership.

717 SEMINAR: URBAN EDUCATIONAL ISSUES

3 credits

Prerequisite: Admission to a College of Education doctoral program or permission. A study of the linkages between educational organizations and their social contexts, particularly as they relate to educational change. Research project required.

718 POLICIES OF EDUCATION

3 credits

Prerequisite: Admission to College of Education doctoral program or permission. Emphasis given to recent efforts to bring about reform at all levels of the educational enterprise and to conceptual and research findings.

719,6 INTERNSHIP IN EDUCATIONAL ADMINISTRATION

15 credits

Prerequisite: Admission to College of Education doctoral program or permission. Students are required to successfully compete a two-semester internship in a school district chosen by the student and his/her advisor.

719 INTERNSHIP IN HIGHER EDUCATION

16 credits

Candidates for the doctoral degree in educational administration must prepare and complete a research proposal that includes questions research, a literature review, and a research design. They must collect, analyze, and interpret data.

897 INDEPENDENT STUDY

1-3 credits

Prerequisites: permission of advisor. In-depth study of a research problem in education. Area of study chosen by the student and his/her advisor.

899 DOCTORAL DISSERTATION

1-20 credits

Prerequisite: permission of advisor. Specific research problem that requires student to apply research skills and techniques to the problem being studied.
50.12 WORKSHOP  1-3 credits each
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units. Delivered in face-to-face web-enhanced format and fully online format.

594 EDUCATIONAL INSTITUTES  14 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

600 THE TWO-YEAR COLLEGE  2 credits
Introduces students to the nature, purpose, and philosophy of the two-year college. Includes an examination of two-year college relationships, professional schools, programs in the postsecondary level. Delivered in face-to-face web-enhanced format and fully online format.

605 ADVANCED SYSTEM DESIGN: NEEDS ASSESSMENT AND EVALUATION  3 credits
An examination of the instructional design in workforce education and training and supporting research in effective performance-based program needs assessment, and evaluation processes delivered in face-to-face web-enhanced format and fully online format.

620 POSTSECONDARY TEACHER LEADERSHIP  3 credits
An examination of the role of supervisor of postsecondary instruction, facilitation and evaluation of instructional activities, professional development, as well as related leadership and management issues. Delivered in face-to-face web-enhanced format and fully online format.

660 POSTSECONDARY DISTANCE LEARNING  3 credits
Introduces students to the principles of distance learning: examination of current scope, theory, history, institutions, and programs of distance learning. Delivered in face-to-face web-enhanced format and fully online format. Delivered in face-to-face web-enhanced format and fully online format.

675 ADVANCED INSTRUCTIONAL APPLICATIONS SEMINAR  3 credits
Prerequisites: 500, 520, 530, and 535. Provides an environment for students to apply learned teaching skills, evaluate their teaching strategies, and fine-tune their skills before independently teaching in the field. Delivered in face-to-face web-enhanced format and fully online format.

690 INTRERNSHIP IN POSTSECONDARY EDUCATION  3 credits
Prerequisites: 500, 520, 530, and 535. Teaching or curriculum development under supervision from the University and the learning organization. Includes a seminar and portfolio development. Delivered in face-to-face web-enhanced format and fully online format.

FIELD EXPERIENCE: MASTER'S  1-6 credits (30-180 field hours)
On-the-job experience related to student's program of studies. Credit/noncredit.

697 INDEPENDENT STUDY  1-6 credits (May be repeated for a total of six credits.) Area of study determined by student's need.

698 MASTER'S PROJECT  3 credits (May be repeated for a total of six credits.) In-depth study of an instructional or curricular problem in workforce education or training. Student must be able to demonstrate critical, analytical, and problem-solving skills.

699 MASTER'S THESIS  3 credits (May be repeated for a total of six credits.) Opportunity to conduct research on a problem in workforce education or training. Student must be able to demonstrate needed analytical, evaluation, and basic research skills. Credit/noncredit.

CUMULATIVE AND INSTRUCTIONAL STUDIES  5500:

520 ADVANCED INSTRUCTIONAL TECHNIQUES  3 credits
Methods of teaching a particular area of the middle and secondary school curriculum for students in the Master's with License program.

522 CONTENT AREA LITERACY  3 credits
Examines instructional strategies for constructing meaning in content subjects (e.g., science, social studies, mathematics, graphic design, fine arts, and fine-tune skills before independently teaching in the field. Delivered in face-to-face web-enhanced format and fully online format.

524 TEACHING READING TO MULTICULTURALLY DIVERSE LEARNERS  3 credits
Knowledge, skills and attitudes to employ effective methods of teaching reading to diverse learners. May be taken for credit or audit. Prerequisite: Admission to Teacher Education program. Organizing instruction, use of oral language on society.

525 PRINCIPLES OF MULTILINGUAL/MULTICULTURAL EDUCATION  3 credits
An introduction to the theoretical, cultural, sociolinguistic bases of bilingual/multicultural education. Legislation, court decisions, program implementation included.

541 TEACHING LANGUAGE TO SECOND LANGUAGE LEARNERS  3 credits (4 credits 12 field hours)
Course applies methodologies for teaching reading, language arts in the bilingual/multicultural classroom. The bilingual student's native language and culture are stressed.

542 TEACHING MATHEMATICS, SOCIAL STUDIES AND SCIENCE TO BILINGUAL STUDENTS  3 credits
Prerequisites: elementary education majors, 5500/333, 336, 338, secondary education majors, 5521, 5526, 5513. Specialized studies in the bilingual/multicultural classroom. Course applies methodologies for teaching mathematics, science, social studies in the bilingual multicultural classroom. The bilingual student's native language is stressed.

543 TECHNIQUES FOR TEACHING ENGLISH AS A SECOND LANGUAGE  3 credits (4 credits 10 field hours)
Course includes teaching English to students in the bilingual/multicultural classroom. The bilingual student's native language and culture are stressed.

550 NATURE, HISTORY, AND PHILOSOPHY OF SCIENCE  3 credits (May be repeated with a change of topic) Provides opportunities to examine the historical and philosophical perspectives of science in an online medium and the impact of science and technology on society.

555 LITERACY FOR MULTILINGUAL STUDENTS  3 credits
Prerequisite: Admission to Teacher Education program. Organizing instruction, use of oral language development protocols, strategies for word skill development, comprehension and assessment of the learner's reading behaviors.

575 INSTRUCTIONAL TECHNOLOGY APPLICATIONS  3 credits
Focus on developing learner competencies in the use of instructional technologies to enhance both the instructor's personal and professional productivity.

590,12 WORKSHOP  1-3 credits (May be repeated for a maximum of 6 credits.)
Workshop for educators to improve teaching skills in a specific area of the curriculum. (May be repeated for a maximum of 6 credits.)

594 EDUCATIONAL INSTITUTES  14 credits
Special courses designed for service upgrading programs. Frequently provided with the support of national foundations.

600 CONCEPTS OF CURRICULUM AND INSTRUCTION  3 credits (3 credits of field hours)
A study of the underlying research and theory of curriculum and instruction with special attention to educational decision in the metropolitan setting. (3 field hours)

605 SEMINAR IN TRENDS AND ISSUES IN CURRICULUM AND INSTRUCTION  3 credits
A study of recent research and theory in curriculum and instruction with special attention to implementation of educational ideas.

615 PHILOSOPHY AND ORGANIZATION OF MIDDLE SCHOOLS  3 credits
Philosophy, theory, research, and exemplary organizational, assessment, and evaluation components of middle-level education.

616 MIDDLE SCHOOL CURRICULUM AND INSTRUCTION  3 credits
Prerequisite: Admission to Teacher Education program. Organizing instruction, use of oral language, and fine-tune skills before independently teaching in the field. Delivered in face-to-face web-enhanced format and fully online format.

617 LICENSURE SEMINAR IN CURRICULAR AND INSTRUCTIONAL STUDIES  3 credits
This course should be taken at the beginning of the Master's with License program as an introduction to curriculum and the pragmatics of teaching.

619 INSTRUCTIONAL AND MANAGEMENT PRACTICES  3 credits
Prerequisite: permission of instructor. Focus on using teaching models and management strategies to become effective in-servicing teachers. Also included are educational issues that relate to effective management and instructional decisions.

621 ADVANCED INSTRUCTIONAL TECHNIQUES: MODERN LANGUAGES P 8  3 credits
Prerequisite: 517 or permission of instructor. Focus is on theories of language acquisition, models of instruction suited to teaching foreign languages and cultures in the elementary school (P-6), and strategies that promote appropriate levels of language competence and proficiency for young learners.

622 CHILDREN'S LITERATURE IN THE CURRICULUM  3 credits
Curation of literary genre with emphasis on methods and techniques for presenting literature to children in preschool, elementary, and middle grades.

625 CONTEMPORARY ISSUES IN LITERACY INSTRUCTION AND PHONICS  3 credits
Survey course explores current research in reading and writing as constructive processes of meaning-making.

627 SPECIAL TOPICS: CURRICULAR AND INSTRUCTIONAL STUDIES  3 credits
Prerequisite: permission of instructor. May be taken for credit with a change of topic for a maximum of 9 credits. Groups study of special topics of critical, contemporary concern in professional education.

628 LITERACY ASSESSMENT PRACTICUM  3 credits (25.5 field hours)
Laboratory experience within classroom, small groups and individuals. A student diagnoses, implements procedures, and follows prescribed reading improvement. (May be repeated for a maximum of 6 credits.)

629 READING PROGRAMS IN SECONDARY SCHOOLS  3 credits
For all subject teachers both with and without previous study in the teaching of reading. Materials, class organization and implementation for developing reading improvement programs, for all secondary school and college students.

630 ASSESSMENT OF READING DIFFICULTIES  3 credits
Prerequisite: 625. Examine factors and informal assessments and intervention strategies for children with reading difficulties.

631 ADVANCED BEHAVIORAL STRATEGIES FOR THE EDUCATOR  3 credits
This course provides the educator with an advanced examination of strategies designed to improve student behavior in the school setting.

635 SEMINAR IN TEACHING FOREIGN LANGUAGES  3 credits (May be repeated for a total of six credits.) Issues and subjects related to teaching in foreign language education and language learning theories. Different topics will be offered for section to section.

637 TOPICAL SEMINAR IN RESEARCH AND THEORY IN FOREIGN LANGUAGE EDUCATION  3 credits (May be repeated for a total of six credits.) Issues and subjects related to research in foreign language education and language learning theories. Different topics will be offered for section to section.

645 THEORY AND PRACTICE IN ELEMENTARY SCHOOL MATHEMATICS  3 credits
Focuses on the development of mathematics education, current trends in the teaching of elementary school mathematics, and future directions in mathematics education.

650 ELEMENTARY SCIENCE CURRICULUM AND INSTRUCTION  3 credits
A critical analysis of contemporary science curriculum and instructional methods for the young elementary student with particular attention to his/her development and national standards.

651 SECONDARY SCIENCE CURRICULUM AND INSTRUCTION  3 credits
A critical analysis of the theory and practice of curriculum and instructional methods in science for early adolescent and adolescent learners.

690 MASTER'S RESEARCH  3 credits
Prerequisite: 760. The implementation of a research design for an inquiry into a curricular and instructional problem within an educational setting.

692 FIELD EXPERIENCE: COLLOQUIUM  1 credit
Prerequisite: admission to student teaching. Corequisite: 694. Experiential learning in the 7-12 classroom to apply theory and research to practice.

693 FIELD EXPERIENCE: MASTER'S WITH LICENSURE  1-3 credits (May be repeated for a maximum of 6 credits.)
Prerequisite: admission to student teaching. Corequisite: 694. Planned teaching experience in schools selected and supervised by Office of Extended Educations Experiences.

694 FIELD EXPERIENCE: CLASSROOM INSTRUCTION  1-2 credits
Prerequisites: admission to student teaching. Corequisite: 695. Planned teaching experience in schools selected and supervised by Office of Extended Educations Experiences.

695 MASTER'S PROJECTS  1-6 credits
Indepth investigation of specific problem pertinent to student's area of concentration in education.

697 INDEPENDENT STUDY  1-3 credits
Selection of area of independent investigation as determined by advisor and related to student's academic needs.

699 MASTER'S THESIS  4-6 credits
Indepth study of research problem in education. Student must be able to demonstrate necessary competencies to deal with research problem in education.

700 CURRENT RESEARCH AND THEORY IN SCIENCE EDUCATION  3 credits
Intensive examination of contemporary theory and research literature in science teaching and learning for preschool through senior high school students.

ACTIONS RESEARCH  3 credits
Prerequisite: Admission to the program. Students develop skills needed to conduct Action Research studying their own instruction to identify means to improve the effectiveness of teaching and learning.

780 SEMINAR IN CURRICULAR AND INSTRUCTIONAL STUDIES  1-3 credits (May be repeated) Intensive examination of a particular area of curriculum and instruction.
800 PROFESSIONAL SEMINAR IN CURRICULAR AND INSTRUCTIONAL STUDIES 3 credits
Prerequisite: admission to either the Ph.D. in Elementary Education or the Ph.D. in Secondary Education program. Learners will develop individualized programs of study and plan their doctoral studies. An overview of process and procedures will be addressed.

820 ADVANCED STUDY AND RESEARCH IN READING INSTRUCTION 3 credits
Survey of research, comparison and evaluation of programs, design and development of projects leading through group or individual study.

890 DOCTORAL SEMINAR IN CURRICULAR AND INSTRUCTIONAL STUDIES 1-3 credits
Prerequisite: admission to the Ph.D. program in either Elementary Education or Secondary Education. An intensive examination of a particular area of teacher education. (May be repeated with change of topic and for a total of 9 credits.)

895 DOCTORAL FIELD EXPERIENCE 1-6 credits each (May be repeated for a total of 6 hours.) Intensive job-related experience pertinent to student's needs. Student must be able to demonstrate skills and leadership abilities in an on-the-job situation.

898 INDEPENDENT STUDY 1-6 credits (May be repeated for a total of 6 hours.) Area of study determined by student's needs.

899 DOCTORAL DISSERTATION 1-20 credits
Study and in-depth analysis of a research problem in curriculum and instruction.

PHYSICAL EDUCATION 5550:

500 MUSCULOSKELETAL ANATOMY I: UPPER EXTREMITY 3 credits
Designed to address the upper portions of the musculoskeletal system in comprehensive detail. Includes articulations, cytology, histology, neurological integration with lab and practical experiences.

501 MUSCULOSKELETAL ANATOMY II: LOWER EXTREMITY 3 credits
Designed to address the lower portions of the musculoskeletal system in comprehensive detail, includes articulations, cytology, histology, neurological integration with lab and practical experiences.

510 INTRODUCTION TO SPORT SOCIOLGY 3 credits
Provides orientation 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.

518 CARDIORESPIRATORY FUNCTION 3 credits
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.

522 SPORTS PLANNING/PROMOTION 3 credits
Analysis of marketing/promotion from a sport manager's perspective. Emphasis on marketing strategy, tactics, and development in sport delivery systems.

524 SPORT LEADERSHIP 3 credits
This course has been designed to introduce the students to current issues 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.

526 NUTRITION FOR SPORTS 3 credits
This course will provide an explanation of the consumption, absorption, and recommendation for specific nutrients related to the physically active individual.

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 alternative methods. Three hour lecture.

538 CARDIAC REHAB PRINCIPLES 3 credits
This course will teach students the core competencies for cardiac rehab professionals, based upon the American Association of Cardiovascular and Pulmonary Rehabilitation Specialists (AACVPR).

540 INJURY MANAGEMENT FOR TEACHERS AND COACHES 2 credits
This course challenges the graduate student to understand ways to provide and care for the safety of individuals they teach.

541 ADVANCED ATHLETIC INJURY MANAGEMENT UPPER EXTREMITY 4 credits
This course is designed to cover recognition, evaluation, and rehabilitation of upper extremity injuries as well as general medical pathologies of the upper extremity.

547 INSTRUCTIONAL TECHNIQUES FOR CHILDREN IN PHYSICAL EDUCATION 3 credits
Instructional strategies for elementary physical education. The course content is to improve the teaching skills of students who will be teaching physical education for children. It is required course for the physical education licensure.

553 PRINCIPLES OF COACHING 3 credits
Basics for becoming a successful coach. Discussion of principles applying to most sports, players, and coaches. Ten (10) clinical hours required.

562 LEGAL/ETHICAL ISSUES IN PHYSICAL AND LEISURE ACTIVITIES 2 credits
Legal and contemporary issues of greatest concern to those interested in physical and leisure activity: risk management, playground safety, blood-borne pathogens, ethics.

565 PSYCHOLOGY OF INJURY REHABILITATION 2 credits
Teaches injury management through group discussion, and affects of injury and rehabilitation. Specifically the stages of rehabilitation and techniques to aid in the rehabilitation process.

570 ORTHOPEDIC INJURY AND PATHOLOGY 3 credits
This course will discuss musculoskeletal pathology and surgical procedures associated with a physically active population.

591 WORKSHOP 1-3 credits
Provides intensive, and concentrated involvement with current curricular practices in areas related to physical education.

600 BIOMECHANICS APPLIED TO SPORT AND PHYSICAL ACTIVITY 4 credits
This course is designed for professionals in an integrated approach to qualitative diagnosis of motor skills for a variety of professional settings. Required clinical/field experiences.

601 SPORTS ADMINISTRATION AND SUPERVISION 3 credits
Organizational and administrative efficiency in implementing sports programs (event management, budgeting, public relations).Objective and effective procedures for evaluation/selection of personnel; periodic program reviews.

602 MOTOR BEHAVIOR APPLIED TO SPORTS 3 credits
Course focuses on physical education principles related to motor development and motor skill learning. Focus on effective practices for learning and advanced skills teaching for coaches.

603 TACTICS AND STRATEGIES IN THE SCIENCE OF COACHING 3 credits
Course focuses on coaching and teaching the skills, tactics, and strategies in individual and team sports.

604 CURRENT ISSUES IN PHYSICAL EDUCATION 3 credits
This course represents a planned experience in interpretation and articulation of information related to current aspects of physical activity.

605 PHYSIOLOGY OF MUSCULAR ACTIVITY AND EXERCISE 3 credits
Functions of body systems and physiological effects of exercise. Laboratory experiences, lectures, discussions.

606 STATISTICS: QUANTITATIVE AND QUALITATIVE METHODS 3 credits
Prerequisite: 300-500. Research methodology, statistics (application and interpretation), use of computers and appropriate software as they relate to various disciplines in the area of physical activity.

607 MOTIVATIONAL ASPECTS OF PHYSICAL ACTIVITY 3 credits
Analysis of factors influencing motivation of motor performance with emphasis on competitive, audience effects, aggression.

610 MASTERING TEACHING AND COACHING 3 credits
To learn about becoming master teachers and coaches, students will apply effective teaching skills, focus on context, and reflect on the teaching/coaching process. Additional 10 clinical/field hours required.

611 RESEARCH AND ANALYSIS OF EFFECTIVE TEACHING IN PHYSICAL EDUCATION 3 credits
For the new professional, this course concentrates on research and analysis of skills and professional competencies needed to become an effective teacher of physical education.

620 LABORATORY INSTRUMENTATION TECHNIQUES IN EXERCISE PHYSIOLOGY 3 credits
This is a course designed to provide hands-on laboratory experiences for students in the area of exercise science.

680 SPECIAL TOPICS IN HEALTH AND PHYSICAL EDUCATION 2-4 credits
May be repeated for a total of 8 credits. Permission in outdoor settings: permission of instructor. Group study of special topics in health and physical education and sports medicine.

695 FIELD EXPERIENCE: MASTER’S 1-6 credits
Prerequisite: permission of advisor. Participation in a work experience related to physical education. The experience may not be part of current position. Documentation of project required.

697 INDEPENDENT STUDY 1-3 credits
Prerequisite: permission of advisor. In-depth analysis of current practices or problems related to physical education. Documentation of the study required.

698 MASTER’S PROBLEM 2-4 credits
Prerequisite: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in physical education.

699 MASTER’S THESIS 4-6 credits
Prerequisite: permission of advisor. In-depth research investigation. Student must be able to demonstrate necessary competencies to deal with a research problem in physical education.

OUTDOOR EDUCATION 5560:

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.

552 RESOURCES AND RESOURCE MANAGEMENT FOR THE TEACHING OF OUTDOOR EDUCATION 4 credits
Resources and instructional techniques which are applicable to outdoor education; and in-depth study of methods and designs, unique to the process of teaching.

554 RESIDENT OUTDOOR EDUCATION 2 credits
Focus on helping physical education teachers use critical thinking to review programming/organizational techniques relevant to outdoor education programs. Extended experience in outdoor settings required.

560 OUTDOOR PURSUIT 4 credits
Investigation and participation in practical experiences in outdoor pursuits.

600 OUTDOOR EDUCATION: RURAL INFLUENCES 3 credits
Prerequisites: 550 or 552. Utilization of resources of rural area as a learning/teaching environment. Content and methodology appropriate for teaching school-age children in rural setting.

604 OUTDOOR EDUCATION: SPECIAL TOPICS 2-4 credits
May be repeated with change in topic Prerequisite: permission of instructor. Group and individual study of special topics of contemporary concern in outdoor education.

691 PRACTICUM IN OUTDOOR EDUCATION 2-4 credits (60-120 field hours)
Prerequisites: 550, 552 and permission of advisor. Supervised practical experience with existing outdoor education programs. In conjunction with practical work student meets regularly with advisor.

695 FIELD EXPERIENCE: MASTER’S 2-4 credits (60-180 field hours)
Prerequisite: permission of advisor. Participation and documentation of practical professional experience related to outdoor education.

697 INDEPENDENT STUDY 1-3 credits (70-90 field hours)
Prerequisite: permission of advisor. In-depth analysis of current practices or problems related to outdoor education. Documentation of study required.

698 MASTER’S PROBLEM 2-4 credits
Prerequisite: permission of advisor. Intensive research study related to a problem in outdoor education or related discipline.

699 MASTER’S THESIS 4-6 credits
An original composition demonstrating independent scholarship in a discipline related to outdoor education.

HEALTH EDUCATION 5570:

520 COMMUNITY HEALTH 2 credits
Study of current public health problems. Organization and administration of various agencies and their roles in the solution of community health problems.

521 COMPREHENSIVE SCHOOL HEALTH 4 credits
Prerequisite: admission to Graduate School. This course explains and presents comprehensive school health curricula for K-12. The three components of a comprehensive school health program are presented; instruction, services, and the environment.

523 METHODS AND MATERIALS OF HEALTH EDUCATION 3 credits
Prerequisite: permission of instructor. Planning, organization, use of instructional resources and delivery of health education content and teaching processes (pre K-12).

530 PRACTICUM IN HEALTH EDUCATION 2-6 credits
Prerequisite: permission of instructor. The practicum in Health Education is an on-site participation in a community health organization, agency, or resource.
COUNSELING 5600:

550 COUNSELING PROBLEMS RELATED TO LIFE-TREATING

ILLNESS AND DEATH 3 credits
Prerequisite: permission. Consideration of the global issues, current research, coping be-

havior, support systems and family and individual needs in regard to life-threatening situa-

tions.

590 WORKSHOP 3 credits
Special instruction designed as in-service and/or upgrading individuals on current issues and

principles in counseling.

600 SEMINAR IN COUNSELING 1 credit
Prerequisite: counseling majors must elect 600 prior to electing 651 and/or within the first 10

credits of this course. Structured group experience designed to help a student assess selec-

tion of counseling as a profession.

610 COUNSELING SKILLS FOR TEACHERS 3 credits
Prerequisite: 631 or 623 or permission. The study and practice of selected counseling tech-

niques can be applied by teachers in working with students, parents and colleagues.

620 ISSUES IN SEXUALITY FOR COUNSELORS 3 credits
A seminar covering, in addition to changing current topics, sexuality across the lifespan, di-

mension and sexual orientation, and assessment.

614 COUNSELING YOUTH AT RISK 3 credits
This course is designed to prepare counselors and other helping professionals to work with

children and adolescents in community and school settings.

622 INTRODUCTION TO PLAY THERAPY 3 credits
Prerequisites: enrolled in a master’s or doctoral program in counseling or related field, or spe-

cial nondegree students (i.e., professional counselors). This course is designed to give students

an introduction to play therapy from a child-centered perspective. Students will develop comp-

etencies in child-centered play therapy.

623 MARRIAGE AND FAMILY COUNSELING/THERAPY ETHICS

AND PROFESSIONAL IDENTITY 3 credits
This course is designed to help students learn about marriage and family counseling/therapy

as a discipline and develop an understanding of its corresponding ethical codes.

630 ELEMENTARY/SECONDARY SCHOOL COUNSELING 3 credits
Introductory class; examines elementary and secondary school counseling practices.

640 COMMUNITY COUNSELING 3 credits
Topics in community and college counseling services; their evaluation, philosophy, organi-

zation and administration.

644 COUNSELING ADOLESCENTS 3 credits
Prerequisites: Graduate student in counseling or related field. The examination of the cogni-

tive, emotional, and social developmental processes of the adolescent as these affect learning

performance in a diverse population will be addressed.

643 COUNSELING THEORY AND PHILOSOPHY 3 credits
Examination of major counseling theories including client-centered, behavioral and existen-

tial theories. Philosophical and theoretical dimensional stress.

650 TESTS AND APPRAISAL IN COUNSELING 4 credits
Prerequisites: 3750:300, 3750:340. Studies of the nature of tests and appraisal in counseling in-

cluding reliability, validity, test construction and selection, administration, scoring, and basic interpretation

of selected measures.

651 MULTICULTURAL COUNSELING 3 credits
Prerequisites: 643 or permission of instructor. An examination of multicultural coun-

seling theories and techniques necessary to work with culturally diverse people.

647 CAREER DEVELOPMENT AND COUNSELING ACROSS THE LIFE-SPAN 3 credits
Prerequisites: 643 or permission of instructor. An examination of counseling theories and tech-
niques that can be applied by teachers in working with students, parents and colleagues.

657 CONSULTANT: COUNSELING PRACTICE 3 credits
This course is designed to teach graduate-level students the intensive supervised clinical experience, which

will include live supervision and videotape review of therapy sessions.

660 INTERNSHIP 3 credits
Prerequisite: 675. Must be repeated for a minimum of 6 credit hours over two semesters.

May be repeated for a maximum of 12 credit hours. Paid or unpaid supervised clinical experi-

ence taken at least two consecutive semesters immediately following completion of 675.

665 INTRODUCTORY TO EXPERIENCE: MASTER’S 1-3 credits
Prerequisites: permission of advisor and department chair. Placement in selected setting for

purpose of acquiring experiences and/or demonstration skills related to student’s counseling pro-

gram.

667 INDEPENDENT STUDY 1-3 credits
(May be repeated for a total of ten credits) Prerequisites: permission of advisor and depart-

ment chair. Specific area of investigation determined in accordance with student needs.

702 ADVANCED COUNSELING PRACTICUM 4 credits
(May be repeated for a total of 12 credits) Prerequisites: 675, 720, 710. Supervised counseling

experience in selected settings.

7028 SUPERVISION IN COUNSELING PSYCHOLOGY I II 4 credits each
Prerequisites: doctoral residency or permission. Instruction and experience in supervising grad-

uate students in counseling.

709 INTRODUCTION TO COUNSELING PSYCHOLOGY 2 credits
Prerequisite: graduate standing in the Collaborative Program in Counseling Psychology. Intro-

duction to historical foundations of and recent developments in counseling psychology, with an emphasis on contemporary issues and research.

710 THEORIES OF COUNSELING AND PSYCHOTHERAPY 4 credits
Prerequisite: 770:630 or departmental permission. Major systems of individual psychothera-

py explored within a philosophy of science framework. Freudian, behavioral, Rogerian, cogni-

tive, and other theories included. Research, professional ethics, training and research.

711 VOCATIONAL BEHAVIOR 3 credits
Prerequisite: 770:630 or departmental permission. Theories and research on vocational behav-

ior and vocational counseling. Topics include major theories on vocational behavior, empirical research on these theories, applied work in vocational counseling and applied research.

712 PRINCIPLES AND PRACTICE OF INDIVIDUAL INTELLIGENCE TESTING 3 credits
Prerequisites: 630 or graduate standing in school psychology and instructor’s permission. His-

tory, concepts and methodology of intelligence testing, supervised practice in administration, scoring and interpretation of scores, development of intelligence tests for children and adults.

713 PROFESSIONAL, ETHICAL AND LEGAL ISSUES IN

COUNSELING PSYCHOLOGY 4 credits
Prerequisites: doctoral residency or permission. Examination of major issues in the field such as

the counselor as a professional and as a person, issues, problems and trends in counseling.

714 OBJECTIVE PERSONALITY EVALUATION 2 credits
Prerequisite: completion of 3750:420/520, and 3750:750 or 6000:640 or permission of

instructor. Study of the development, administration, and interpretation of objective instruments for personal assessment (MMPI, CPI, MBTI, BPI and selected additional inventories).

715 RESEARCH DESIGN IN COUNSELING I 3 credits
Prerequisite: doctoral residency or permission. Study of research designs, evaluation proce-

dures and review of current research.

716 RESEARCH DESIGN IN COUNSELING II 3 credits
Prerequisite: doctoral residency or permission. This course is designed for doctoral students

utilizing the qualitative approach for conducting research. Theory, methods, and design of qual-

itative research are reviewed.

717 ISSUES OF DIVERSITY IN COUNSELING PSYCHOLOGY 4 credits
Prerequisites: 3750:630; one semester of practicum work. Critical examination and application of

research and theory in counseling diverse populations, focusing on race/ethnicity, gender, sexual orientation, age, disability and spirituality.

718 HISTORY AND SYSTEMS IN PSYCHOLOGY 2 credits
Prerequisite: 3750:630. Philosophical and scientific antecedents of psychology and details of

the development of systematic viewpoints in the 19th and 20th centuries.

720 TOPICAL SEMINAR: COUNSELOR EDUCATION AND SUPERVISION 14 credits
Prerequisite: permission of instructor. A topical study with a variety of disciplinary input.

Students will be by department faculty and other professionals in counseling and related fields. A maximum of six credits may be applied to a degree.

722 INTRODUCTION TO PLAY THERAPY 3 credits
Prerequisite: enrolled in a master’s or doctoral program in counseling or related field, or spe-

cial nondegree students (i.e., professional counselor). This course is designed to give students

an introduction to play therapy from a child-centered perspective. Students will develop com-

petencies in child-centered play therapy.

724 ADDICTION COUNSELING I: THEORY AND ASSESSMENT 3 credits
This course is designed to teach graduate-level students about the history, foundations, theoretical models, assessment strategies, and diagnostic procedures associated with addictive disor-

ders.

725 ADDICTION COUNSELING II: TREATMENT PLANNING AND INTERVENTION STRATEGIES 3 credits
This course is designed to teach graduate-level students about the process of treatment planning and range of treatment interventions used with addictive disorders.
737 CLINICAL SUPERVISION I 4 credits
Prerequisite: Successful completion of advanced practicum. Instruction and experience supernumerary teaching students in counseling.

738 CLINICAL SUPERVISION II 4 credits
Prerequisite: Successful completion of advanced practicum and Supervision I. Instruction and experience supervising graduate students in counseling.

759abby CONSULTATION AND TREATMENT ISSUES IN MARRIAGE AND FAMILY THERAPY 3 credits
Prerequisite: 645. Provides advanced counseling skills with the knowledge and skills in advanced counseling methods, techniques and instruments relevant to the practice of marriage and family therapy.

756 OUTCOME RESEARCH IN MARRIAGE AND FAMILY THERAPY 3 credits
Prerequisites: 567, 500:640, 11. This course will provide an in-depth examination of marriage and family therapy outcome research.

760 COUNSELING CHILDREN 3 credits
Prerequisite: Graduate student in counseling or related field. This course is designed as an entry-level course for counselors, school counselors, school psychologists, or other professionals preparing to engage in therapeutic work with children. It is not a class in diagnosis of child disorders.

785 DOCTORAL INTERNSHIP 3 credits
(May be repeated for a total of 9 credits.) Prerequisite: passing grades on written and oral comprehensive examination. Supervision and experience in clinical settings, teaching, and supervision. A minimum of 600 clock hours must be completed in a minimum of two consecutive semesters immediately following passing of comprehensive examinations. Credit/noncredit.

796 COUNSELING PSYCHOLOGY PRACTICUM 4 credits
(May be repeated for a total of 12 credits) Advanced counseling psychology students will have supervised training with clients in a variety of settings and will focus on supervised development of specialized theoretical applications. Credit/noncredit.

797 INDEPENDENT READING AND/OR RESEARCH IN COUNSELING PSYCHOLOGY 1-15 credits
(May be repeated) Prerequisite: permission of instructor. Independent readings and/or research in the area of special topics in counseling psychology under the direction of a faculty member.

895 FIELD EXPERIENCE: DOCTORAL 16 credits
(May be repeated) Prerequisite: doctoral candidate status. Placement in selected setting for purpose of acquiring experiences and/or developing skills related to student’s doctoral program.

897 INDEPENDENT STUDY 4 credits
(May be repeated for a total of nine credits) Prerequisites: permission of advisor and department chair. Specific area of investigation determined in accordance with student needs.

899 DOCTORAL DISSERTATION 20 credits
Prerequisite: permission of major doctoral advisor and department chair. Study, design and analysis of counseling problem.

SPECIAL EDUCATION 5610:

540 INDIVIDUALS WITH EXCEPTIONALITIES: EDUCATIONAL AND OCCUPATIONAL ISSUES 3 credits
Prerequisite: Admission to College of Education Teacher Preparation Program or permission of instructor. A survey course covering the identification, development characteristics, and intervention strategies for exceptional children and youth across education and community settings (1 field hour).

544 DEVELOPMENTAL CHARACTERISTICS OF INTELLECTUALLY GIFTED INDIVIDUALS 3 credits
Prerequisite: 540. Survey of etiology, diagnosis, classification and developmental characteristics of intellectually gifted individuals.

547 INDIVIDUALS WITH MILD/MODERATE EDUCATIONAL NEEDS: CHARACTERISTICS AND IMPLICATIONS 4 credits
Survey of the etiology, identification, classification, developmental characteristics of and intervention strategies for individuals with mild/moderate educational needs.

548 INDIVIDUALS WITH MODERATE/INTENSIVE EDUCATIONAL NEEDS: CHARACTERISTICS AND IMPLICATIONS 4 credits
Prerequisite: 540. Survey of the etiology, identification, classification, and developmental characteristics of individuals with moderate/intensive educational needs.

550 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD 3 credits
Prerequisite: 540. Developmental patterns of young children with disabilities and developmentally exceptional appropriate practices with respect to programming and adaptations (1 field hour).

551 SPECIAL EDUCATION PROGRAMMING: MILD/MODERATE I 3 credits
Prerequisites: 540 or 547. Educational implications regarding assessment, teaching strategies, and adaptive materials, necessary to meet the needs of school age students with mild/moderate educational needs (20 field hours).

552 SPECIAL EDUCATION PROGRAMMING: SECONDARY/TRANSITION 3 credits
Prerequisite: Diagnostically prescriptive service delivery systems designed to accommodate developmental patterns of secondary level students with exceptionalities (20 field hours).

553 SPECIAL EDUCATION PROGRAMMING: MODERATE/INTENSIVE I 4 credits
Developed of the programming strategies, interdisciplinarity, family involvement, IEP/IEP/IEP development, instructional practices based upon legal/ethical principles for individuals with moderate/intensive educational needs (20 field hours).

554 SPECIAL EDUCATION PROGRAMMING: MODERATE/INTENSIVE II 4 credits
Advanced program for providing educational planning and intervention for individuals with moderate/intensive educational needs. Focus is on developing a comprehensive education program which will facilitate optimum functioning and independence (20 field hours).

557 SPECIAL EDUCATION PROGRAMMING: MILD/MODERATE II 3 credits
Prerequisite: General educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs (20 field hours).

559 COLLABORATION AND CONSULTATION IN SCHOOLS AND COMMUNITY 3 credits
Prerequisites: 540 and 547, or permission of instructor. Provides professional education/intervention specialists with skills in collaboration and consultation for working with parents, teachers, and students with disabilities within school/community settings.

560 FAMILY DYNAMICS AND COMMUNICATION IN THE EDUCATIONAL PROCESS 3 credits
Prerequisite: Successful completion of core modules and fieldwork. A study of family theory and structure along with beginning techniques for working with families of students with exceptionalities, in educational and community settings.

561 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD MODERATE/INTENSIVE 3 credits
Prerequisites: 540 and 547. Developmental patterns of young children with moderate/intensive needs (ages 3-8) and developmentally appropriate practices in programming and adaptations (20 field hours).

563 ASSESSMENT IN SPECIAL EDUCATION 3 credits
Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.

564 ASSESSMENT AND EVALUATION IN EARLY CHILDHOOD SPECIAL EDUCATION 3 credits
Prerequisites: 440/540 and 448/548. The assessment of children (three to eight) and their environments who are at risk for disabilities or currently in special education.

567 MANAGEMENT STRATEGIES IN SPECIAL EDUCATION 3 credits
Content emphasizing the development of application strategies with a variety of behavior management models for developing effective behaviors with exceptional individuals.

568 ADVANCED BEHAVIOR MANAGEMENT 3 credits
Prerequisites: 567 Advanced techniques for remediating problematic behavior, establishing effective repertoires and evaluating research relevant to classroom management will be covered. Behavioral theory will be stressed.

570 CLINICAL PRACTICUM IN SPECIAL EDUCATION 3 credits
Prerequisite: Successful completion of 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.

579 SEMINAR: INVITATIONAL STUDIES IN SPECIAL EDUCATION 1-2 credits
(May be repeated) Prerequisite: Successful completion of core module in special education with a varied array of disciplinary input. Staffing will be invited members of allied and contributing professions active in management of exceptional children.

601 SEMINAR SPECIAL EDUCATION CURRICULUM PLANNING 3 credits
Prerequisite: Certification in an area of special education. Study of curriculum planning practices in special education classes and services. Appropriate curriculum objectives for selected areas of instruction as well as effective organizational programs examined.

602 SUPERVISION OF INSTRUCTION 3 credits
Study of administration supervisory practices unique to special education classes and services.

604 COLLABORATION AND CONSULTATION SKILLS FOR SPECIAL EDUCATORS 3 credits
Advanced overview of the roles and responsibilities of parents, professionals and individuals with disabilities in the development and implementation of educational interventions and related issues.

605 INCLUSION MODELS AND STRATEGIES 3 credits (3 field hours)
Prerequisite: graduate level. Inclusionary models, inclusionary mandates, models, strategies, curriculum modifications, methods/materials adaptations which support the inclusion of students with disabilities. (May be repeated for a total of 3 credits).

606 RESEARCH APPLICATIONS IN SPECIAL EDUCATION 3 credits
Prerequisite: admission to graduate program in special education and 500:640. An examination of qualitative and quantitative research methodology and its application to the field of special education. Applied research is an essential component of the course.

607 CHARACTERISTICS AND NEEDS OF INDIVIDUALS DEMONSTRATING PERVERSIVE DEVELOPMENTAL DISORDERS 3 credits
This course provides a survey of the etiology, diagnoses, characteristics, and needs of individuals with pervasive developmental disorders.

609 PROGRAMMING ISSUES FOR INDIVIDUALS WITH PERVERSIVE DEVELOPMENTAL DISORDERS 2 credits
This course provides an overview of current issues in the area of special education with an emphasis on the role of the special educator.

610 CHARACTERISTICS AND NEEDS OF INDIVIDUALS WITH BEHAVIORAL AND EMOTIONAL DISORDERS 3 credits
A survey of the etiology, diagnoses, classification, and developmental characteristics of students with behavioral and emotional disorders. (May be repeated for a total of 9 credits).

611 SEMINAR: LEGAL ISSUES IN SPECIAL EDUCATION 3 credits
Prerequisite: permission of advisor or department chair. Analysis of legal/ethical issues in special education. (May be repeated for a total of eight credits).

612 SEMINAR: SOCIAL/ETHICAL ISSUES IN SPECIAL EDUCATION 3 credits
The course is designed for graduate students in special education designed to study, examine and reflect upon the social and ethical aspects of historical and current trends, issues and practices.

627 SPECIAL TOPICS IN SPECIAL EDUCATION 1-4 credits
Prerequisite: Permission of advisor or department chair. In-depth examination of current critical research on issues in Special Education.

629 STUDENT TEACHING: SPECIAL EDUCATION 11 credits
Prerequisite: Permission of advisor or department chair. Corequisites: 570. Directed teaching under supervision of a special education teacher and a university supervisor.

690 SCHOOLBASED EXTERNSHIP SEMINAR 1 credit
Takes place concurrently with School-based Externship in Audiology or Speech-Language Pathology. Review and discussion of issues raised during externship experience.

692 SCHOOLBASED EXTERNSHIP: SCHOOL AUDIOLOGY 6 credits
Directed professional experience under supervision of a licensed and certified audiologist and a University supervisor.

693 SCHOOLBASED EXTERNSHIP: SPEECH LANGUAGE PATHOLOGY 6 credits
Directed professional experience under supervision of a licensed and certified speech-language pathologist and a University supervisor.

694 RESEARCH PROJECT IN SPECIAL AREA (SCHOLARLY PAPER) 3 credits
An in-depth study of an identified topic in a scholarly paper.

695 FIELD EXPERIENCE: MASTER’S 1-4 credits
(May be repeated for a total of eight credits) Designed to provide on-the-job experience in a special education program on an individual basis.

697 INDEPENDENT STUDY 1-3 credits
May be repeated for a total of nine credits. Specific area of investigation determined in accordance with student’s needs.

698 MASTER’S PROBLEM 2-4 credits
In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in special education.

699 MASTER’S THESIS 4-6 credits
Thorough study and analysis in depth of an educational problem, field projects in special areas; synthesis of existing knowledge in relationship to a specific topic.
**SCHOOL PSYCHOLOGY  5620:**

- **609 SEMINAR: ROLE AND FUNCTION OF THE SCHOOL PSYCHOLOGIST  3 credits**
  - Prerequisite: permission of instructor. Seminar on role and function of school psychologist. The course, tailored to meet individual needs of trainees, is a consideration of professional standards of school psychology practice.

- **610 COGNITIVE FUNCTION MODELS FOR PRESCRIPTIVE EDUCATIONAL PLANNING  3 credits**
  - Prerequisite: permission of instructor. Consideration of cognitive development theories and their application for educational programming.

- **622 BEHAVIORAL ASSESSMENT  3 credits**
  - Prerequisite: permission of instructor. Overview of behavioral theory and its application focusing upon the role of the school psychologist as an agent of behavior change.

- **623 CONSULTATION STRATEGIES IN SCHOOL PSYCHOLOGY  3 credits**
  - Prerequisite: permission of instructor. A consideration of consultant roles in the practice of school psychology as related to consultant process and with school and agency personnel, parents and children.

- **611 EDUCATIONAL DIAGNOSIS FOR SCHOOL PSYCHOLOGISTS  4 credits**
  - Prerequisite: permission of instructor. Clinical study and application of current assessment approaches applicable in assessment of children's learning problems.

- **612 PRACTICUM IN SCHOOL PSYCHOLOGY  4 credits**
  - Prerequisite: permission of instructor. Laboratory experience in psycho-educational study of individual children who have learning problems in school. (Repeat requirement.

- **631, 3 INTERNSHIP IN SCHOOL PSYCHOLOGY FALL/SPRING  3 credits each**
  - Prerequisite: permission of instructor. Full-time paid work assignment under supervision of a qualified school psychologist for an academic year structured according to provisions of State Department of Education. Additional readings required.

- **640 FIELD SEMINAR I: CURRENT PROFESSIONAL TOPICS/ISSUES IN SCHOOL PSYCHOLOGY  3 credits**
  - Prerequisite: permission of instructor. Consideration of pertinent topics/issues in practice of school psychology with emphasis upon field-based concerns of a practicing school psychologist.

- **641 FIELD SEMINAR II: LOW INCIDENCE/RELATED INQUIRIES  3 credits**
  - Prerequisite: permission of instructor. Consideration of pertinent topics/issues in practice of school psychology with emphasis on field-based concerns of a practicing school psychologist.

- **694 RESEARCH PROJECT IN SPECIAL AREAS  1-3 credits**
  - Prerequisite: permission of advisor. Study, analysis and reporting of school psychology problem.

- **695 FIELD EXPERIENCE: MASTER’S  3-12 credits**
  - Prerequisite: permission of instructor. Practical school psychology-related experience in school setting.

- **697 INDEPENDENT STUDY  1-4 credits**
  - Prerequisite: permission of advisor and supervisor of the independent study. Documentation of specific area of investigation. Nature of the inquiry to be determined by student-supervisor agreement.

- **698 MASTER’S PROBLEM  2-4 credits**
  - Prerequisite: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in school psychology.

- **699 MASTER’S THESIS  4-6 credits**
  - Prerequisite: permission of instructor. Thorough study, analysis and reporting in depth of an educational problem, field projects in special areas, synthesis of existing knowledge in relationship to specific topic.

**SPECIAL EDUCATIONAL PROGRAMS  5800:**

- **590 WORKSHOP IN ECONOMIC EDUCATION OR IN SOCIAL STUDIES  1-3 credits**
  - Individual work under staff guidance on curricular problems; utilization of community resources; planning of curricular units.

**Business Administration**

**ACCOUNTANCY  6200:**

- **520 ADVANCED ACCOUNTING  3 credits**
  - Prerequisite: 622 or equivalent. Examination of accounting theory emphasizing accounting for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements.

- **530 TAXATION I  3 credits**
  - Prerequisite: 621 or equivalent. 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.

- **531 TAXATION II  3 credits**
  - Prerequisite: 530 or permission. Federal income tax law related to partnerships, corporations, trusts and estates, also includes an overview of federal estate and gift tax law.

- **540 AUDITING  3 credits**
  - Prerequisite: 621 or equivalent. Examines auditing standards and procedures used by independent auditors in determining whether a firm has fairly presented its financial position.

- **541 INFORMATION SYSTEMS AUDIT AND CONTROL  3 credits**
  - Prerequisite: 540 or permission of instructor. Learn the fundamental concepts and practices of information systems audit and control. Use control objectives and standards by information systems control, audit and security organizations.

- **554 INFORMATION SYSTEMS SECURITY  3 credits**
  - Prerequisite: 603 or equivalent. Focuses on information systems risk and security in distributed business environments; develops policies, practices, and systems for security of computers and data in business.

- **570 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING  3 credits**
  - Prerequisite: 621 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.

- **561 FINANCIAL ACCOUNTING  3 credits**
  - Introductory course for student with no accounting background. Examines accounting principles as applied to financial problems of firm.

- **563 ACCOUNTING DECISION SUPPORT SYSTEMS  3 credits**
  - Introduction to basic financial statement information; coverage of databases, electronic spreadsheets, and other information technology tools that support accounting and assurance services.

- **566 APPLICATIONS DEVELOPMENT FOR FINANCIAL SYSTEMS  3 credits**
  - Prerequisites: 650.601 and 650.602. Analysis, design and development of financial and control applications, using object oriented languages, integrated development environments (IDE), and object analysis and design methodology.

- **567 FINANCIAL DATA COMMUNICATIONS AND ENTERPRISE INTEGRATION  3 credits**
  - Prerequisites: 6200.601 and 6500.601. In-depth study of contemporary methodologies, technologies, and standards used to integrate business processes and systems, including XML and XBRL.

- **568 PROCESS ANALYSIS AND COST MANAGEMENT  3 credits**
  - Prerequisites: 6200.603 or 6200.621, 6500.601, or permission of instructor. Investigates management accounting and control systems and the use of accounting information in cost management, risk assessment, planning, decision making, and performance evaluation.

- **569 ERP AND FINANCIAL DATA COMMUNICATIONS  3 credits**
  - Prerequisite: 603 or equivalent. Risk assessment and mitigation of ERP systems and integration of contemporary data communication technologies such as XML and XBRL into financial applications.

- **571 CORPORATE ACCOUNTING AND FINANCIAL REPORTING I  3 credits**
  - Prerequisite: 602 or graduate accounting status. An examination of generally accepted accounting principles in theory and application, as well as financial statement preparation. Not open to students who have taken Intermediate Accounting I.

- **572 CORPORATE ACCOUNTING AND FINANCIAL REPORTING II  3 credits**
  - Prerequisite: Permission of instructor. A continuation of 6200.621 which examines generally accepted accounting principles in theory and practice, as well as financial statement preparation. Not open to students who have taken Intermediate Accounting II.

- **573 SURVEY OF FEDERAL TAXATION  3 credits**
  - Survey of federal taxation of entities, tax research, and individual taxation. Tax cases, projects, and problems will be assigned.

- **577 TAX RESEARCH  3 credits**
  - Prerequisites: Admission to Master of Tax program or special admission. Designed to develop basic research competence involving federal income, estate, and gift tax laws.

- **581 CORPORATE TAXATION I  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Detailed examination of tax problems of corporations and their shareholders. Formation, distribution, redemption, and liquidation.

- **582 TAXATION OF TRANSACTIONS IN PROPERTY  3 credits**
  - Prerequisites: Admission to Master of Tax program or special permission. Explores the federal tax implications of gains and losses derived from sales, exchanges and other dispositions of property.

- **583 ESTATE AND GIFT TAXATION  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Analyzes provisions of federal estate and gift tax laws and tax consequences of testamentary and lifetime transfers.

- **587 CONTEMPORARY ACCOUNTING ISSUES  3 credits**
  - Prerequisite: Permission of instructor. Critical examination of contemporary issues and trends in accounting, including professional ethics and corporate social responsibility, standard setting process, regulatory compliance, and international issues.

- **590 ADVANCED AUDITING  3 credits**
  - Prerequisite: 640 or equivalent or permission. Conceptual foundations and current research on professional and internal auditing. Includes government regulation and litigation, statistics, computer systems as well as current and prospective developments in auditing.

- **591 TAXATION OF PARTNERSHIPS  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Explores intensive provision of chapters K and S of Internal Revenue Code and uses of partnerships for tax planning.

- **592 CORPORATE TAXATION II  3 credits**
  - Prerequisite: 631. Concludes study of chapter C on Internal Revenue Code with major focus on corporate reorganization.

- **593 TAX ACCOUNTING  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Attention focused on timing of income and expenses for individual businesses and its relation to tax planning.

- **594 INCOME TAXATION OF DECEDES, ESTATES AND TRUSTS  3 credits**
  - Prerequisite: 633. An in-depth examination of the decedent's last income tax return along with the analysis of income taxation of trusts and estates and their creators, fiduciaries and beneficiaries.

- **595 ADVANCED INDIVIDUAL TAXATION  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. In-depth study of some of the more involved areas of individual income taxation.

- **596 CONSOLIDATED TAX RETURNS  3 credits**
  - Prerequisite: 631. Intensive study of tax provisions concerning use of consolidated tax returns.

- **597 QUALIFIED PENSIONS AND PROFIT SHARING  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Nature, purpose and operation of various forms of deferred compensation examined with much emphasis on pension and profit-sharing plans.

- **598 TAX ADMINISTRATION AND PROCEDURE  2 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. In-depth study of administration and procedures of Internal Revenue Service and responsibilities of tax practitioners.

- **599 STATE AND LOCAL TAXATION  3 credits**
  - Prerequisite: Admission to Master of Tax program or special permission. Examines common types of taxes imposed by state and local governments and includes taxation of multistate businesses.

- **600 ESTATE PLANNING  3 credits**
  - Prerequisite: 633. Considers entire process of planning the estate with due regard for disposition of property, tax minimization, liquidity requirements and administrative costs.
591 INTERNATIONAL TAXATION 3 credits
Prerequisite: 631. Examines United States tax law of foreign income of domestic corpora-
tions, citizens, and residents, as well as United States income of nonresident aliens and for-
eign corporations.

592 TAX-EXEMPT ORGANIZATIONS 3 credits
Prerequisite: Admission to Master of Tax program or special permission. Analysis of tax-
tax exemption programs, including nature of and limits of its exemptions.

595 INDEPENDENT STUDY IN TAXATION 1–3 credits
Prerequisite: permission of instructor. Intensive study of particular topic or limited number of topics to be given in the term offered in curriculum. May be repeated for a total of six credits.

596 ADVANCED INFORMATION SYSTEMS 3 credits
Prerequisites: 603 or equivalent and 610. Advanced study of accounting information system theory, design, elements, principles, design and implementation. Practical data processing and net-
tworks to control flow of information.

597 ENTERPRISE RISK ASSESSMENT AND ASSURANCE 3 credits
Prerequisite: 601 or equivalent and 610. An examination of the risks, controls, and assurance services in contemporary organizations.

598 ASSURANCE SERVICES AND DATA MINING 3 credits
Prerequisite: 603 or equivalent. Application of data mining and quantitative techniques to fraud risk assessment, error detection, financial distress, going concern, and information risk assessment.

599 ACCOUNTING AND ASSURANCE PROJECT 3 credits
Prerequisites: 540 and instructor approval. Comprehensive accounting and assurance project and a project management module completed in the final semester of the MBA program.

600 S CORP TAXATION 3 credits
Prerequisite: 610. This course involves in an in-depth study of Subchapter S of the Internal Rev-
ue Code.

601 CORPORATE PERFORMANCE EVALUATION AND CONTROL SYSTEMS 3 credits
Prerequisites: 601 and 6200:603. Examination of the role of financial information systems in developing strate-
gy, planning, measuring results, and motivating managers to define and pursue organizational goals and objectives.

602 INTERNATIONAL ACCOUNTING 3 credits
Prerequisite: 610. Examination of accounting theory and practice from international perspec-
tive with emphasis on multinational investment, business and auditing activities and reporting problems.

603 SELECTED TOPICS IN TAXATION 3 credits
Prerequisites: 603. Provides study in contemporary issues in taxation that are not covered in current courses.

604 GRADUATE INTERNSHIP IN ACCOUNTING 3 credits
Prerequisites: 610, and 621. This course provides an opportunity for graduate accounting stu-
dents to apply classroom instruction to practice problems in a professional working environ-
ment.

605 INDEPENDENT STUDY IN ACCOUNTING 1–3 credits
(May be repeated for a total of six credits) Focus on special topics of study and research in accounting on an independent basis.

FINANCE 6400:

538 INTERNATIONAL BANKING 3 credits
Prerequisite: 602 or permission. Examination of recent trends in the expansion of international banking activities and associated revenue maximizing strategies.

620 MANAGERIAL FINANCE 3 credits
Prerequisite: 6200:601 or equivalent. 6400:602 may be taken concurrently with 6200:601.
Emphasis on financial decision making related to goal of firm; specifically, the investment deci-
sion, the financial decision and the dividend decision.

623 LEGAL ASPECTS OF BUSINESS TRANSACTIONS 3 credits
(Prerequisites: Students with a minor in undergraduate business law) Advanced legal issues of contacts, UCC, debtor-creditor relationships, business organizations, property, and govern-
ment regulation.

631 FINANCIAL MARKETS AND INSTITUTIONS 3 credits
Prerequisites: 602 or equivalent. A study of major financial markets and financial institutions with an emphasis on the decision making processes within a rapidly changing, but regulated operating environment.

645 INVESTMENT ANALYSIS 3 credits
Prerequisite: 602 or equivalent. Study of the economic and market forces that influence secu-
rities prices. Techniques of analysis used in evaluating limited income and equity securities.

650 TECHNOLOGIES OF FINANCIAL MODELING 3 credits
Prerequisites: 3200:600 and 6400:602. Current techniques and methods of financial analysis are examined, including the use of financial models for short and long run profitability deci-
sions.

651 GOVERNMENT AND BUSINESS 3 credits
Public policy with regard to business institutions and issues is considered from an econom-
ic, legal, and political framework.

674 STRATEGIC FINANCIAL DECISION MAKING 3 credits
Prerequisite: 602. Examines the role of financial decision makers as strategic consultants to organizations and the use of decision support systems with integrative risk management as a unifying theme.

678 CAPITAL BUDGETING 3 credits
Prerequisite: 602 or equivalent. Attempt to integrate various theories of capital budgeting into a consistent conceptual scheme. Theoretical concepts and practical applications blended for better understanding of capital problems.

681 MULTINATIONAL CORPORATE FINANCE 3 credits
Prerequisite: 602 or equivalent. Financial policies and practices of companies involved in multi-
national operations. Considers management of working capital and permanent assets, return on investment and capital budgeting for the global firm.

685 E-BUSINESS: LEGAL ISSUES 3 credits
Study of the application of law to emerging e-commerce form of business with concentration on emerging law and policy.

690 SELECTED TOPICS IN FINANCE 3 credits
(Prerequisite: 602 or equivalent. May be repeated for a total of six credits) Prerequisite: 602 or equivalent. Provides study of contemporary issues and areas not covered in current finance graduate courses.

691 INTERNATIONAL MARKETS AND INVESTMENTS 3 credits
Prerequisite: 540 or equivalent. A study of international financial markets with an emphasis on international investments and risks in a rapidly changing global economy.

697 INDEPENDENT STUDY IN FINANCE 1–3 credits
(May be repeated for a total of six credits) Focus on special topics of study and research in finance on an independent basis.

MANAGEMENT 6500:

520 MANAGEMENT OF DATA NETWORKS 3 credits
Prerequisite: 602. Principles of the design and management of data networks for business communications.

533 SUPPLY CHAIN LOGISTICS PLANNING 3 credits
Prerequisites: 670. Emphasis on the importance of planning in the development of the domes-
tic and global supply chain logistics system that includes transportation, inventory, warehous-
ing, and procurement.

571 MANAGEMENT PROJECT 3 credits
Prerequisite: 670. Students develop skills in field-based management problem solving, project management, and requires analysis under conditions of uncertainty in a collaborative interdisciplinary team environment.

576 SUPPLY CHAIN SOURCING 3 credits
Prerequisite: 675. Introduces the student to fundamental sourcing concepts as well as the scope of responsibility and critical roles of the sourcing function within the principal organiza-
tion in a supply chain network.

580 INTRODUCTION TO HEALTH-CARE MANAGEMENT 3 credits
Prerequisite: graduate standing. Introductory course for health professionals covering princi-
ples and concepts of management applied to health services organizations. For those regis-
tered for graduate credit, a major research paper is required.

582 HEALTH SERVICES OPERATIONS MANAGEMENT 3 credits
Prerequisite: 580 or 600 or equivalent or permission of instructor. Application of operations and systems analysis to health services organizations.

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 healthcare organizations and healthcare systems. Separa-
tate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.

601 QUANTITATIVE DECISION MAKING 3 credits
Prerequisite: 602. An introduction to the use of integrated spreadsheet software, database management software and the analysis and design of management information systems.

602 BUSINESS APPLICATIONS DEVELOPMENT 3 credits
Prerequisite: 602. Introduces students to techniques and methods of business software development and quality assurance. Students will integrate these applications for business decision making.

603 E-BUSINESS FOUNDATIONS 3 credits
Prerequisite: 602 or 620. This course provides a foundation in Internet related technologies for successfully managing an e-business. Students will be required to design and implement a functional e-business prototype.

640 INFORMATION SYSTEMS AND IT GOVERNANCE 3 credits
Prerequisite: 602. Covers issues, strategies, tactics for managing organizational use of information technology and its governance. Includes strategic alignment, project management, offshoring, security, application systems, and emerging technologies.

641 BUSINESS DATABASE SYSTEMS 3 credits
Prerequisites: 620, 602 and 603. Analysis and automation of standard business processes with examples from diverse business functions. Students will integrate these applications for business decision making.

642-human resource systems for managers 3 credits
Prerequisite: 600 or equivalent or permission of instructor. Application of operations and systems analysis to health services organizations.

643 ANALYSIS AND DESIGN OF BUSINESS SYSTEMS 3 credits
Prerequisites: 602 or 6200:603. A hands-on treatment of the methods used to develop differ-
ent types of business information systems.

644 KNOWLEDGE MANAGEMENT AND BUSINESS INTELLIGENCE 3 credits
Prerequisite: admission to Master of Tax program or special permission. Application of operations and systems analysis to health services organizations.

645 SOFTWARE DEVELOPMENT AND QUALITY ASSURANCE 3 credits
Prerequisite: 602. Focus on the software development and quality assurance process. Stu-
dent teams will work on projects with an emphasis on implementation of business systems.

646 ENTERPRISE SYSTEMS IMPLEMENTATION 3 credits
Prerequisite: 602. The configuration and implementation of Enterprise Systems to support the cross functional integration of business processes.

648 MANAGEMENT OF TELECOMMUNICATIONS 3 credits
Prerequisites: 602 or 6200:603. An introduction to the use and management of telecommuni-
cation systems to support the cross functional integration of business processes.

650 HUMAN RESOURCE SYSTEMS FOR MANAGERS 3 credits
Prerequisites: 600 or equivalent. A broad survey of the fundamental principles, research find-
ings, and practical issues related to the acquisition, development, maintenance and effective utiliza-
tion of a business firm’s human resources.

651 MANAGEMENT OF ORGANIZATIONAL TRANSFORMATION 3 credits
Prerequisites: 600 or equivalent. A broad survey of the fundamental principles, research find-
ings, and practical issues related to the acquisition, development, maintenance and effective utiliza-
tion of a business firm’s human resources.

652 MANAGEMENT OF ORGANIZATIONAL BEHAVIOR 3 credits
Prerequisite: 602 or equivalent. Study of factors which influence human behavior in business organizations. Emphasis on theories of individual and group behavior, motivation, leadership, and communication in organizations.

653 ORGANIZATIONAL THEORY 3 credits
Prerequisite: 600. Examines the structure, design and overall effectiveness of a business orga-
nization.

654 MANAGEMENT OF ORGANIZATIONAL CONFLICT 3 credits
Prerequisite: 600 or equivalent. Course emphasizes understanding the role of leadership in the analysis of conflicts that occur and provides skills in diagnosis, negotiation, and building trust and cooperative working relationships in organizations.

Graduate Courses 125
565 COMPENSATION AND PERFORMANCE MANAGEMENT 3 credits
Prerequisite: 600 or equivalent. The development and analysis of systems of payments and rewards in business organizations with special attention placed on performance evaluation methods and productivity enhancement.

566 MANAGEMENT OF GLOBAL SUPPLY CHAIN AND OPERATIONS 3 credits
Prerequisite: 600 or equivalent or permission. Study and explore the elements and issues related to the globalization of supply chain, production, and service operations.

567 THE LEADERSHIP ROLE IN ORGANIZATIONS 3 credits
Prerequisite: 600. Analysis and development of leadership theory and thought. Identification of leadership in both formal and informal organizations. Training and development methods developed from a leader's evaluated. Individual and small group field study assignments.

568 STRATEGIC AND GLOBAL HUMAN RESOURCES MANAGEMENT 3 credits
Prerequisite: 600 or equivalent. The formulation and implementation of human resource practices designed to generate competitive cost advantages for business firms operating in domestic and international markets.

569 INDEPENDENT STUDY IN MANAGEMENT 3 credits
Prerequisite: 600. A survey course focused on the identification, analysis, and resolution of human resource problems in business firms with global operations.

660 STAFFING AND EMPLOYMENT REGULATION 3 credits
Prerequisite: 600 or equivalent. Design and implementation of staffing practices and systems for organizations with an emphasis on the implications of federal regulations on the staffing function.

661 SUPPLY CHAIN ANALYSIS 3 credits
Prerequisite: 675. Application of quantitative models in the analysis and design of systems in the supply chain and in manufacturing and service operations environments.

662 DATA ANALYSIS FOR MANAGERS 3 credits
Prerequisite: 601 or equivalent. Design, evaluation and interpretation of research in business and organizations. Integrates quantitative and behavioral concepts and processes encountered in conducting such research, including ethical issues.

665 MANAGEMENT OF TECHNOLOGY 3 credits
Survey of the principles and management practices of technology driven organizations are discussed with concepts, models and case studies for managers of technology intensive operations.

669 POLYMER MANAGEMENT DECISIONS 3 credits
Introduces major polymer concepts, production processes, and uses of polymers in an easy-to-comprehend interdisciplinary instructional way. Industrial case studies help integrate enterprise-wide innovation and technology management related decisions.

670 MANAGEMENT OF OPERATIONS 3 credits
Prerequisites: 660, 605, 602, or equivalent. An overview of the issues directly related to the management of operations at the strategic, tactical, and operational levels of the organization.

671 QUALITY AND PRODUCTIVITY TECHNOLOGIES 3 credits
Prerequisite: 601 or equivalent. Introduction to tools and techniques for improving productivity and quality, including statistical process control (SPC), material requirements planning (MRP), just-in-time (JIT) inventory control and management of the program.

675 SUPPLY CHAIN MANAGEMENT 3 credits
Prerequisite: 600. Focuses on the integration of activities and information/material flows across multiple organizations that comprise the supply chain, and the relationships among those organizations.

680 PROJECT MANAGEMENT 3 credits
Prerequisite: 601 or permission of instructor. Provides working knowledge of tools and methods available to project managers including computerized analysis of network models to aid in the planning and control functions.

683 HEALTH SERVICES SYSTEMS MANAGEMENT 3 credits
Prerequisite: 610 or equivalent or permission of instructor. Study of health services organizations, comparative delivery systems, the roles of third-party payers and government policy in health care. Seminar format: major research paper required.

686 HEALTH SERVICES RESEARCH PROJECT 3 credits
Prerequisite: 683 or permission of instructor. In-depth field study in health services administration with applications of research and analysis skills. Course requires review of literature and a major research paper.

687 INDEPENDENT STUDY IN HEALTH SERVICES ADMINISTRATION 1-3 credits
(May be repeated for more than three credits) Prerequisites: 580 or 600 or equivalent or permission of instructor. Independent study and research of a special topic in health services administration (e.g., management), chosen by the student in consultation with and under the supervision of the instructor.

689 SELECTED TOPICS IN MANAGEMENT 1-3 credits
(May be repeated for a total of six credits) Prerequisite: 652. Selected topics in historical, contemporary and/or operational and functional areas of management.

695 BUSINESS STRATEGY AND POLICY: DOMESTIC AND INTERNATIONAL 3 credits
Prerequisites: 6500:6700, 6400:694, 6600:620, 6800:605 or permission of instructor. A case-oriented course which focuses on the development of business policies designed to achieve long-range goals in core business courses. Students analyze, evaluate, formulate organization objectives and strategies within domestic and international environmental contexts.

697 INDEPENDENT STUDY IN MANAGEMENT 1-3 credits
(May be repeated for a total of six credits) Focus on special topics of study and research in management on an independent basis.

615 DATABASE MARKETING 3 credits
Prerequisite: 600. This course examines the information-driven process that is managed by database technology in order to develop, test, implement, measure, and create customized marketing programs and strategies. Database marketing focuses on better decision making relative to customer selections and customer relationships.

620 STRATEGIC MARKETING MANAGEMENT 3 credits
Prerequisite: 600 or equivalent. Managerial assessments of opportunities, threats are explored as are the development and management of appropriate strategic marketing plans and their implementation.

630 CUSTOMER RELATIONSHIP MANAGEMENT 3 credits
Prerequisite: 600 or permission of instructor. Investigation of the marketing concept and practice of building the customer focus of the firm’s business model. Examining the strategies and tactics for successful customer acquisition and retention is the focus of the course.

635 E-BUSINESS: ELECTRONIC MARKETING STRATEGIES AND TACTICS 3 credits
Prerequisites: 600 and 6500:620. Covers the impact of electronic technology on marketing strategy and tactics. Investigations include: vendor/dealer relations, website traffic design, database applications, and web appraisal metrics.

694 BUSINESS RESEARCH METHODS 3 credits
Prerequisites: 6500:600 and 602. Covers the scientific methods as well as the gathering and analysis of information to identify opportunities and solve problems within a business organization.

645 INNOVATIVE MARKETING STRATEGIES 3 credits
Prerequisites: 660. A review of contemporary business issues and their impact on innovative marketing practices. Simulations, cases, and field projects support structured class dialogues on emerging strategic business and marketing themes.

655 INTEGRATED MARKETING COMMUNICATIONS 3 credits
Prerequisite: 600. The total range of marketing communication tools are examined individually and in the context of planning, developing, and implementing a systematic and integrated communications program.

670 COMPETITIVE BUSINESS STRATEGY 3 credits
Prerequisite: 600. Investigation of competitive business strategy from an industry perspective. The course presents a framework which can be used to understand and develop competitive strategies.

697 INDEPENDENT STUDY IN MARKETING 1-3 credits
(May be repeated for a total of six credits) Focus on special topics of study and research in marketing on an independent basis.

PROFESSIONAL 6700:

695 INTERNSHIP IN BUSINESS 1-3 credits
Prerequisite: permission of instructor. On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports and research papers required. Credit/No credit.

696 SPECIAL TOPICS IN PROFESSIONAL DEVELOPMENT 1 credit
Special topics and current issues in the MBA Program Professional Core. May be repeated with change of subject, not to exceed 4 credits.

698 COLLOQUIUM IN BUSINESS 1-3 credits
Prerequisite: permission of graduate director. Study of business administration through a seminar of general lectures in business education and practice. A broad range of topics in business research and issues will be discussed by guests, faculty and graduate students. May be repeated, but will not satisfy degree requirements. Credit/No credit.

INTERNATIONAL BUSINESS 6800:

605 INTERNATIONAL BUSINESS ENVIRONMENTS 3 credits
Prerequisites: all MBA foundation courses. This course is intended to develop an understanding of the global business environment and the integrated functions of the multinational corporation.

630 INTERNATIONAL MARKETING POLICIES 3 credits
Explores the problems of formulating and implementing marketing strategies and tactics with emphasis on emerging strategic business and marketing themes.

650 MULTINATIONAL CORPORATIONS 3 credits
A course designed to develop an understanding of global businesses, their functions, structures, and strategic operations.

659 SEMINAR IN INTERNATIONAL BUSINESS 3 credits
A course covering major issues in international business.

697 INDEPENDENT STUDY IN INTERNATIONAL BUSINESS 1-3 credits
(May be repeated for a total of six credits) Prerequisites: Graduate standing and permission of instructor. Focus on special topics of study and research in international business on an independent basis.

MARKETING 6600:

540 PRODUCT AND BRAND MANAGEMENT 3 credits
Prerequisite: 600. Applied investigation into the management of new product development, product life cycle management, product mix strategies, brand positioning, brand image, and brand equity.

575 BUSINESS NEGOTIATIONS 3 credits
Examines business negotiation principles and practices and builds skills in the process of negotiating business agreements within a global environment.

580 SALES MANAGEMENT 3 credits
Prerequisite: 600. Development of analytical and managerial skills through case studies and other learning activities relating to the organization, selection, training, motivation, and control of domestic or global sales forces. Graduate credit requires additional research paper.

600 MARKETING CONCEPTS 3 credits
Introductory course examining buyer behavior, environmental influences, target marketing, product development, distribution, promotion, and pricing for business firms and nonprofit organizations within a global context.

ART 7100:

501 SPECIAL TOPICS IN HISTORY OF ART 3 credits
Prerequisite: Permission. A lecture course focusing on a particular movement, period, artist, or medium. (May be repeated when a different subject or level of investigation is selected.)

502 MUSEOLOGY 3 credits
Prerequisite: Permission. A lecture course dealing with museum science, including museum history, staff structures, art handling, storage and presentation, and exhibition preparation.

503 ART AND CRITICAL THEORY 3 credits
Prerequisite: Permission. A lecture course designed to develop a critical understanding of art, art history, and art theory.

504 HISTORY OF MODERNISM 3 credits
Prerequisite: Permission. A lecture course focusing on the development of Modernist art (primarily painting and sculpture) from approximately 1863 through 1968 - from Manet through early Conceptualism, Video, and Performance.
505 HISTORY OF ART SYMPOSIUM 1-3 credits
(May be repeated for credit when a different subject is indicated) Prerequisite: Permission of instructor. Seminar on the history, theme, and importance of art history, with group discussion related to a specific topic of interest.

507 METHODS OF ART HISTORY 3 credits
Prerequisite: Permission of instructor. This course explores the history of the discipline and the methodologies it has undergone since its establishment in the early years of the nineteenth century.

510 METHODS OF TEACHING ELEMENTARY ART 3 credits
Prerequisite: Permission of instructor. A course for teaching artists presenting the necessary skills and knowledge for successful implementation, plan, plan, and assess a developmentally-based curriculum for the elementary school. No credit as elective courses for art majors.

511 METHODS OF TEACHING SECONDARY ART 3 credits
Prerequisite: Admission to Teacher Education Program Art P-12. A lecture course providing the knowledge skills, and experience necessary for the development of curriculum, instruction and assessment appropriate for application at the high school level. No credit as an elective for art majors.

512 STUDENT TEACHING COLLOQUIUM 1 credit
Prerequisites: Successful completion of field experience and permission. Corequisite: 550.50. A lecture providing the knowledge and experience necessary for secondary school art education. Student will gain knowledge in resume building, licensure requirements, and practical pedagogical techniques.

515 MULTIPLES AND MULTIPLICITY 3 credits
Prerequisites: Permission of instructor, Advanced printmaking class recommended for studio majors, working with multiples, variability, and production requiring students to define and complete their own projects.

521 SPECIAL TOPICS IN PRINT 3 credits
Prerequisite: Permission of instructor, Investigation in specialized printmaking media like Photography, Digital Printing, and Book Arts among others. May be offered in conjunction with University sponsored residency or travel.

544 ADVANCED CERAMICS 3 credits
Prerequisite: Permission of instructor. Advanced studio course with emphasis on advanced ceramic techniques.

550 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 the curriculum.

550 WORKSHOP IN ART 1-4 credits
(May be repeated for credit when a different subject or level of investigation is indicated 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.

553 ADVANCED SEMINAR IN ART EDUCATION 3 credits
Prerequisites: Acceptance to the M.S. program in Secondary Education with Visual Art License. This lecture course is an advanced seminar in art education introducing students to historical, contemporary, philosophical issues in an art education. Contemporary problems, theories and practices in art in education also addressed.

554 SPECIAL TOPICS: ART EDUCATION 1-3 credits
(May be repeated for credit when a different subject or level of investigation is indicated Group investigation of topics of interest to the art education student and not covered elsewhere in the curriculum.

557 INDEPENDENT STUDIES 1-3 credits
(May be repeated for credit) 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. Prerequisite for non-majors: permission of instructor. Investigation in depth of aesthetic and technical problems within a studio-selected area of specialization. Student must present in writing a proposed study plan and time schedule for instructor approval.

558 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 topics; such as specific time period, history of a specific artist or movement in art history. No more than 10 credits will be counted toward major.

559 MUSICAL STYLES AND ANALYSIS I 1-3 credits
(May be repeated for credit) 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. Prerequisites: advanced standing in art or 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.

563 REPERTOIRE AND PEDAGOGY: STRING INSTRUMENTS 3 credits
Prerequisite: permission of instructor. Study in depth of the four bowed string instruments, their techniques and close relationship. To study the obvious difference in physical application of cells 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.

567 GUITAR PEDAGOGY 2 credits
Prerequisite: permission of instructor. A systematic analysis of prevailing schools of guitar pedagogy. Sound production psychology, method books and special problems in teaching addressed.

568 GUITAR ARRANGING 2 credits
Prerequisite: permission of instructor. After comparative analyses of selected examples, student makes original solo guitar arrangements of works written for other solo instruments ensembles.

569 HISTORY AND LITERATURE OF THE GUITAR AND LUTE 2 credits
Prerequisite: permission of instructor. Study of plucked, fretted, string instruments from the 15th through the 16th, with an emphasis on the construction, notation, literature and performance practices. Modern editions and recordings evaluated.

570 STUDIES IN CHORAL LITERATURE I: MEDIEVAL-RENAISSANCE 2 credits
A study in depth of the choral repertoire of general structure, character, voice, notation, pitch, ormentation, improvisation, and interpretation of dynamics, rhythm, articulation, and tempo.

571 STUDIES IN CHORAL LITERATURE II: BAROQUE 2 credits
A study of the repertoire in terms of general structure, character, voice, notation, pitch, ormentation, improvisation, and interpretation of dynamics, rhythm, articulation, and tempo.

572 STUDIES IN CHORAL LITERATURE III: CLASSIC-ROMANTIC 2 credits
A study of the repertoire in terms of general structure, character, voice, notation, pitch, ormentation, improvisation, and interpretation of dynamics, rhythm, articulation, and tempo.

573 STUDIES IN CHORAL LITERATURE IV: THE 20TH CENTURY 2 credits
A study of the repertoire in terms of general structure, character, voice, notation, pitch, ormentation, improvisation, and interpretation of dynamics, rhythm, articulation, and tempo.

574 INTEGRATIVE CONDUCTING WORKSHOP 2 credits
Prerequisite: A study of how to prepare and execute effective rehearsal which respond to the needs of the singers while maintaining stylistic integrity in executing the music.

580 WORKSHOP IN MUSIC 1-3 credits
Prerequisite: permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.

601 CHORAL LITERATURE 2 credits
Prerequisite: permission of instructor. Study in depth of style, structure, technical demands, manner of setting text, and special performance problems found in masterworks by great choral composers of nine centuries.

604 DEVELOPMENT OF OPERA 2 credits
Prerequisite: permission of instructor. Growth and development of opera from 1600 to present includes detailed examination of stylistic and structural changes as well as performance practices.

609 PEDAGOGY OF JAZZ IMPROVISATION 3 credits
Prerequisite: A study of the methods and materials as they relate to the teaching of jazz improvisation.

611 FOUNDATIONS AND PRINCIPLES OF MUSIC EDUCATION 3 credits
A study of basic historical, philosophical, sociological, and psychological concepts in the context of music education.

612 PRACTICES AND TRENDS IN MUSIC EDUCATION 3 credits
A study of the history of practices and trends in American music education.

613 INSTRUCTIONAL PROGRAMMING IN MUSIC FOR THE MICROCOMPUTER 3 credits
Prerequisite: 503. Introduction to programming languages for the microcomputer including BASIC, Pascal and Assembler. Programming will be directed towards music educational concepts.

614 MEASUREMENT AND EVALUATION IN MUSIC 3 credits
A study of measurement and evaluation techniques and their application in music education.

615 MUSICAL STYLES AND ANALYSIS I 2 credits
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic traits observed in Western music from period of Gregorian chant through music of Paleist Gesualdo and others of late Renaissance.

616 MUSICAL STYLES AND ANALYSIS II 2 credits
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic traits observed in Western music from Monteverdi through early Baroque.

617 MUSICAL STYLES AND ANALYSIS III 2 credits
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic traits observed in Western music from period of late Baroque to Händel and Strauss.

618 MUSICAL STYLES AND ANALYSIS IV 2 credits
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic traits observed in Western music in 20th Century.

621 MUSIC HISTORY SURVEY: MIDDLE AGES AND RENAISSANCE 2 credits
Prerequisite: permission of instructor. Historical and stylistic analysis of all aspects of music of Middle Ages and Renaissance. Research and writing in areas of special interest.

622 MUSIC HISTORY SURVEY: BAROQUE 2 credits
Prerequisite: permission of instructor. Historical and stylistic analysis of Baroque music; study in depth of specific examples, from recordings, scores and live performances; continuation and synthesis of approaches to study of music history; selected readings related to each student's particular fields of interest; project papers.

623 MUSIC HISTORY SURVEY: CLASSIC AND ROMANTIC 2 credits
Prerequisite: permission of instructor. Historical and stylistic analysis of classic and romantic music; study in depth of specific examples, through recordings, scores and live performances; continuation and synthesis of approaches to study of music history; selected readings related to each student's particular fields of interest; project papers.

624 MUSIC HISTORY SURVEY: MUSIC SINCE 1900 2 credits
Prerequisite: permission of instructor. Historical and stylistic analysis of music since 1900; study in depth of specific examples through recordings and live performances, continuation and synthesis of approaches to study of music history; selected readings and project papers.

625 GRADUATE BIBLIOGRAPHY AND RESEARCH IN MUSIC 2 credits
Prerequisite: undergraduate music degree of equivalent. Examination of all types of published music materials; research methods for thesis preparation and professional publishing; field work in music libraries, consultation of general structure.

627 COMPUTER STUDIO DESIGN 2 credits
Prerequisite: permission of instructor. Design and maintenance of a computer lab. Emphasis on hardware and software setup to maximize function and minimize maintenance.
630 TEACHING AND LITERATURE: BRASS INSTRUMENTS 2 credits
Prerequisite: permission of instructor. Research in current trends and issues in brass teaching techniques and appropriate literature.

631 TEACHING AND LITERATURE: WOODWIND INSTRUMENTS 2 credits
Prerequisite: permission of instructor. To delineate and clarify contemporary techniques of woodwind pedagogy and to develop a comprehensive understanding of woodwind literature.

633 TEACHING AND LITERATURE: PIANO AND HARPSCORD 2 credits
Prerequisite: permission of instructor. The examination of piano and harpsichord literature in historically chronological order with special attention to its pedagogical value and stylistic differences.

634 TEACHING AND LITERATURE: STRING INSTRUMENTS 2 credits
Prerequisite: permission of instructor. Research in current trends and issues in string teaching techniques and appropriate literature.

640,1,2,3 ADVANCED ACCOMPANYING I, II, III, IV 1 credit each
Prerequisite: Graduate standing in keyboard performance and/or accompanying or the permission of the instructor. An in-depth study of principles of accompanying, sight-reading, standard repertoire, and transposition.

653 ELECTRONIC MUSIC 2 credits

657 STUDENT RECITAL 0 credits
Required of all music majors. Forum for student and faculty providing lectures, recitals, and opportunity to practice skills for successful music performance.

665 VOCAL PEDAGOGY 3 credits
Prerequisite: permission. In-depth study of subjects dealing with teaching of voice: physiology of vocal instruments; principles governing vocal production and application of vocal pedagogy.

666 ADVANCED SONG LITERATURE 2 credits
Prerequisite: permission of instructor. Systematic study of song literature presented chronologically according to national schools of composition. Stylistic compositional characteristics and representative works of all major composers of solo song literature.

675 SEMINAR IN MUSIC EDUCATION 1-3 credits
(May be repeated for a total of 6 credits). Intensive examination of special topics in the field of music education.

697 ADVANCED PROBLEMS IN MUSIC 1-3 credits
(May be repeated for a total of eight credits). Prerequisite: permission of graduate advisor. Studies or research projects related to problems in music.

698 GRADUATE RECITAL 2 credits
Prerequisite: permission of graduate advisor. Recital prepared and presented as a requirement for any appropriate degree option. If recital document is to be written in conjunction with the recital, add 699 for the additional credit. Once passed, may not be repeated for credit.

699 MASTER’S THESIS/PROJECT 4 credits
Prerequisite: permission of graduate advisor. Research related to the completion of the master’s thesis, project, or recital document written in conjunction with the graduate recital, depending on the student’s degree option.

MUSICAL ORGANIZATIONS 7510:

602 AkrOn SYMPHONY CHORUS 1 credit
Open to University and community members by audition. Prospective members should contact School of Music within two weeks before semester begins. Performs with Akron Symphony Orchestra.

603 UNIVERSITY SYMPHONY ORCHESTRA 1 credit
Membership by audition. Organization devoted to study of orchestral literature. Full-length concertos as well as special University appearances. Major conducted ensemble.

604 SYMPHONIC BAND 1 credit
Prerequisite: membership by audition. The University Symphonic Band is the most select band at the University and performs the most demanding and challenging music available.

605 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.

606 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.

607 STRING ENSEMBLE 1 credit
Membership by audition. In-depth study and performance of chamber music literature with special emphasis on string quartet and piano trio.

608 OPERA WORKSHOP 1 credit
Prerequisite: permission of instructor. Research in current trends and issues in vocal pedagogy and performance. In-depth study of repertoire. Includes production of standard opera and/or contemporary chamber work with stage, costumes and scenery.

609 PERCUSSION ENSEMBLE 1 credit
Prerequisite: permission of instructor. Research in current trends and issues in percussion literature. Develops performance skills.

610 WOODWIND ENSEMBLE 1 credit
Prerequisite: permission of instructor. Study and performance of woodwind literature from all periods. Develops performance skills.

614 KEYBOARD ENSEMBLE 1 credit
In-depth study of ensemble playing. Required for keyboard assistantship recipients.

615 JAZZ ENSEMBLE 1 credit
Membership by audition. Provides experience in jazz ensemble performance. A student is required to have knowledge of rudiments of music and some experience in Jazz Ensemble performance.

618 SMALL ENSEMBLE-MIXED 1 credit
Prerequisite: permission of instructor. Small ensemble. "Major conducted ensemble" for vocal majors.

620 CONCERT CHORUS 1 credit
Membership by audition. Highly selected mixed choir. Performs classical literature from all periods. Campus, regional, and tour performances. “Major conducted ensemble” for vocal majors.

621 UNIVERSITY SINGERS 1 credit
Prerequisite: permission of instructor. Advanced mixed ensemble devoted to performance of a wide variety of choral literature from classical to popular. “Major conducted ensemble” for vocal majors.

625 CONCERT BAND 1 credit
Membership by audition. Performs the finest in concert band literature available for concert bands today.

628 MARCHING BAND 1 credit
This organization is noted for its high energy performances a University football games. Enrollment is open to all members of the University student body.

627 BLUE AND GOLD BRASS 1 credit
The official band for Akron home basketball games. Membership is by audition.

628 UNIVERSITY BAND 1 credit
The University Band is open to all members of the University community and performs excellent standard band literature. All music majors are required to complete a placement audition each fall semester. Major conducted ensemble.

629 BLUE AND GOLD BRASS II 1 credit
Membership is by audition.

630 SUMMER CONCERT BAND 1 credit
The University of Akron Summer Concert Band is open to all wind and percussion musicians and performs the finest in band literature.

APPLIED MUSIC 7520:

521-569 APPLIED MUSIC FOR MUSIC MAJORS 2 or 4 credits each
The following courses are intended for a student majoring in one of the programs in the Department of Music. Courses levels correspond approximately to class standing (000 for freshmen, 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.

521 PERCUSSION

522 CLASSICAL GUITAR

523 HARP

524 VOICE

525 PIANO

526 ORGAN

527 VIOLIN

528 VIOLA

529 CELLO

530 STRING BASS

531 TRUMPET OR CORNET

532 FRENCH HORN

533 TROMBONE

534 BARI TONE

535 TUBA

536 FLUTE OR PICCOLO

537 OBOE OR ENGLISH HORN

538 CLARINET OR BASS CLARINET

539 BASSOON OR CONTRABASSOON

540 Saxophone

541 HarpscHorD

542 PRIVATE LESSONS IN MUSIC COMPOSITION 2-4 credits each
(May be repeated). Prerequisite: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

621-661 GRADUATE STUDY IN APPLIED MUSIC 2 or 4 credits each
(May be repeated). Prerequisite: undergraduate degree in music, graduate standing and permission of instructor determined through audition.

621 PERCUSSION

622 CLASSICAL GUITAR

623 HARP

624 VOICE

625 PIANO

626 ORGAN

627 VIOLIN

628 VIOLA

629 CELLO

630 STRING BASS

631 TRUMPET OR CORNET

632 FRENCH HORN

633 TROMBONE

634 BARI TONE

635 TUBA

636 FLUTE OR PICCOLO

637 OBOE OR ENGLISH HORN

638 CLARINET OR BASS CLARINET

639 BASSOON OR CONTRABASSOON

640 Saxophone

641 HarpscHorD

642 APPLIED COMPOSITION

651 JAZZ PERCUSSION

652 JAZZ GUITAR 2-4 credits each
(May be repeated). Prerequisite: undergraduate degree in music. Private instruction in composition offered primarily for a student majoring in composition. Another student may be approved by composition faculty.

653 JAZZ ELECTRIC BASS

664 JAZZ PIANO

665 JAZZ TRUMPET

666 JAZZ TROMBONE
COMMUNICATION 7600:

500 HISTORY OF JOURNALISM IN AMERICA 3 credits
A review and analysis of the historical evolution of journalism in America, focusing primarily on newspapers, magazines, radio, television.

506 CONTEMPORARY MEDIA RELATIONS 3 credits
Study and practical application of communication concepts, theories and skills relevant to public relations programs in businesses and nonprofit organizations.

508 WOMEN, MINORITIES AND NEWS 3 credits
Study of images of women and minorities in U.S. news, along with the power women and minorities have as decision-makers in the news industry.

516 NEW MEDIA WRITING 3 credits
Prerequisite: Permission. This class will look at how today's professionals practice online publishing. Students will work on writing and reporting skills needed in New Media.

517 ONLINE MEDIA PRODUCTION 3 credits
Prerequisite: 516 or permission. Covers practical application of software to create on-line multimedia documents and explores design ideas for New Media content.

520 MAGAZINE WRITING 3 credits
An introduction to writing class designed to develop the specialized reporting, researching, and writing skills needed in consumer and specialized business magazines today.

525 ELECTRONIC COMMERCIAL PUBLISHING 3 credits
Theories and class exercises in depth investigation of the business and production principles of electronic publishing of magazines.

535 COMMUNICATION IN ORGANIZATIONS 3 credits
Overview of the approaches to understanding communication flow and practices in organizations, including interdepartmental, networks, superordinate, formal and informal communication.

536 ADVANCED ORGANIZATIONAL COMMUNICATION 3 credits
Prerequisite: 535 or permission. Methodology for indepth analysis and application of communication in organizations; team building, conflict management, communication flow, individual and group projects; simulations.

537 TRAINING METHODS IN COMMUNICATION 3 credits
Principles and concepts in the design and delivery of communication training programs; integration of theory and methodology, presentation skills, matching methods and learner needs.

538 HEALTH COMMUNICATION 3 credits
This course presents an overview of health communication theory and research issues in interpersonal, small group, organizational, public relations, and mass media contexts.

546 WOMEN, MINORITIES, AND MEDIA 3 credits
Examination of the media's portrayal of white women and people of color and the roles of media decisionmakers as powerful counterparts to these images.

555 THEORY OF GROUP PROCESSES 3 credits
Group communication theory and conference leadership as applied to individual projects and seminar reports.

557 PUBLIC SPEAKING IN AMERICA 3 credits
Survey and critical analysis of major speakers, speeches and speech movements in American history. Examines how style and content of American speaking influenced events and reflected the times.

559 LEADERSHIP AND COMMUNICATION 3 credits
Theories of leadership and communication across public, organizational, small group, interpersonal, and political contexts. Assessment tools provided. Guest speakers.

562 ADVANCED MEDIA WRITING 3 credits
Practical applications of script writing principles and techniques, focusing on the skills and discipline required to finish an entire script.

568 ADVANCED AUDIO/VIDEO EDITING 3 credits
Prerequisite: Permission of instructor. Advanced computerized multi-track audio and video editing. Theory and practice of multi-track sound mix for video productions.

571 THEORIES OF RHETORIC 3 credits
Study of key figures in the history of rhetorical theory, stressing interrelationships among theories of rhetoric, intellectual climates and social climates.

575 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 analyzed.

581 FILM AS ART: AN INTRODUCTION TO THE FILM FORUM 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 narrative and the documentary structure.

590 COMMUNICATION WORKSHOP 3 credits (May be repeated for a total of six credits) Group study or project investigating a particular phase of media not covered by other courses in curriculum.

600 INTRODUCTION TO GRADUATE STUDY IN COMMUNICATION 3 credits
Introduction to the ideas and scholarship that constitute the various research interests in the field of communication.

602 QUALITATIVE METHODS IN COMMUNICATION 3 credits
Prerequisite: 600. The course covers paradigms underlying qualitative inquiry, major methods of inquiry, and techniques utilized in the communication discipline. The course fosters student's ability to conduct qualitative research through gathering and analyzing data.

603 QUANTITATIVE METHODS IN COMMUNICATION 3 credits
An introduction to elementary concepts of empirical and quantitative research and their application in studies of mass media research topics.

606 COMMUNICATION PROBLEMS IN THE BASIC SPEECH COURSE 1 credit
Designed to train a graduate student in methods and materials of introductory speech course.

608 COMMUNICATION PEDAGOGY 3 credits
Familiarizes students with aspects of teaching communication and media courses at the college level.

624 SURVEY OF COMMUNICATION THEORY 3 credits
Study of dimensions of field of communication: information analysis, social context, and semantic analysis.

THEATRE 7800:

555 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.

567 CONTEMPORARY THEATRE STYLES 3 credits
Introduction to the ideas and scholarship that constitute the various research interests in the particular phase of media not covered by other courses in curriculum.

572 METHODS OF TEACHING ELEMENTARY THEATRE ARTS 3 credits
Prerequisite: Graduate status. Course provides skills, knowledge, and experience essential to teaching effective and creative theatre arts in elementary school through current theories, methods, and materials.

573 METHODS OF TEACHING SECONDARY THEATRE ARTS 3 credits
Prerequisite: Graduate status. This course presents skills, knowledge, and experiences essential to teaching creative and innovative theatre arts in the secondary school through current theories, methods, and materials.

575 ACTING FOR THE MUSICAL THEATRE 3 credits
Prerequisite: permission. A special study course in analyzing and performing roles in musicals. Accompanist provided.

590 WORKSHOP IN THEATRE ARTS 1-3 credits
(May be repeated for a total of six credits). Prerequisite: Advanced standing or permission. Group study or project investigating particular phases of theatre arts not covered by other courses in curriculum.

600 RESEARCH AND WRITING TECHNIQUES 3 credits
Exploration of the basic research tools and methods appropriate to the discipline, including utilization of the computer. Guidelines for writing thesis.

603 SPECIAL TOPICS IN THEATRE ARTS 1-4 credits
(May be repeated as different subject areas are covered, but no more than 12 credits may be applied toward M.A. degree) Traditional and experimental courses in theatre, supplementing those listed in the General Bulletin.

605 COLLOQUIUM ON THE ARTS 3 credits
A brief exploration of the major visual and performing forms and organizations examined in relationship to the business management of arts. Team-taught.

641 PROBLEMS IN DIRECTING 3 credits
Advanced directing course with special emphasis on staging of complex plays from all periods of dramatic literature.

645 SEMINAR IN DRAMATIC LITERATURE 3 credits
Representative Western stage play (non-American) are examined in theatrical, historical, and critical/theoretical contexts.

646 GRADUATE ACTING: TECHNIQUES 3 credits
Advanced study of basic acting techniques, especially Stanislavski, through analysis and performance. Voice/Movement Lab required.

648 GRADUATE ACTING: PROBLEMS 3 credits
Study of problems confronting the advanced actor in various modern styles of performance. Voice/Movement Lab required.

658 HISTORY OF THEATRE 3 credits
Theatre history from the Greeks to the present with emphasis on physical theatre, conventions, and theatre architecture of each period.

659 STAGE LIGHTING DESIGN AND TECHNOLOGY 3 credits
Study of the art and technique of stage lighting design, including drafting of lighting plots, function of lighting instruments and of intensity control.

660 ADVANCED TECHNICAL THEATRE 3 credits
Processes including multiple set productions, revolves and their rigging, techniques in simple hydraulics, pneumatics and load capacities, and properties and techniques in multi-media.

662 SEMINAR IN SCENE DESIGN 3 credits
Prerequisite: 106 or undergraduate scene design course or permission of instructor. Study of problems in scene design portfolio projects, research of noted designers, studies of theatre spaces, and new scenicographic materials.

665 AUDIENCE DEVELOPMENT 3 credits
Developing audiences for the Arts through Arts marketing techniques, including training in season and single ticket campaigns, promotional strategies, media/public relations, market research, and telemarketing.

666 PRINCIPLES OF ARTS ADMINISTRATION 3 credits
Principles and practices in nonprofit arts management, including organizational structure, function of boards, personnel and volunteer management, and public policy for the arts.

625 THEORIES OF MASS COMMUNICATION 3 credits
A review of theories of mass media and studies exploring the effect of media.

645 INTERCULTURAL COMMUNICATION THEORY 3 credits
Analysis of the impact on the communication process of cultural difference between communicators; examination of existing literature in intercultural communication.

670 COMMUNICATION CRITICISM 3 credits
Introduces the basic elements, approaches and types of critical discourse as it is relevant to communication and mass media studies.

680 GRADUATE COMMUNICATION INTERNSHIP 1-6 credits
(May be repeated for a total of six credits.) Prerequisites: must have attained the category of full-time standing and be in good standing in the School's graduate program; must receive permission and approval of internship placement and research proposal. Provides communication graduate students with opportunity to obtain experience and to apply knowledge of academic concepts in a supervised work setting in the communication field.

691 ADVANCED COMMUNICATION STUDIES 3 credits
(May be repeated for a total of six credits.) Special topics in communication in areas of particular faculty expertise. Consult department for particular topic each semester.

697 GRADUATE RESEARCH IN COMMUNICATION 1-6 credits
(May be repeated for a total of six credits.) Prerequisites: 7800:600 and approval of project prospectus one term prior to undertaking the project. Performance of research on problems found in mass media-communication.

698 MASTER'S PROJECT/PRODUCTION 1-6 credits
(May be repeated for a total of six credits.) Prerequisite: Permission of the school director.

699 MASTER'S THESIS 1-6 credits
(May be repeated for a total of six credits.) Prerequisite: Permission of the school director.
Health Sciences & Human Services

FAMILY AND CONSUMER SCIENCES 7400:

500 NUTRITION COMMUNICATION AND EDUCATION SKILLS 4 credits
Preparation of instructor. Theory and development of communication and education skills essential to dietetics practice; interpersonal communication; interviewing; nutrition counseling; education techniques, media, and current technology.

501 AMERICAN FAMILIES IN POVERTY 3 credits
Overview of the issues, trends, and social policies affecting American families living in poverty. Online section available.

502 ADVANCED FIBER ARTS 2 credits
Prerequisite: Permission of instructor. An advanced course that builds on the skills learned in the prerequisite, with the intention of reaching a caliber suitable for one of the many professionals in this field, including business aspects such as market analysis and product development.

503 ADVANCED FOOD PREPARATION 3 credits
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.

504 MIDDLE CHILDHOOD AND ADOLESCENCE 3 credits
Prerequisite: 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.

506 FAMILY FINANCIAL MANAGEMENT 3 credits
Analysis of the family as a financial unit including financial problems and their resolution, decision-making patterns and financial practices behavior. Cases, exercises, problems and computer analysis.

507 FCS OCCUPATIONAL EMPLOYMENT EXPERIENCE 4 credits
Provides student with knowledge of current business and industrial practices at level minimally compatible with employment expectations of graduates of vocational job training programs in Family and Consumer Sciences.

513 FOOD SYSTEMS MANAGEMENT I 3 credits
Prerequisite: Acceptance into the graduate program or permission of instructor. Advanced concepts in management of dietary service systems relating to achievement of nutritional care goals.

514 FOOD SYSTEMS MANAGEMENT II CLINICAL 3 credits
Prerequisite: Acceptance CP program. Corequisite: 513. This clinical experience is designed to prepare students for depth the role and responsibility of the Management RD/Food Service Director. Professional competencies are learned, leading to employment as an entry level dietitian.

518 HISTORY OF INTERIOR DESIGN I 4 credits
The study of furnishings, interiors, and architecture from antiquity through the eighteenth century, with emphasis on the socio-cultural influences shaping their development.

519 HISTORY OF INTERIOR DESIGN II 4 credits
The study of nineteenth and twentieth-century furnishings and interiors, with emphasis on the socio-cultural influences shaping their development.

522 TEXTILES FOR INTERIORS 3 credits
Prerequisite: Permission of instructor. Evaluation of physical, aesthetic, comfort, care, and durability properties of textile products and testing procedures to determine suitability for desired end uses and as it relates to interior fabrics.

524 NUTRITION IN THE LIFE CYCLE 3 credits
Prerequisite: Permission of instructor. Study of the physiological basis for nutritional requirements; understanding factors affecting growth, development, maturation and nutritional status from conception through the elderly years.

525 TEXTILES FOR APPAREL 3 credits
Prerequisite: Permission of instructor. Evaluation of physical, aesthetic, comfort, care and durability properties of textile products and testing procedures to determine suitability for desired end uses.

526 HUMAN NUTRITION 3 credits
Prerequisite: Acceptance into the graduate program or permission of instructor. Corequisite: 543. Application of principles of nutrition, metabolism, and assessment. Analysis and interpretation of current literature.

527 GLOBAL ISSUES IN TEXTILES AND APPAREL 3 credits
Prerequisite: Permission of instructor. Examines the global structure and scale of the textile and apparel industries emphasizing an economic perspective.

528 NUTRITION IN MEDICAL SCIENCE II 3 credits
Prerequisite: Acceptance into the graduate program or permission of instructor. Emphasizing nutritional implications of more complex metabolic and pathological conditions as well as nutrition support strategies.

529 NUTRITION IN MEDICAL SCIENCE II CLINICAL 3 credits
Prerequisite: Admission to CP program. Corequisite: 528. Clinical experience in hospitals; application of principles of nutritional care.

531 PROFESSIONAL PRESENTATION SKILLS IN FAMILY & CONSUMER SCIENCES 3 credits
Prerequisite: Permission of instructor. 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.

536 TEXTILE CONSERVATION 3 credits
Prerequisite: Permission of instructor. Principles and practices of textile conservation with emphasis on procedures appropriate for collectors and small historical agencies.

537 HISTORIC COSTUME 3 credits
Study of western costume and textiles from antiquity to 1830, with emphasis on social-cultural influences.

538 HISTORY OF FASHION 3 credits
Prerequisite: Permission of instructor. Study of western fashion, textiles, and designers from the sixteenth century to the present, with emphasis on social-cultural influences.

540 FAMILY CRISIS 3 credits
Study of family stress and crisis including internal and external variables and their influence on degree of disorganization, coping and recovery. Includes theory, research and application dimensions.

541 FAMILY RELATIONSHIPS IN MIDDLE AND LATER YEARS 3 credits
Study of family patterns and problems during middle and later years of life with emphasis on psychological and biological changes and economic and social adequacy. Research and trends in gerontology.

542 HUMAN SEXUALITY 3 credits
Prerequisite: Permission of instructor. Introduction to problems and values. Emphasis is on the role of values in intimate relationships, the diverse dimensions of sexual responsibility.

543 NUTRITION ASSESSMENT 3 credits
Corequisite: 513 or permission. Application of principles of nutrition and assessment. Analysis and interpretation of current literature. Open to dietetics majors only.

544 NUTRITION IN MEDICAL SCIENCE LONG TERM CARE - CLINICAL 2 credits
Prerequisites: CP graduate students only. Clinical experiences in long term care facilities for application of principles of nutritional care.

546 CULTURE, ETHNICITY AND THE FAMILY 3 credits
Study of the role of culture and ethnicity in adaptation of the family system to environment. Program applications considered. Online section available.

548 BEFORE AND AFTER SCHOOL CHILD CARE 2 credits
Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.

549 FLAT PATTERN DESIGN 3 credits
Prerequisite: Permission of instructor. Theory and experience in clothing design using flat pattern techniques.

551 CHILD IN THE HOSPITAL 4 credits
Prerequisite: Permission of instructor. Seminar dealing with special needs and problems of hospitalized child and family. Literature related to effects, separation, illness and stress. Examination of strategies for coping.

552 CHILD, ILLNESS AND LOSS 3 credits
This course examines the phenomena of illness, loss and bereavement in modern society with a special emphasis on children and families.

553 FACILITATING SUPPORT GROUPS 3 credits
Theories, strategies, and skills needed to facilitate support groups for children and adults are studied using a variety of approaches including participation in a support group.

555 PRACTICUM EXPERIENCE IN A CHILD LIFE PROGRAM 3 credits
Prerequisite: 561 or permission of instructor. Field experience in a child life program and classroom activities including critical analysis of a currently functioning program and program administration.

560 ORGANIZATION AND SUPERVISION OF CHILD-CARE CENTERS 3 credits
Theory, principles and procedures involved in establishing and operating centers for infants, toddlers, preschool and school-age children.

561 CASE MANAGEMENT FOR CHILDREN AND FAMILIES I 3 credits
Provides an overview of Case Management basics in a multi-systems collaborative context. Includes roles, values, principles, state and service systems, and service coordination.

562 CASE MANAGEMENT FOR CHILDREN AND FAMILIES II 3 credits
Prerequisite: 561. Provides in-depth exploration of Case Management principles and practice. Emphasis on process and functions, assessment, cross-system service planning and coordination, advocacy, and cultural diversity.

570 THE FOOD INDUSTRY: ANALYSIS AND FIELD STUDY 3 credits
Prerequisite: permission. Role of technology in extending the food supply. Chemical, physical and biological effects of processing and storage, on-site tours of processing plants.

574 CULTURAL DIMENSIONS OF FOOD 3 credits
An examination of cultural, geographical and historical influences on development of food habits. Emphasis on evolution of diets; effects of religion, education, gender roles, media.

576 DEVELOPMENTS IN FOOD SCIENCE 3 credits
Prerequisite: permission. Advanced study of the chemistry and physics of food components, affecting characteristics of foods. Critical evaluation of current basic and applied research emphasized.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>715</td>
<td>CENTRAL AUDITORY PROCESSING: EVALUATION AND MEASUREMENT</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 705 and 706. Study of audiological evaluation and habituation/rehabilitation procedures for people having hearing impairments.</td>
<td></td>
</tr>
<tr>
<td>716</td>
<td>ADULT HEARING AID FITTING AND SELECTION</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 713. Examination of the theory and practice of fitting hearing aids. Emphasis on special clinical procedures, research needs, and evolving technology in hearing instruments (includes 1 credit hour lab).</td>
<td></td>
</tr>
<tr>
<td>717</td>
<td>PEDIATRIC AUDIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 709. Study of audiological diagnostic and auditory habilitative protocols for the birth to three year age group. Both assessment and management strategies will be emphasized.</td>
<td></td>
</tr>
<tr>
<td>718</td>
<td>COCHLEAR IMPLANTS</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Study of cochlear implants in children and adults including equipment, candidacy, mapping, and overview of utilization/rehabilitation.</td>
<td></td>
</tr>
<tr>
<td>719</td>
<td>COUNSELING IN AUDIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Focus on counseling, assessment, screening, and interaction with individuals with hearing impairments, their families, and significant others.</td>
<td></td>
</tr>
<tr>
<td>720</td>
<td>PEDIATRIC AMPULATION</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 713, 716. The focus of study is on amplification systems and fitting techniques for the pediatric population.</td>
<td></td>
</tr>
<tr>
<td>721</td>
<td>EVALUATION AND MANAGEMENT OF BALANCE DISORDERS</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Study of the balance mechanism; differential diagnostic assessment of balance disorders including electromyography, posturography and rotational testing; rehabilitation of the balance disordered patient (includes 1 credit hour lab).</td>
<td></td>
</tr>
<tr>
<td>722</td>
<td>AUDILOGIC MANAGEMENT OF THE SCHOOL-AGED CHILD</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 717. Focus on educational audiological features delivery of audiological services designed to access the school environment for children ages 4-21.</td>
<td></td>
</tr>
<tr>
<td>723</td>
<td>AUDILOGIC REHABILITATION OF ADULTS</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 716. Study of current methodologies employed in the audiological rehabilitation of adult listeners. Implementation of remedial strategies is emphasized.</td>
<td></td>
</tr>
<tr>
<td>724</td>
<td>HISTORY OF AUDIOLOGY</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. An examination of the history of deafness/hearing impairment and the profession of audiology.</td>
<td></td>
</tr>
<tr>
<td>725</td>
<td>MEDICAL MANAGEMENT OF AUDITORY DISORDERS</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 712. A study of the multidisciplinary approach to medical/surgical management of the normal and disordered ear.</td>
<td></td>
</tr>
<tr>
<td>726</td>
<td>ELECTROPHYSIOLOGICAL TECHNIQUES IN AUDIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 709. Study of evoked responses used in diagnostic audiology, including ABR, VNG, ECoG, ENG, ALP, P300, VER, and SSS.</td>
<td></td>
</tr>
<tr>
<td>727</td>
<td>CULTURAL ISSUES IN DEAFNESS</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. An introduction to Deaf Culture and the audiologist's roles and responsibilities in planning treatment with members of the deaf community.</td>
<td></td>
</tr>
<tr>
<td>728</td>
<td>SEMINAR IN AUDIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Selected current topics in audiology with emphasis on review of current literature. Course may be repeated up to six credits.</td>
<td></td>
</tr>
<tr>
<td>729</td>
<td>RESEARCH PROJECT IN AUDIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission. Completion of a Doctoral Research Project including data collection, analysis, write-up, and oral presentation.</td>
<td></td>
</tr>
<tr>
<td>730</td>
<td>PRACTICE MANAGEMENT IN AUDIOLOGY</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Study of issues which impact the management of audiological practices, including establishing a private practice, reimbursement, marketing, record keeping and professional liability.</td>
<td></td>
</tr>
<tr>
<td>731</td>
<td>FOURTH YEAR SEMINAR</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Corequisites: 749 or 750 or permission of instructor. In-depth perspective of topics/issues in the practice of audiology with emphasis upon issues related to clinical rotation issues. Repeatable up to six credits.</td>
<td></td>
</tr>
<tr>
<td>741</td>
<td>DIRECTED OBSERVATION IN AUDIOLOGY I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: admission to the Au.D. program or permission of instructor. Introduction to clinical practicum in Audiology. Directed observation of clinical practice including audiological diagnosis and audiological rehabilitation are required. Repeatable up to six credits.</td>
<td></td>
</tr>
<tr>
<td>742</td>
<td>DIRECTED OBSERVATION IN AUDIOLOGY II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 741. Introduction to clinical practicum in Audiology. Directed observation of clinical practice including audiological diagnosis and audiological rehabilitation are required. Repeatable up to six credits.</td>
<td></td>
</tr>
<tr>
<td>743</td>
<td>CLERKSHIP I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Corequisite: 709. Clinical practicum in audiology during which students perform discrete tasks under supervision. Repeatable for up to 6 credits.</td>
<td></td>
</tr>
<tr>
<td>744</td>
<td>CLERKSHIP II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 743. Supervised clinical practicum in audiology during which students perform discrete clinical tasks while under supervision. Repeatable for up to 6 credits.</td>
<td></td>
</tr>
<tr>
<td>746</td>
<td>INTERNSHIP IN AUDIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: 744 and permission. Supervised practicum in audiology requiring the independent performance of basic audiological procedures, including hearing aid management. Repeatable up to eight credits.</td>
<td></td>
</tr>
<tr>
<td>747</td>
<td>INTERNSHIP IN AUDIOLOGY II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 745 and permission. Supervised clinical practicum in audiology requiring the independent performance of clinical practicum in audiology, hearing aids, and audiological rehabilitation procedures. Repeatable up to eight credits.</td>
<td></td>
</tr>
<tr>
<td>748</td>
<td>GRADUATE AUDIOLOGIST</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 746. Supervised clinical practicum in audiology which encompasses audiological assessments and audiological rehabilitation. Repeatable for up to 9 credits.</td>
<td></td>
</tr>
<tr>
<td>749</td>
<td>GRADUATE AUDIOLOGIST II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 747 and permission. Supervised clinical practicum in audiology requiring the independent performance of audiological procedures, audiological rehabilitation, and vestibular assessment and rehabilitation. Repeatable for up to 9 credits.</td>
<td></td>
</tr>
<tr>
<td>750</td>
<td>GRADUATE AUDIOLOGIST III</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: 748. Supervised clinical practicum in audiology. Successful completion of PRAXIS Examination. Corequisite: 731. Supervised clinical practicum in audiology requiring the independent performance of audiological assessment procedures, audiological rehabilitation, and vestibular assessment and rehabilitation. Repeatable up to 24 credits.</td>
<td></td>
</tr>
</tbody>
</table>
SOCIAL WORK 7750:

558 ADULT DAY CARE
3 credits
Prerequisite: for 458: 276 or permission of instructor; for 558: permission of instructor. Planning, development, implementing, evaluating, and delivery of adult day-care services.

580 SPECIAL TOPICS IN SOCIAL WORK AND SOCIAL WELFARE
1.5 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.

597 INDIVIDUAL INVESTIGATIONS IN SOCIAL WORK SOCIOLOGY
1.5 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 appropriate to nature of topic. For social work major.

601 FOUNDATION FIELD PRACTICUM
3 credits
Prerequisite: first of two field practicum courses to be taken in the first year of the MSW program. A two-semester, 500 clock hour, supervised internship at a social agency. Credit/no credit. (Offered only Fall Semester.)

602 FOUNDATION FIELD PRACTICUM
3 credits
Prerequisite: second of two field practicum courses to be taken in the first year of the MSW program. A two-semester, 500 clock hour, supervised internship at a social service agency. Credit/no credit. (Offered only Spring Semester.)

603 ADVANCED FIELD PRACTICUM
3 credits
Prerequisite: first of two practicum courses to be taken in the second year of the MSW program. A two-semester, 500 clock hour, supervised internship in a social service agency, based on the student's concentration and specialization. Credit/no credit. (Offered only Fall Semester.)

604 ADVANCED FIELD PRACTICUM
3 credits
Prerequisite: second of two practicum courses to be taken in the second year of the MSW program. A two-semester, 500 clock hour, supervised internship in a social service agency, based on the student's concentration and specialization. Credit/no credit. (Offered only Spring Semester.)

605 SOCIAL WORK PRACTICE WITH SMALL SYSTEMS
3 credits
Prerequisite: Graduate status or permission of instructor. Provides the basic knowledge, skills, professional ethics and values necessary for beginning social work practice with small client systems.

606 SOCIAL WORK PRACTICE WITH LARGE SYSTEMS
3 credits
Prerequisite: 605 or permission of instructor. Provides the basic knowledge, skills, and strategies of social work practice with task groups, organizations and communities.

607 ADVANCED PRACTICE WITH SMALL SYSTEMS I
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course focuses on the differential assessment of individuals, families and small groups and the application of a range of theory bases.

608 ADVANCED PRACTICE WITH SMALL SYSTEMS II
3 credits
Prerequisite: 607 or permission of instructor. As a continuation of Advanced Practice I, this course focuses on the development and implementation of intervention strategies with and on behalf of small systems.

610 DYNAMICS OF RACISM AND DISCRIMINATION
3 credits
Prerequisite: Gradate status or permission of instructor. Provides knowledge of analysis and understanding the factors leading to and sustaining racism, sexism, homophobia, and the like, at micro and macro levels.

622 FUNDAMENTALS OF RESEARCH I
3 credits
Prerequisite: Graduate status or permission of instructor. This course provides an introduction to the logic of scientific inquiry, the research process, and the relationship between research and social work practice.

623 FUNDAMENTALS OF RESEARCH II
3 credits
Prerequisite: 622; statistics course, or permission of instructor. Provides students with an understanding of quantitative and qualitative methodologies and the use of descriptive and inferential statistics in analyzing research data.

631 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT SMALL SOCIAL SYSTEMS
3 credits
Prerequisite: Graduate status or permission of instructor. This course focuses on understanding the human behavior and life cycle development of people as individuals and as members of small group systems.

632 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT LARGE SOCIAL SYSTEMS
3 credits
Prerequisites: 631 or permission of instructor. This course focuses on the human behavior of people as members of larger social systems including formal and informal organizations, communities, and institutions.

646 SOCIAL WELFARE POLICY I
3 credits
Prerequisite: graduate status or permission of instructor. Examines the historical, philosophi- cal and value bases of social welfare as well as the relationship between social work practice, policy and service delivery.

647 SOCIAL WELFARE POLICY II
3 credits
Prerequisite: 646 or permission of instructor. This course prepares students with the beginning skills to engage in social policy/program analysis.

690 ADVANCED STANDING INTEGRATIVE SEMINAR
6 credits
Prerequisite: Advanced standing or permission of instructor. Provides an integrative view of social work practice emphasizing on values, foundation knowledge and skills, and evaluation of professional inter- ventions.

691 SOCIAL WORK PRACTICE WITH GAYS AND LESBIANS
3 credits
Prerequisite: Second level graduate status or permission of instructor. This course examines gay and lesbian culture and lifestyles, discrimination based on sexual orientation, and intervention strategies appropriate to practice with gays and lesbians.

663 PSYCHOPATHOLOGY AND SOCIAL WORK
3 credits
Prerequisite: Second level graduate student or permission of instructor. An examination of the somatic, psychological, and psychosocial aspects of mental illness, and the role of the social worker in the treatment of mental disorders.

664 DIRECT PRACTICE RESEARCH
3 credits
Prerequisite: Second level graduate student or permission of instructor. Provides students with advanced knowledge about the methodology of single-system design and skills to implement an evaluation study of their intervention with clients.

665 SUPERVISION AND STAFF DEVELOPMENT
3 credits
Prerequisite: Second level graduate student or permission of instructor. An examination of the purpose, functions, and theories of supervision; the impact of cultural, ethnic and racial differ- ences in supervision/staff development; and problems encountered.

671 SOCIAL WORK ADMINISTRATION
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course focuses on supervisory and managerial roles and functions as they are carried out at different hierarchical levels in human service organizations.

672 COMMUNITY ORGANIZATION AND PLANNING
3 credits
Prerequisite: Must have completed first year of master's program. Required for all second year students concentrating on Macroeconomics. Seeks to understand how people and organizations work in the community, plan and organize strategies to meet identified needs, and work towards building a better community.

673 STRATEGIES OF COMMUNITY ORGANIZATION
3 credits
Prerequisite: Second level graduate student or permission of instructor. Emphasizes the his- torical development and application of several community strategies used to identify community problems, and how to organize and empower diverse community groups.

674 COMMUNITY, ECONOMIC SYSTEMS AND SOCIAL POLICY ANALYSIS
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course provides a base for understanding economic systems and analyzing the political framework at federal, state, and local levels and their impact on communities.

675 PROGRAM EVALUATION
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course provides students with the methods of evaluating programs and agencies, including planning, measurement, design, data collection and analyses employed in program outcome research.

676 FISCAL MANAGEMENT OF SOCIAL AGENCIES
3 credits
Prerequisite: Second level graduate student or permission of instructor. This elective course concentrates on the financial management of social administration, financial planning and man- agement, principles of economic and fiscal exchange, accountability and fiscal accounting.

680 SOCIAL WORK AND SOCIAL WELFARE
3 credits
Prerequisite: Second level graduate student or permission of instructor. An examination and evaluation of aging programs and policies, demographic trends and the changing role of social work service providers.

681 AGING: POLICIES AND PROGRAMS
3 credits
Prerequisite: Second level graduate student or permission of instructor. An examination and evaluation of aging programs and policies, demographic trends and the changing role of social work service providers.

685 SOCIAL WORK PRACTICE: FAMILY AND CHILDREN
3 credits
Prerequisite: Second level graduate student or permission of instructor. Examines the major problems encountered by children and families in the life cycle and explores intervention strategies and programs to address their needs and strengths.

686 SOCIAL WELFARE POLICY AND SERVICES: FAMILY AND CHILDREN
3 credits
Prerequisite: Second level graduate student or permission of instructor. Examines the federal and state laws, policies, and services governing children and families, including the support- ive, supplemental and substitute aspects of services.

690 ADVANCED PRACTICE AND POLICY IN SUBSTANCE ABUSE
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course provides students the knowledge and skill base necessary for managing and practice with people involved in substance abuse, evaluating programs, and preventive work.

693 SPECIAL TOPICS FOR ADVANCED SOCIAL WORK PRACTICE
1.5 credits
Prerequisite: Admission to MSW program or permission of program director. Directed analysis and study of current practice issues and considerations faced by social work practitioners providing services and interventions at advanced levels.

695 HEALTH CARE: PLANNING AND POLICY ISSUES
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course is designed to orient students to the planning and policy issues in health care, and how social work practice can interface with health care institutions and organizations.

696 EPIDEMIOLOGIC ANALYSIS OF HEALTH AND SOCIAL PROBLEMS
3 credits
Prerequisite: Second level graduate student or permission of instructor. This course applies the epidemiological method to social work practice, such as treatment groups, making adminis- trative decisions, in planning and evaluation, and doing preventive work.
628 ADULT/GERONTOLOGICAL HEALTH NURSING NP II PRACTICUM 2 credits
Prerequisites: Admission to Adult/Gerontological Nurse Practitioner track or Post-MSN certifi-
cation in NP. 620, 627; corequisites: 621 or its equivalent for Post-MSN, 690. Practicum will
focus on health appraisal/risk reduction and common, uncomplicated acute or chronic ill-
ness states of the adult/older adult.

629 ADULT/GERONTOLOGICAL HEALTH NURSING NP III PRACTICUM 2 credits
Prerequisites: 626, 629; course work will emphasize on complex chronic illness states and Comorbidities of the adult/older adult.

630 RESOURCE MANAGEMENT IN NURSING SETTINGS 3 credits
Prerequisites: Admission to Graduate Program or permission of instructor. Examination of
management of fiscal and human resources in nursing service settings; analyzes impact of econom-
omic and regulatory influences on resource allocation and provision of care.

632 FISCAL MANAGEMENT IN NURSING ADMINISTRATION 3 credits
Prerequisites: Admission to Graduate Program or permission of instructor. Examination of
management of fiscal resources in nursing service settings.

636 LEADERSHIP IN NURSING ORGANIZATIONS II 3 credits
Prerequisites: 630, 632, 635. Leadership and management theories are utilized to guide the practice in the role of nurse administrator.

639 ORGANIZATIONAL BEHAVIOR IN NURSING SETTINGS 3 credits
Prerequisites: Admission to Graduate Program or permission of instructor. Examines organi-
zational behavior theories/principles related to systems analysis and assessment of organiza-
tional structure in nursing settings.

636 ADULT/GERONTOLOGICAL HEALTH NURSING CNS RESIDENCY 2-4 credits
Prerequisites: 673, 679. This clinical residency focuses on components of influencing change,
systems thinking, leadership within a multidisciplinary collaborative environment using out-
come measurement and evaluation.

637 NURSE ANESTHESIA RESIDENCY I 4 credits
Prerequisites: 644, 645. This course introduces the second year student to the art and science of administering and monitoring regional anesthesia in surgical and other acute care settings.

638 NURSE ANESTHESIA RESIDENCY II 4 credits
Prerequisites: 633, 638; corequisites: 634. Leadership and management theories are utilized to guide the study of the role of nurse administrator.

640 SCIENTIFIC COMPONENTS OF NURSE ANESTHESIA 3 credits
Prerequisite: admission into the Nurse Anesthesia program. The course covers content dealing with the chemical and physical components of anesthesia agents.

641 PHARMACOLOGY FOR NURSE ANESTHESIA I 3 credits
Prerequisite: 640. The study of intravenous induction agents, injectable anesthetics and inhaler anesthetics commonly used in the administration of general anesthesia. Includes use of muscle relaxants.

642 INTRODUCTION TO NURSE ANESTHESIA 2 credits
Prerequisite: admission into the Nurse Anesthesia program. This course provides a general overview of anesthetic concepts and preparation for entry into a hospital residency. The course includes a lecture component and selected laboratory experiences.

643 PRINCIPLES OF ANESTHESIA I 4 credits
Prerequisite: 641. This course focuses on the acquisition of basic skills related to nurse anes-
thesia care and administration of anesthesia agents, with a focus on equipment.

644 PHARMACOLOGY FOR NURSE ANESTHESIA II 3 credits
Prerequisite: 641. Focuses on mechanisms of drug transport within the human body for inhalad and injected medications. The effects of accessory drugs are also discussed.

645 PRINCIPLES OF ANESTHESIA II 4 credits
Prerequisite: 643. Emphasis on pre-operative anesthesia care including induction techniques. Discusses airway management, equipment, and ventilator use.

646 NURSE ANESTHESIA RESIDENCY II 4 credits
Prerequisite: 637. Concentration on the theoretical basis for specific nursing interventions and the rationale for their use in the administration of anesthesia, cardiac anesthesia, vascular anesthesia, and neurosurgical anesthesia management.

647 PROFESSIONAL ROLE SEMINAR 2 credits
Prerequisites: 643, 645. Discusses issues, concepts and theories related to the professional role of nurse anesthetists. Focuses on leadership/management content as well as profes-
sional ethical issues.

648 NURSE ANESTHESIA RESIDENCY III 4 credits
Prerequisite: 646. Focuses on the understanding of physiologic and pathophysiologic prin-
ciples of particular organ systems and the relevant implication that govern anesthetic manage-
ment.

649 NURSE ANESTHESIA RESIDENCY IV 4 credits
Prerequisite: 648. Comprehensive review of basic and advanced anesthetic concepts impor-
tant to the entry level nurse anesthetist.

650 ADVANCED PEDIATRIC/ADOLESCENT ASSESSMENT 3 credits
Prerequisites: acceptance to Child and Adolescent Health Nursing track or permission of fac-
culty. 630, 637; corequisites: 650. Emphasis on the professional and ethical issues associated with adoles-
cent primary care nursing with introduction to differential diagnosis and clinical management.

651 CHILD AND ADOLESCENT HEALTH NURSING I 3 credits
Primary care nursing to enhance positive health behavior outcomes of well children/adolescents and those with minor health disruptions and problems in family/community contexts.

652 CHILD AND ADOLESCENT HEALTH NURSING I PRACTICUM 2 credits
Prerequisite: Admission to Child and Adolescent Health Nursing track or Post-MSN certifi-
cation in NP. 651; corequisites: 652, 653. Practicum course emphasizes primary health care
nursing to enhance positive health behavior outcomes of well children/adolescents, and those
with minor health disruption/problems in family/community contexts.

653 CHILD AND ADOLESCENT HEALTH NURSING II PRACTICUM 2 credits
Prerequisites: admission to Child and Adolescent Health Nursing NP track or Post-MSN certifi-
cation in NP. 651; corequisites: 652, 653. Practicum course emphasizes primary health care
nursing to enhance positive health behavior outcomes of well children/adolescents, and those
with minor health disruption/problems in family/community contexts.

654 CHILD AND ADOLESCENT HEALTH NURSING III PRACTICUM 2 credits
Prerequisite: 655. Clinical practicum course emphasizes on advanced practice in primary health care using consultation and program development, market-related to development and health behavior outcomes of children, adolescents, and families.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>670</td>
<td>ECONOMICS I</td>
<td>3</td>
<td>Provides a foundation in microeconomics and macroeconomics for students in other fields.</td>
</tr>
<tr>
<td>671</td>
<td>ECONOMICS II</td>
<td>3</td>
<td>Continues with microeconomic and macroeconomic analysis, focusing on production, distribution, and utilization of resources.</td>
</tr>
<tr>
<td>672</td>
<td>LEARNING THEORIES AND METHODS IN NURSING EDUCATION</td>
<td>3</td>
<td>Focuses on evidence-based teaching and learning strategies in nursing education.</td>
</tr>
<tr>
<td>673</td>
<td>PSYCHIATRIC MENTAL HEALTH-SYNTHESIS, APN IV</td>
<td>2</td>
<td>Prepares students to apply advanced practice skills in psychiatric mental health care using a multidisciplinary approach.</td>
</tr>
<tr>
<td>674</td>
<td>CLINICAL PSYCHOPHARMACOLOGY</td>
<td>3</td>
<td>Covers pharmacological principles and application in clinical settings.</td>
</tr>
<tr>
<td>675</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II</td>
<td>2</td>
<td>Focuses on acute care management of psychiatric patients.</td>
</tr>
<tr>
<td>676</td>
<td>PSYCHIATRIC MENTAL HEALTH POST MSN RESIDENCY</td>
<td>1-4</td>
<td>Offers clinical experiences to integrate theory and clinical practice in psychiatric mental health care.</td>
</tr>
<tr>
<td>677</td>
<td>PSYCHIATRIC MENTAL HEALTH-CHRONIC, APN III</td>
<td>3</td>
<td>Prepares students to manage chronic psychiatric conditions in adults.</td>
</tr>
<tr>
<td>678</td>
<td>PSYCHIATRIC MENTAL HEALTH-SYNTHESES, APN IV PRACTICUM</td>
<td>2</td>
<td>Provides practical experience in psychiatric mental health care.</td>
</tr>
<tr>
<td>679</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>680</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>681</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>682</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>683</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>684</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>685</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>686</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>687</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>688</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>689</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>690</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>691</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>692</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
<tr>
<td>693</td>
<td>PSYCHIATRIC MENTAL HEALTH-ACTE, ACUTE II PRACTICUM</td>
<td>2</td>
<td>Offers supervised practice in acute care psychiatric mental health care.</td>
</tr>
</tbody>
</table>

Graduate Courses
POLYMER ENGINEERING 9841:

525 INTRODUCTION TO BLENDBINDING AND COMPOUNDING POLYMERS 3 credits
Prerequisites: Permission of instructor. Material, polymer blends, and compound properties including
applications. Preparation and technology using batch and continuous mixers. Mixing mecha
nism, polymer science.

527 MOLD DESIGN 3 credits
Prerequisite: Permission of instructor. Molding methods to manufacture polymeric products.
Machinery, materials, molds, equipment, computer-aided design.

556 MATERIAL PROPERTIES OF POLYMERS 3 credits
Prerequisite: Permission of instructor. Introduction to engineering properties and polymer pro
cessing. Analyzing mechanical polymer tests in glassy, rubbery, and fluid states. Product design
development, theory, and polymer processing concepts.

551 POLYMER ENGINEERING LABORATORY 3 credits
Prerequisite: Permission of instructor. Laboratory experiments on the rheological characteri
zation of polymer melts, fabrication of engineering products, structural investigation of poly
meric parts.
POLYMER SCIENCE 9871:

601 POLYMER CONCEPTS 2 credits
Prerequisite: Permission of instructor. Introduction to basic concepts in polymer science, including polymerization, copolymerization processes and naturally occurring polymers. Polymer nomenclature, definitions and classifications. Polymer stereochemistry and structure-property relationships.

602 SYNTHESIS AND CHEMICAL BEHAVIOR OF POLYMERS 2 credits
Prerequisite: 601 or instructor's permission. Introduction to fundamentals and practical aspects of polymer synthesis and reactions of polymers; general knowledge of laboratory and commercial methods for polymer preparation; practical examples.

604 SPECIAL PROJECTS IN POLYMER SCIENCE 1-3 credits
Prerequisite: permission. Research projects of limited nature assigned to student entering polymer science program. Intended to familiarize student with typical problems and techniques in this field.

6028 POLYMER SCIENCE SEMINAR I AND II 1 credit each
Prerequisite: limited to first-and second-year resident graduate students. Participants are to present a 25-minute lecture on some aspect of polymer science and to participate in discussions of lectures presented by other seminar participants.

613 POLYMER SCIENCE LABORATORY 3 credits
Prerequisite or corequisites: at least one of the courses 601, 621, 674, or 701, or permission of instructor. Laboratory experiments in synthesis, characterization, physical properties and processing and testing of polymers.

615 LABORATORY COMPUTER APPLICATIONS IN POLYMER SCIENCE 2 credits
Prerequisite: Basic knowledge of computer programming and permission of instructor. Laboratory use of computers in polymer science research for data acquisition, data analysis, graphing, and preparation of reports and thesis.

631 PHYSICAL PROPERTIES OF POLYMERS I 2 credits
Prerequisite: permission of instructor. Thermodynamic and molecular basis of rubber elastic behavior; intermolecular mechanical properties of polymer materials; melt-flow and entanglements; the morphology of crystalline polymer materials; fracture of polymers.

632 PHYSICAL PROPERTIES OF POLYMERS II 2 credits
Prerequisite: 631 or permission of instructor. Normal-coordinate theories of molecular motion and applications to time-dependent mechanical, electrical, and scattering properties of polymeric systems; temperature superposition; free volume; WLF relation; fracture; glass transition.

674 POLYMER STRUCTURE AND CHARACTERIZATION 2 credits
Prerequisites: 3150:313 and 3150:314 or permission of instructor. Presentation of statistical transition polymerization, organic/inorganic hybrid materials, coating technology. Rheology of colloidal polymers.

675 POLYMER THERMODYNAMICS 2 credits
Prerequisite: 674 or permission of instructor. Presentation of the theories and experiments concerning polymer solutions, polymer phase equilibria, and polymer phase transitions and dilute solution steady-state transport.

699 MASTER'S THESIS 16 credits
Prerequisite: Permission. For properly qualified candidate for master's degree. Supervised original research in polymer science, under direction of faculty member, followed by submission of thesis.

701 POLYMER TECHNOLOGY I 2 credits
Principles of compounding and testing, processing principles and types of operation, design principles.

702 POLYMER TECHNOLOGY II 2 credits
Prerequisite: 701 or permission of instructor. Rubber industry, rubber compounding and processing, vulcanization methods, physical testing, plastics preparation and compounding, manufacturing processes. Lecture/laboratory.

703 POLYMER TECHNOLOGY III 2 credits
Prerequisite: 702 or permission of instructor. Flow properties, extrusion, calendaring and milling, molding, mixing, bond operations, engineering properties, rubber springs, viscoelastic analysis design consideration. Lecture/laboratory.
APPENDICES

Grievance Procedures for Graduate Students

Purpose
The procedures set forth in this document are intended to provide graduate students with a formal channel of appeal and redress of grievances arising out of their academic and/or employment relationship with the University.

Procedures
1. Any graduate student who believes that he or she has valid grounds for a complaint shall attempt to resolve the problem through a conference with the faculty member involved, the department head, and/or the graduate advisor. Following that, the student may attempt to resolve the problem with the assistance of the academic dean. A graduate student presenting a case to the academic dean must provide a full written statement of the grievance, together with all appropriate supporting material. When or if the problem has not been adequately solved at that level or the student wishes to appeal that decision, the student shall prepare a written statement of the complaint setting forth clearly and specifically the allegations and shall hand deliver the written complaint to the Dean of the Graduate School. The Dean of the Graduate School shall notify the complainant confirming the receipt of the complaint and shall request all materials from the Dean of the complainant's college.

2. Within one week of receipt of the complaint, the Dean of the Graduate School shall communicate with all parties in an attempt to informally resolve the problem. The result of this process will be a recommendation by the Dean of the Graduate School which will be communicated in writing to all parties, including the Senior Vice President and Provost.

3. The complaint shall become a grievance to be filed with the Senior Vice President and Provost if: (a) the Dean of the Graduate School wishes to have a Hearing Committee render a recommendation on the grievance; or (b) the student wishes to appeal the recommendation of the Dean of the Graduate School. The student must notify the Senior Vice President and Provost in writing within one week of notification of the Dean of the Graduate School's decision on the complaint.

4. Upon receipt of the grievance, the Senior Vice President and Provost shall notify in writing the President of Graduate Student Government that a Hearing Committee should be constituted. The Hearing Committee shall be organized in no more than two weeks.

5. When the grievance has been filed with the Chairperson of the Hearing Committee, it shall be the responsibility of that Chairperson to notify all parties involved in the grievance within two working days. This notification shall include the following information: that a grievance has been filed; the nature of the grievance; and the parties involved.

6. If the charged party in that grievance admits the validity of the grievance, the Chairperson of the Hearing Committee shall waive the hearing and shall direct an appropriate resolution in consultation with the Hearing Committee.

7. If the party charged in the grievance denies the validity of the grievance, the Hearing Committee shall conduct the hearing.

Hearing Committee
A Hearing Committee shall be established as follows:

1. Chairperson – The Chairperson shall be a member of the graduate faculty with full membership, but not from a department involved in the proceedings. This Chairperson shall be selected by the Senior Vice President and Provost and shall serve for only one grievance proceeding. The Chairperson shall conduct the hearing and shall vote only in the case of a tie.

2. Members – Four members shall be selected as follows:
   a. From the complainant’s department - a graduate student not directly involved, selected jointly by the Department Chair and the President of the Graduate Student Government. If the grievance is filed against the Department Chair, the Academic Dean shall substitute for the Department Chair. If the grievance is filed against the department, the Senior Vice President and Provost shall substitute for the Department Chair.
   b. From the complainant’s department - a faculty member not directly involved, selected jointly by the Department Chair and the President of the Graduate Student Government. If the grievance is filed against the Department Chair, the Academic Dean shall substitute for the Department Chair. If the grievance is filed against the department, the Senior Vice President and Provost shall substitute for the Department Chair.
   c. A graduate student not involved with the complainant and not from the complainant’s department, selected by the Vice Chairperson of the Graduate Council.
   d. A member of the graduate faculty with full membership not involved in the complaint nor from the complainant’s department, selected by the Senior Vice President and Provost.

3. A Hearing Committee shall be organized anew each and every time a grievance is brought forth. A Hearing Committee shall serve through the adjudication and resolution of the complaint.

Hearing Procedure
1. The hearing must take place within two weeks of the Hearing Committee’s formation.

2. At least three working days prior to the hearing, the Hearing Committee Chairperson shall provide the Hearing Committee and the Parties involved with:
   a. The student’s written statement of the grievance.
   b. Written notification of when and where the Hearing Committee shall meet.
   c. A copy of “Grievance Procedures for Graduate Students” and all relevant documents.

3. Each party shall be required to appear in person before the Hearing Committee to present his/her case. Each party may have an advisory colleague present to protect his/her rights if so desired. However, the parties shall speak and act on their own behalf. Witnesses may be called to present evidence on behalf of the complainant or the charged person. The use of tape recorders is prohibited, except as may be required to accommodate persons with disabilities.

4. All parties shall be entitled to an expeditious hearing. In urgent cases in which it is alleged that a regulation, administration decision, or action threatens immediate and irreparable harm to any of the parties involved, the Hearing Committee shall expedite the hearing and disposition of the case. The Hearing Committee is empowered to recommend to the Dean of the Graduate School that an individual, department, or college discontinue or postpone any action which threatens to cause irreparable harm, pending the final disposition of the case.

5. The burden of proof shall be on the complainant and the standards of justice and fair play shall prevail in the adjudication of violations and grievances.

6. If necessary, the Hearing Committee may consult with the University’s Office of General Counsel for advice at any time throughout this process.

Decisions and Actions
1. The Hearing Committee shall decide as follows: there has been a violation of the complainant’s rights, or there has been no violation of the complainant’s rights.

2. Should the Hearing Committee determine that a violation of the complainant’s rights occurred, the Committee shall, if practical, recommend a resolution to the Senior Vice President and Provost.

3. The Senior Vice President and Provost, exercising his/her judgment, shall act on the implementation of the resolution recommended by the Hearing Committee.

Record Keeping
The Chairperson of the Hearing Committee shall be responsible for keeping a summarized, written record of all the proceedings.

1. Records of all proceedings shall be prepared by the secretarial personnel of the Graduate School. Copies of all proceedings shall be distributed as follows:
   a. To all parties involved in the proceedings.
   b. To the Hearing Committee members.
   c. To the President of the Graduate Student Government.
   d. To the Dean of the Graduate School.
   e. To the Senior Vice President and Provost.

2. A copy of all proceedings shall be kept in the office of the Dean of the Graduate School pursuant to the University’s record retention proposal.

Appeal
An appeal may be made to the President of the University after all of the above procedures have been followed. The President of the University shall assess each case on an individual basis and his/her decision shall be considered final.

University Rule 3359-24-02
http://www.uakron.edu/opc/pdfs/a24-02.doc
Family Educational Rights and Privacy Act (FERPA)

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

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

Disclosure of Personally Identifiable Information

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

Annual Notification

Each year, The University of Akron is required to give notice of the various rights accorded to parents or students pursuant to the Family Education Rights and Privacy Act (FERPA). Parents and students, under FERPA, have a right to be so notified and informed. In accordance with FERPA, you are notified of the following:

- Right to Prevent Disclosures
  You have the right to prevent disclosure of Education Records to third parties with certain limited expectations. It is the intent of The University of Akron to limit the disclosure of information contained in your Education Records to those instances where prior written consent has been given for disclosures, as an item of directory information of which you have not refused to permit disclosure, or under the provisions of FERPA which allows disclosure without prior written consent.
- Right to Inspect
  You have the right to review and inspect substantially all of your Education Records maintained at or by The University of Akron.
- Right to Request an Amendment
  You have the right to have corrected any parts of any Education Record that you believe to be inaccurate, misleading, or otherwise in violation of your FERPA rights. This right includes the right to a hearing to present evidence that the record should be changed if this institution decides not to alter the Education Records.
- Right to Obtain Policy
  You have the right to obtain a copy of the written institutional policy adopted by The University of Akron in compliance with FERPA. A copy may be obtained in person or by mail from the FERPA coordinator, the University Registrar, whose office is located in Simmons Hall, Room 120. In addition, this policy may be accessed online at http://www.uakron.edu/ogc/docs/11-08_6-25-07.doc.
- Right to File a Complaint
  You have the right to file a complaint with the Family Educational Rights and Privacy Act Office at the Department of Education, 600 Independence Avenue, S.W., Washington, D.C., 20202-3887, (202) 260-0001, concerning any belief you may have that The University of Akron has failed to comply with the provisions of FERPA.

Release of Directory Information

The Family Educational Rights and Privacy Act of 1974 (FERPA) permits The University of Akron to release directory (public) information about students. Directory (public) information includes the student’s name, local (mailing) address, telephone number, major field of study, participation in officially recognized activities and sports, the student’s photograph, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous education agency or institution attended by the student.

Withhold Directory Information

If a student asks for directory information to be withheld, it will be withheld from a variety of sources, including friends, relatives, prospective employers, honor societies, the news media, and the commencement program. Students should carefully consider the consequences of a decision to withhold directory information.

Students may obtain a “DIRECTORY INFORMATION RESTRICTION REQUEST” form at http://www3.uakron.edu/registrar/DirInfoRel.doc or at the Office of the University Registrar.

Completed forms must be provided to the Office of the University Registrar more than 10 days prior to the starting date of the semester or summer session for instructions to be effective for that semester. Return to: Office of The University Registrar, The University of Akron, Akron, Ohio 44325-6208, or fax to (330) 972-6097.

Note: The above is a very general summary of the Family Educational Rights and Privacy Act (FERPA) and the University’s policy implementing this law. The full text of the University’s policy implementing FERPA may be accessed at http://www.uakron.edu/ogc/docs/11-08_6-25-07.doc.
**Intellectual Property Rights and Obligations**

During your graduate study at The University of Akron and your professional career thereafter, you may become involved with at least one of the three main forms of intellectual property matters: copyrights, patents, and proprietary information/trade secrets. It is possible that certain discoveries may have commercial value, and therefore may invoke one or more of the above forms of intellectual property ownership.

**Copyright**

Copyright, by law, is automatically owned by the author or the authors, employer or sponsor when the work is placed in a fixed form (or medium). The University Board of Trustees automatically waives any claim of the University to copyright in books, texts, or articles of a purely academic nature authored by faculty or students except when the material is prepared as a sponsored project in which case it is the property of the University. Ownership would then be assigned to the University or its designee as the Board of Trustees directs. Questions of authorship are often best handled informally between potential joint authors.

**Patents**

All discoveries and inventions made by you while associated with The University of Akron must be reported to your faculty advisor, and through your advisor to your department chair, dean, and thereafter to the Office of Research Services and Sponsored Programs using the standard University of Akron invention disclosure form. This form provides a guide to describing and identifying the invention broadly and referencing specific results. Those persons thought to be possible inventors should also be identified on this form.

Patents on inventions made by University faculty, staff, students or anyone using University facilities are automatically owned by The University of Akron, as provided by Ohio Revised Code Section 3345.14. The final decision as to inventorship is a technical legal conclusion and will be made in the course of preparing a patent application by the patent attorney handling the application.

**Proprietary Information**

Those engaged in sponsored research may also be involved with developing or receiving proprietary information owned by others outside the University i.e., sponsors such as corporations and individuals seeking certain research from the University. The University and the principal investigator may have agreed to maintain this proprietary information in confidence. In some situations, proprietary information of a sponsor may be provided to you or other project investigators during a research project. The sponsor desires, in these situations, to keep the information confidential (or secret) for as long as possible.

You are free to use the confidential information in the course of the project and discuss it with other students or faculty members engaged in that project. However, you may not use the information on other projects, nor may you discuss it with other individuals not involved with that project. While these commitments could delay public access to your thesis for a specified time, it will not delay acceptance or approval of your thesis/dissertation nor delay your graduation date.

The University and principal investigator must have written personal commitments from anyone working on a project involving and securing proprietary information. Therefore, all research students are required to execute the Confidentiality Agreement (sample form attached to this page). Prior to the start of your research, it is the responsibility of the research director to inform you in writing of any restrictions on the research with a copy also sent to the Office of Research Services and Sponsored Programs, if your research is subject to confidentiality provisions. You are also to be informed by the research director about the scope of the research that is covered by any confidentiality provisions.

If you have any questions as to what information is proprietary, seek guidance from your project’s principal investigator or your faculty research advisor.

**Questions of Authorship and Inventorship**

In the event you think you have been improperly omitted from the list of authors, you should first discuss the matter with your faculty advisor. If you have further questions or consider the matter unresolved, you should inform in the following order the appropriate department chair, the college dean, and finally the Dean of the Graduate School. (Questions are usually, and most quickly, resolved at the lowest administrative levels.)

In the event you think you have been omitted as an inventor on a patent application, you should first discuss the matter with your faculty research advisor and, thereafter, with your department chair and finally with your academic dean. Following such consultations, either you and/or your faculty advisor, or your department chair, or your dean can request the patent attorney who prepared the application to recheck the findings and then prepare a formal report on inventorship. The whole patent application file may then be referred to the Office of General Counsel for a re-evaluation of valid inventors. However such a re-evaluation by patent counsel shall only occur with the prior knowledge of your faculty advisor, Department Chair and Dean.

**THE UNIVERSITY OF AKRON INVENTION PATENT AGREEMENT**

Name: ___________________________ Last First Middle Initial
Social Security No.: ___________________________

The University of Akron graduate students are required to sign this form as a condition of being permitted to participate in any research activity at the University.

1. As a condition of and in consideration of my participating in sponsored research or other financially supported activity at The University of Akron, I hereby agree to communicate fully with my Faculty Advisor, including discussing the details of any work conducted by me and the results which flow therefrom. I recognize that this communication is essential as it relates to any sponsored research, to any course and thesis/dissertation research, and to my safety and the safety of everyone else using the same facility that I use.

2. I further agree to disclose promptly to the director of the research and to my faculty research advisor any invention conceived and/or reduced to practice by me whether jointly with others or solely, which results in whole or in part from such sponsored research or financially supported activity. I agree that I will comply with the provisions of any agreement between The University of Akron and any sponsor for any information and laboratory practice to which I am privileged to know. I will cooperate in assuring that the sponsor’s rights, including rights in inventions, patents, copyrights, are fully protected. Further, I hereby assign all rights, title and interest to The University of Akron for its disposal at its sole discretion.

3. I also acknowledge that certain technical information that may arise as a result of the sponsored research or supported activity may be of a confidential nature. I agree to be bound to the reasonable terms of any nondisclosure agreement as it has been agreed to by the University.

4. Finally, I acknowledge and agree that any rights which arise as a result of the sponsored research or supported activity belong to The University of Akron or to the sponsor as determined by agreement between The University of Akron and the sponsor.

Date: ___________ Student’s Signature

---

(Sample)
INDEX

A

Academic Dishonesty, 23
Academic Reassessment, 23
Academic Requirements, 27
Admission, 27
Advancement to Candidacy, 27, 28
Continuous Enrollment, 27, 28
Credits, 27, 28
Dissertation and Oral Defense, 28
Doctoral, 27
Graduation, 27, 28
Language Requirements, 28
Master’s, 27
Optional Departmental Requirements, 27, 28
Residence Requirement, 27
Time Limit, 27, 28
Transfer Credit, 27, 28
Accessibility, Office of, 17
Accounting, 62, 124
Accreditation, 5
Addiction Counseling certificate, 82
Administrative Specialists, 55
Educational Research, 55
Educational Staff Personnel Administration, 55
Instructional Services, 55
Pupil Personnel Administration, 56
School and Community Relations, 56
Admission, 20, 27
Doctoral Program, 27
International Student, 22
Master’s Program, 27
Transfer Student, 20
Adult Fitness, 58
Adult Gerontological Health Nursing Clinical Nurse Specialist track, 78
Adult Gerontological Health Nursing Practitioner track, 78
Adult Gerontological Nurse Practitioner certificate, 82
Advanced Certificate in Family Conflict, 83
Advanced Certificate in Global Conflict, 83
Advanced Vehicles and Energy Systems, Center for, 13
Advanced Role Specialization in Nursing Management and Business, certificate, 83
Advancement to Candidacy, 27, 28
Akron Global Polymer Academy, 13
Anesthesia option, Nurse, 77
Anthropology, 97
Applied Mathematics, 39
Applied Music, 128
Applied Politics, 36, 83
Applied Politics, Ray C. Bliss Institute of, 13, 36, 83
Applied Polymer Research, Center for, 13
Arabic, 104
Archaeology, 97
Art, 126
Arts and Sciences, Buchtel College of, 7, 29, 95
Anthropology, 97
Applied Mathematics, 39
Applied Politics, 36, 83
Arabic, 104
Archaeology, 97
Biology, 33, 95, 96
Chemical Physics, 29, 35
Chemistry, 29, 32, 96
Chinese, 104
Classics, 97
Computer Science, 32, 103
Counseling Psychology, 30, 46
Courses, 94
Doctor of Philosophy Degree, 29
Economics, 33, 97
Engineering Applied Mathematics, 39, 41, 104
English, 33, 98
French, 105
Geography and Planning, 34, 99
Geology, 34, 99
German, 105
History, 30, 35, 100
Integrated Bioscience, 29
Italian, 105
Latin, 104
Master’s Degree, 31

NANCY K. GRANT, 1989-1990, Ph.D. (acting)
THOMAS J. VUKOVICH, 1990-1993, Ph.D. (acting)
KARLA T. MUGLER, 1993-present, 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)
CAESAR A. CARRINO, 1974-1986, Ph.D. (dean)
WILLIAM H. BEISEL, 1986-2004, Ph.D. (dean)

Summit College (formerly Community and Technical College)
W. M. PETRY*, 1964-1974, M.S.M.E.
ROBERT C. WEYRICK, 1974-1985, M.S.
JAMES P. LONG, 1987-1989, Ph.D.
DEBORAH S. WEBER, 1995-96, M.A. (internim)
DAVID A. SAM, 1996-2000, Ph.D.
WILLIAM H. BEISEL, 2000-2004, Ph.D. (internim)
STANLEY B. SILVERMAN, 2004-present, M.A.

College of Fine and Applied Arts
RAY H. SANDEFUR*, 1967-1979, Ph.D.
GERARD L. KNIETER, 1978-1986, Ph.D.
WALLACE T. WILLIAMS*, 1987-1991, Ph.D.
LINDA L. MOORE, 1992-1998, Ph.D.
MARK S. AUBURN, 1998-2000 (internim); 2000-2005, Ph.D.
JAMES M. LYNN, 2005-2009, Ph.D. (internim)

College of Creative and Professional Arts
DUDLEY B. TURNER, 2009-present, Ph.D. (internim)

College of Health Sciences and Human Services
JAMES M. LYNN, 2009-present, Ph.D. (internim)

College of Nursing
ESTELLE B. NAES, 1967-1975, Ph.D.
LILLIAN J. DeYOUNG, 1975-1988, Ph.D.
ELIZABETH J. MARTIN, 1988-1992, Ph.D.
JANIE R. DUNHAM-TAYLOR, 1996-1997 Ph.D. (internim)
CYNTHIA CAPERS, 1997-2006, Ph.D.
N. MARGARET WINEMAN, 2006-present, Ph.D.

Wayne College
MARVIN E. PHILLIPS, 1972-1974, M.A. (acting director)
JOHN G. HEDRICK, 1974-1979, M.A. (director)
JOHN G. HEDRICK, 1979-1979, M.A. (dean)
ROBERT L. McEWEE, 1979-1980, M.A. (acting dean)
JOHN P. KRISTOFICO, 1997-present, Ph.D. (dean)

College of Polymer Science and Polymer Engineering
FRANK N. KELLY, 1988-2006, Ph.D. (dean)
GEORGE R. NEWKOME, 2006-2007, Ph.D. (internim)
STEPHEN Z. CHENG, 2007-present, Ph.D. (dean)
Dance Performance, 130

Deans, 141, 147

Dietetics (see Nutrition and Dietetics), 67
Disabilities (see Office of Accessibility, 17)
Dishonesty, Academic, 22
Dismissal (see Probation and Dismissal, 23)

Dissertation and Oral Defense, 28

Dissertation Credits (see Thesis and Dissertation Credits, 23)

Dishonesty, Academic, 23

Dissertation and Oral Defense, 28

Dissertation Credits (see Thesis and Dissertation Credits, 23)

Divorce Mediation certificate, 85, 94

Doctoral Degree Requirements, 27

Doctoral Programs

Audiology, 66
Chemistry, 29
Counseling Psychology, 30, 46
Counselor Education and Supervision, 46
Curricular and Instructional Studies, 45
Educational Leadership, 47
Engineering, 40
History, 30
Integrated Bioscience, 29
Nursing, 24
Polymer Engineering, 80
Polymer Science, 79
Psychology, 30
Sociology, 31
Urban Studies and Public Affairs, 31

Doctor of Education, 47
Doctor of Philosophy, 44
Doctoral Residency Requirement, 44
Educational Administration, 55
Educational Foundations, 56, 117
Educational Psychology option, 57
Instructional Technology option, 57
Social/Psychological Foundations of Education option, 57
Research Methodology and Evaluation option, 57
Educational Leadership, 47
E-Learning certificate, 85
Elementary, 49
Exercise Physiology/Adult Fitness, 58
General Administration, 55, 118
Health Education, 121
Higher Education Administration, 56, 119
Higher Education certificate, 88
Instructional Technology option, 57
Marriage and Family Counseling/Therapy, 48
Master’s Degree, 47
Mission Statement, 44
New Media Technologies certificate, 90
Outdoor, 58, 121
Physical, 58, 121
Postsecondary Technical Education, 57, 119
Postsecondary Teaching certificate, 91
Principalship, 55
Purpose, 44
School Counseling, 48
School Nurse, 59
School Psychology, 49, 124
Secondary, 50
Special Education, 50, 123
Special Educational Programs, 124
Sport Science and Wellness Education, 58
Sports Science/Coaching, 59
Superintendent, 96
Technology Endorsement, 57

Dietetics (see Nutrition and Dietetics), 67

Enrollment, 9, 111

Curricular and Instructional Studies, 45, 49, 120

Elementary Education, 49
Secondary Education, 50
Special Education, 50, 123

Doctor of Education, 47
Doctor of Philosophy, 44
Doctoral Residency Requirement, 44
Educational Administration, 55
Educational Foundations, 56, 117
Educational Psychology option, 57
Instructional Technology option, 57
Social/Psychological Foundations of Education option, 57
Research Methodology and Evaluation option, 57
Educational Leadership, 47
E-Learning certificate, 85
Elementary, 49
Exercise Physiology/Adult Fitness, 58
General Administration, 55, 118
Health Education, 121
Higher Education Administration, 56, 119
Higher Education certificate, 88
Instructional Technology option, 57
Marriage and Family Counseling/Therapy, 48
Master’s Degree, 47
Mission Statement, 44
New Media Technologies certificate, 90
Outdoor, 58, 121
Physical, 58, 121
Postsecondary Technical Education, 57, 119
Postsecondary Teaching certificate, 91
Principalship, 55
Purpose, 44
School Counseling, 48
School Nurse, 59
School Psychology, 49, 124
Secondary, 50
Special Education, 50, 123
Special Educational Programs, 124
Sport Science and Wellness Education, 58
Sports Science/Coaching, 59
Superintendent, 96
Technical Skills Training certificate, 92

Educational Foundations and Leadership, 56, 117
Educational Leadership, 47
E-Learning certificate, 85
Electrical Engineering, 43, 114
Electrical and Computer Engineering, 10, 114
Electronic Business, 61, 85
Elementary Education, 49
Emergency Management, Center for, 14
Emergency Phone Numbers, 3, 19
Engineering Applied Mathematics, 39, 41, 104

Engineering, College of, 9, 38, 108
Admission, 40, 42
Biomedical, 44, 117
Chemical, 42, 111
Civil, 43, 112
Computer Engineering, 115
Coordinated and Joint Programs, 41
Courses, 111
Degree Requirements, 41, 42
Doctor of Philosophy, 38
Electrical, 43, 114
Engineering Applied Mathematics, 39, 41, 104
Engineering Management Specialization, 44
Environmental Engineering certificate, 85
General Engineering, 111
Geotechnical Engineering certificate, 87
Interdisciplinary Fields of Study, 41
Joint Programs, 41
Master’s Degree, 42
M.D. and Ph.D. in Engineering, 42
Mechanical, 43, 119
Mission, 40
Motion and Control Specialization certificate, 90
Polymer Engineering Specialization, 44
Structural Engineering Certificate, 92
Transfer Credit, 41
Transportation Engineering Certificate, 93

Earth Science, 35

E-Business (see Electronic Business) 61, 85
Economic Education, H. Kenneth Barker Center for, 13
Economics, 33, 97
Ed.D. Program, Educational Leadership, 47
Education, College of, 9, 44, 117
Addiction Counseling certificate, 82
Administrative Specialists, 55
Classroom Guidance for Teachers, 47
Community Counseling, 48
Continuing Enrollment, Doctoral, 45
Counseling, 46, 122
Counseling Psychology, Collaborative Program, 30, 46
Counselor Education and Supervision, 46
Courses, 117
Curricular and Instructional Studies, 45, 49, 120

Doctorate of Education, 47
Doctor of Philosophy, 44
Doctoral Residency Requirement, 44
Educational Administration, 55
Educational Foundations, 56, 117
Educational Psychology option, 57
Instructional Technology option, 57
Social/Psychological Foundations of Education option, 57
Research Methodology and Evaluation option, 57
Educational Leadership, 47
E-Learning certificate, 85
Elementary, 49
Exercise Physiology/Adult Fitness, 58
General Administration, 55, 118
Health Education, 121
Higher Education Administration, 56, 119
Higher Education certificate, 88
Instructional Technology option, 57
Marriage and Family Counseling/Therapy, 48
Master’s Degree, 47
Mission Statement, 44
New Media Technologies certificate, 90
Outdoor, 58, 121
Physical, 58, 121
Postsecondary Technical Education, 57, 119
Postsecondary Teaching certificate, 91
Principalship, 55
Purpose, 44
School Counseling, 48
School Nurse, 59
School Psychology, 49, 124
Secondary, 50
Special Education, 50, 123
Special Educational Programs, 124
Sport Science and Wellness Education, 58
Sports Science/Coaching, 59
Superintendent, 96
Technical Skills Training certificate, 92

Technology Endorsement, 57

Educational Administration, 55
Educational Foundations and Leadership, 56, 117
Educational Leadership, 47
E-Learning certificate, 85
Electrical Engineering, 43, 114
Electrical and Computer Engineering, 10, 114
Electronic Business, 61, 85
Elementary Education, 49
Emergency Management, Center for, 14
Emergency Phone Numbers, 3, 19
Engineering Applied Mathematics, 39, 41, 104

Engineering, College of, 9, 38, 108
Admission, 40, 42
Biomedical, 44, 117
Chemical, 42, 111
Civil, 43, 112
Computer Engineering, 115
Coordinated and Joint Programs, 41
Courses, 111
Degree Requirements, 41, 42
Doctor of Philosophy, 38
Electrical, 43, 114
Engineering Applied Mathematics, 39, 41, 104
Engineering Management Specialization, 44
Environmental Engineering certificate, 85
General Engineering, 111
Geotechnical Engineering certificate, 87
Interdisciplinary Fields of Study, 41
Joint Programs, 41
Master’s Degree, 42
M.D. and Ph.D. in Engineering, 42
Mechanical, 43, 119
Mission, 40
Motion and Control Specialization certificate, 90
Polymer Engineering Specialization, 44
Structural Engineering Certificate, 92
Transfer Credit, 41
Transportation Engineering Certificate, 93

Engineering Geology, 39
Engineering Management Specialization, 44
Engineering, Polymer, 44, 80, 81, 136

English, 33, 98

English Language Institute, 15
Entrance Qualifying Examinations, 20
Entrepreneurial Studies, William and Rita Fitzgerald Institute for, 15
Entrepreneurship, 61
Environmental Engineering certificate, 85
Environmental Geology, 35
Environmental Studies, Center for, 14
Exercise Physiology/Adult Fitness, 58
Expenses and Fees, 25 (see also Fees)
  International Fees, 22

F
Facilities and Equipment, University, 7
Faculty, Graduate, alphabetical listing of, 141
Family and Consumer Sciences, 66, 130
  Child and Family Development option, 66
  Child Life option, 67
  Clothing, Textiles and Interiors option, 67
  Food Science option, 67
  Nutrition and Dietetics M.S. program, 67
Family Educational Rights and Privacy Act (FERPA), 139
Family Studies, Center for, 14
Fees, 25
  Refunds, 26
Finance, 61, 125
Financial Assistance, 22, 25
Fire and Hazardous Materials, Training Center for, 16
Fisher Institute for Professional Selling, 15
Fitzgerald Institute for Entrepreneurial Studies, 15

G
Gender Conflict certificate, 86
General Administration (Education), 55, 118
General Information, 20
Geographic Information Sciences certificate, 86
Geography and Planning, 34, 99
  Geography/Urban Planning, M.A., 34
  Geography/Geographic Information Sciences, M.S., 34
Geology, 35, 100
  Earth Science, 35
  Engineering Geology, 35
  Environmental Geology, 35
Geophysics, 35
Geotechnical Engineering certificate, 87
German, 105
Gerontology, 87, 94
Global Business, Institute for, 15
Grades, 23
Graduate Assistantships, 26
Graduate Council, 20, 141
Graduate Faculty, 20, 141
Graduate School, 19
  Academic Dishonesty, 23
  Academic Reassessment, 23
  Academic Requirements, 27
  Admission, 20, 27
  Audit Policy, 23
  Classifications, 21
  Commencement, 23
  Colloquia, Seminars and Workshops, 23
  Course Load, 21
  Cross Registration, 23
  Doctoral Degree Requirements, 27
  Entrance Qualifying Examinations, 20
  Fees, 26
  Financial Assistance, 22, 25
  General Information, 20
  Grades, 22
  Graduate Council, 20, 141
  Graduate Faculty, 20, 141
  Graduate Student Government, 20
  Graduate Student Organizations, 20
  Grievance Procedures for Graduate Students, 138
  History of Graduate School, 19
  International Students, 22
  Master's Degree Requirements, 27
  Nature of Graduate Education, 19
  Nonscience American School Graduates, 20
  Objectives, 19
  Probation and Dismissal, 23
  Refunds, 26
  Registration, 21
  Repeating a Course, 23
  Residence Requirements, 24, 27
  Student Responsibility, 20
  Thesis and Dissertation Credits, 23
  Transfer Student, 20
  Graduate Student Government, 19
  Graduate Student Organizations, 19
  Graduation, Doctoral, 27
  Graduation, Master's, 26

H
Handicapped (see Office of Accessibility, 17)
Health and Social Policy, Institute for, 15
Healthcare Management, 61
  Healthcare Management, certificate, 87
  Health Education, 121
Health Sciences and Human Services, College of, 66, 130
  Family and Consumer Sciences, 66, 130
  Social Work, 68, 133
  Speech-Language Pathology and Audiology, 66, 68, 131
Health Services, 17
Higher Education Administration, 56, 119
Higher Education certificate, 88
History, 30, 35, 100
  History and Literature option, Music, 72
  History of the Graduate School, 19
  History of the University, 4
Home-Based Intervention Therapy certificate, 88
Human Resources Management, 64
  Human Resources Management certificate, 88

I
Information Systems Management, 64
  Information Systems Project Management, certificate, 89
  Information Technology Services Division, 12
  Innovative Curriculum Pathway to the Joint Ph.D. in Nursing Program, 76
Inquiries, 2
  Installment Payment Plan, 25
  Institutes, 13 (see Research Centers and Institutes)
  Instructional Technology, 57
  Integrated Bioscience, 29
  Intellectual Property Law and Technology Center, 15
  Intellectual Property Rights and Obligations, 140
  Interdisciplinary Programs, 82, (see also Certificate Programs)
  Interdisciplinary Programs, course listings, 94
  Cooperative Education, 94
  Divorce Mediation, 94
  Home-Based Intervention Therapy, 94
  Institute for Life-Span Development and Gerontology, 94
  Women's Studies, 94
International Business, 61, 126
International Finance, 62
International Students, 22
  Admission, 22
  Costs, Expenses, Fees, 22
  Financial Aid, 22
  Medical Insurance, 22
  Orientation, 22
  Teaching Assistants, 22
  Transfer Credit, 22
  TSE, 22
Internet Address, 3
  Italian, 105

J
Joint Programs
  Audiology Au.D. (with KSU), 66
  Engineering Ph.D. (with YSU), 42
  Engineering/Applied Mathematics Ph.D., 39, 41
  Engineering, M.D./Ph.D. with NEUCOM, 42
  J.D./Master of Applied Politics, 36
  J.D./Master of Business Administration, 65
  J.D./Master of Public Administration, 37
  J.D./Master of Science in Management-Human Resources, 65
  J.D./Master of Taxation, 65
  Social Work Master's degree program (with CSU), 68
  Sociology Ph.D. (with KSU), 31
  Nursing Ph.D. (with KSU), 75
  Urban Studies and Public Affairs Ph.D. (with CSU), 31
  Judicial Affairs, Office of Student, 17
L
Language Requirement, 28
Latin, 104
Law Enforcement and Criminal Justice, Training Center for, 16
Libraries, University, 6, 12
Life-Span Development and Gerontology, courses, 94
Life-Span Development and Gerontology, Institute for, 16
Literacy, Center for, 14
Literature certificate, 88
Literature, English, 33
Location, 6

M
Management, 62, 64, 125
Management of Technology and Innovation, 62
Management of Technology and Innovation certificate, 89
Map, Campus, 154
Marketing, 126
Marriage and Family Counseling/Therapy, 48
Master’s Academic Requirements, 27
Mathematics, 39, 102
  Applied Mathematics, 39
  Engineering Applied Mathematics, 39, 41, 104
M.B.A., 61
M.D./Ph.D. in Engineering with NEOUCOM, 42
Mechanical Engineering, 43, 115
Medical Insurance, International Students, 22
Middle Eastern Studies, certificate, 89
Microscale Physicochemical Engineering Center, 16
Mission Statements
  Arts and Sciences, 29
  Business Administration, 60
  Education, 44
  Engineering, 40
  Nursing, 74
  Polymer Science and Polymer Engineering, 79
University, 4
Modern Languages, 104
  Arabic, 104
  Chinese, 104
  French, 106
  German, 105
  Italian, 104
  Spanish, 39, 105
Motion and Control Specialization certificate, 90
Music, 70, 127
  Applied, 128
  Composition option, 70
  Education option, 70
  History and Literature option, 72
  Organizations, 126
  Performance options, 72
  Technology option, 72
  Theory option, 73

N
NEOUCOM (Northeastern Ohio Universities College of Medicine)
  Biology/NEOUCOM courses, 96
  M.D./Ph.D. in Engineering with NEOUCOM, 42
  New Media Technologies certificate, 90
  Non-Accredited American School Graduates, 20
  Nurse Anesthesia option, 77
Nursing Center for Community Health, 16
Nursing, College of, 11, 74, 133
  Administration option, 78
  Admission, 75, 76
  Adult Gerontological Health Nursing Clinical Nurse Specialist option, 78
  Adult Gerontological Health Nursing Practitioner option, 78
  AdultGerontological Nurse Practitioner certificate, 82
  Advanced Role Specialization in Nursing Management/Business certificate, 83
  Child and Adolescent Health Nurse Practitioner options, 77
  Child and Adolescent Health Nurse Practitioner certificate, 84
  Courses, 133
  CRNA-MSN Anesthesia option, 77
  Doctoral Program, 75
  Graduate Degree Completion Program for Nurse Anesthetist, 78
  Innovative Curriculum Pathway to the Joint Ph.D. in Nursing Program, 76
  Instructional Program, 77
  Master of Science Degree, 76
  Mission Statement, 74
  Nurse Anesthesia option, 77
  Nurse Anesthesia certificate, 90
  Nurse Education certificate, 90
  Philosophy, 74
  Psychiatric Family Nurse Practitioner option, 78
  Psychiatric Mental Health Nursing option, 77
  Psychiatric Nurse Practitioner certificate, 91
  Nutrition and Dietetics, M.S. Program, 67
  Nutrition Center, 16

O
Office of Accessibility, 17
Ohio Residency Requirements, 24
Organizational Development, Center for, 14
Organizational Research, Center for, 14
Organizations, Graduate Student, 29
Orientation, International Students, 22
Outdoor Education, 58, 121
Outreach and Consulting Service, 17

P
Parent and Family Education certificate, 90
Parking Fees, 25
Parking Lots (see Campus Map), 154
Patents, 140
Performance option, Music, 72
Ph.D. Programs
  Chemistry, 29
  Counseling Psychology, 30, 46
  Counselor Education and Supervision, 46
  Curricular and Instructional Studies, 45
  Engineering, 40
  History, 30
  Integrated Bioscience, 29
  Nursing, 74
  Polymer Engineering, 80
  Polymer Science, 79
  Psychology, 30
  Sociology, 31
  Urban Studies and Public Affairs, 31
Philosophy, 195
Phone Numbers, 3
Physical and Health Education, 58, 121
  Exercise Physiology/Adult Fitness option, 58
  Outdoor Education, 58, 121
  Sports Science/Coaching option, 59
Physics, 29, 35, 106
Planning (see Geography and Urban Planning), 34
Policy Studies, Center for, 14
Political Science, 36, 106
Polymer Engineering, 44, 80, 81, 136
Polymer Science and Polymer Engineering, Institute of, 15
Polymer Science and Polymer Engineering, College of, 11, 79, 136
  Admission, 79
  BS/MS Programs, 81
  History, 79
  Description, 79
  Doctor of Philosophy, 79
  Master’s, 80
  Mission, 79
  Polymer Engineering, 80, 81, 136
  Polymer Science, 79, 80, 137
  Polymer Science, 79, 80, 137
  Postsecondary Teaching certificate, 91
  Postsecondary Technical Education, 57, 119
  President and Vice Presidents, listing, 139, 144
  Principals, 55
  Probation and Dismissal, 23
  Professional Selling, Fisher Institute for, 15
  Proprietary Information, 140
  Psychiatric Mental Health Nursing option, 77
  Psychiatric Nurse Practitioner certificate, 91
  Psychologist, School, 49, 124
  Psychology, 30, 36, 107
  Public Administration and Urban Studies, 31, 32, 110
  Public Administration and Urban Studies certificate, 91
  Public Health, Consortium M.P.H., 37, 111
  Public Service Research and Training, Center for, 14
R

Racial Conflict certificate, 92
Refunds, 26
Registration, 21
Regulations, 20
Repeating a Course, 23, 27, 28
Research Centers and Institutes, 13
Advanced Vehicles and Energy Systems, Center for, 13
Akron Global Polymer Academy, 13
Applied Politics, Ray C. Bliss Institute of, 13, 36, 83
Applied Polymer Research, Center for, 13
Biomedical Engineering Research, Institute for, 13
Collaboration and Inquiry, Center for, 13
Community Health, Nursing Center for, 16
Conflict Management, Center for, 13
Direct Marketing, Taylor Institute for, 16
Economic Education, H. Kenneth Barker Center for, 13
Emergency Management and Homeland Security Policy Research, Center for, 14
English Language Institute, 15
Entrepreneurial Studies, Vrm. and Rita Fitzgerald Institute for, 15
Environmental Studies, Center for, 14
Family Studies, Center for, 14
Fire and Hazardous Materials, Training, Center for, 16
Global Business, Institute for, 15
Health and Social Policy, Institute for, 15
Information Technology and E-Business, Center for, 14
Intelectual Property Law and Technology Center, 15
Law Enforcement and Criminal Justice, Training Center for, 16
Life-Span Development and Gerontology, Institute for, 16
Literacy, Center for, 14
Microscale Physiochemical Engineering Center, 16
Nutrition Center, 16
Organizational Development, Center for, 14
Organizational Research, Center for, 14
Policy Studies, Center for, 13
Polymer Science and Polymer Engineering, Institute of, 15
Professional Selling, Fisher Institute for, 15
Public Service Research and Training, Center for, 14
Statistical Consulting, Center for, 14
Teaching and Learning, Institute for, 15
University of Akron Magnetic Resonance Center, 16
Urban and Higher Education, Center for, 15
Workforce Development and Training, Center for, 16
Residency Requirements, 24, 27

S

Safety and Security Information, Campus, 18
School Counseling, 48
School Nurse, 59
School Psychology, 49, 124
Secondary Education, 50
Sixty Plus Program, 21
Social Work, 68, 133
Sociology, 31, 38, 108
Spanish, 39, 105
Special Education, 50, 123
Special Educational Programs, courses, 123
Speech-Language Pathology and Audiology, 66, 68, 131
Sports Science/Coaching, 59
Statistical Consulting, Center for, 14
Statistics, 39, 103
Strategic Marketing, 62
Structural Engineering certificate, 92
Student Affairs, 16
Center for Career Management, 17
Center for Child Development, 17
Counseling Center, 16
Counseling Services, 16
Health Services, 17
Office of Accessibility, 17
Outreach and Consulting Service, 16
Student Judicial Affairs, 17
Student Union, 7, 16
Testing Service, 15
Student Union, 7, 17
Student Organizations, Graduate, 20
Superintendent, 56
Supply Chain Management, 62, 92

T

Taxation, Degree Program, 64
Teaching and Learning, Institute for, 15
Teaching English as a Second Language certificate, 92
Technical and Skills Training certificate, 92
Technology option, Music, 72
Telephone Numbers, 3
Testing Service, 17
Theatre Arts, 74, 129
Arts Administration option, 74
Theatre option, 74
Theatre Organizations (courses), 130
Theoretical and Applied Mathematics, 39
Applied Mathematics, 39
Engineering Applied Mathematics, 39, 41, 104
Theory option, Music, 73
Thesis and Dissertation Credits, 23
Time Limits, Doctoral, 27
Time Limits, Master’s, 28
TOEFL, 22
Transfer Credits, Doctoral, 28
Transfer Credits, Master’s, 27
Transfer Student, 20
Transportation Engineering certificate, 93
TSE, 22
Tuition, 25 (see Fees)

U

University Libraries, 6, 12
University Police, 18
University Research Council, 13
Urban Planning, 34
Urban Studies and Public Affairs, Ph.D. program, 31

V

Vice Presidents, President and, listing, 141

W

Women’s Studies, certificate, 93
Women’s Studies, courses, 94
Workforce Development and Training, Center for, 16
Workshops, 23
World Wide Web Address, 3
THE UNIVERSITY OF AKRON IS AN EQUAL EDUCATION AND EMPLOYMENT INSTITUTION . . .


It is the policy of this institution that there shall be no discrimination against any individual at The University of Akron because of age, color, creed, disability, national origin, race, religion, veteran status, or sex. The University of Akron prohibits sexual harassment of any form in its programs and activities and prohibits discrimination on the basis of sexual orientation in employment and admissions.

Complaint of possible discrimination, including sexual harassment, should be referred to:

Director, Equal Employment Opportunity and Training
Polsky Building 326
The University of Akron
Akron, Ohio 44325-4709
330-972-7300

Information on Title IX (sex discrimination) may be obtained from
Title IX Coordinator
330-972-7300