YOUNGSTOWN STATE UNIVERSITY

SCHOOL OF GRADUATE STUDIES AND RESEARCH

GRADUATE BULLETIN 2004-2006

Youngstown State University Bulletin

Graduate Edition

2004–2006

Effective August 2004

Youngstown, Ohio

Youngstown State University reserves the right to change without notice any statement in this bulletin concerning, but not limited to, rules, policies, tuition, fees, curricula, and courses.

Youngstown State University is committed to a campus environment that values all individuals and groups, and to nondiscrimination and equal opportunity for all persons without regard to sex, race, religion, color, age, national origin, sexual orientation, handicap/disability, or identification as a disabled and/or Vietnam Era veteran. The University is also committed to the principles of affirmative action and acts in accordance with state and federal laws.

Inquiries should be addressed to Youngstown State University's Director of Equal Opportunity and Diversity, who is responsible for coordinating the University's programs for compliance. Inquiries can be initiated in writing or by calling (330) 941-3370.

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Graduate Bulletin

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Youngstown State University
One University Plaza
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The Academic Calendar 2004–2005

Fall 2004

Date	Day	Time	Event
July 15	Thurs.		Last day to apply for graduate admission
Aug. 23	Mon.	8 a.m.	Fall term begins
Sept. 2	Thurs.	6 p.m.	Last day for adds
Sept. 6	Mon.		Legal holiday—University closed (Labor Day)
Sept. 10	Fri.	5 p.m.	Last day to apply for fall semester graduation
Oct. 23	Sat.	12 p.m.	Last day to withdraw with a W
Nov. 11	Mon.		Legal holiday—University closed (Veteran's Day)
Nov. 24	Wed.	11 p.m.	Thanksgiving academic break begins
Nov. 25	Thurs.		Legal holiday—University closed (Thanksgiving)
Nov. 26	Fri.		Legal holiday—University closed (Columbus Day observed)
Nov. 29	Mon.	8 a.m.	Thanksgiving academic break ends
Dec. 6	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies and Research
Dec. 12	Sun.	5 p.m.	Fall term ends
Dec. 12	Sun.	2 p.m.	Fall Commencement

Spring 2005

Date	Day	Time	Event
Dec. 15	Wed.		Last day to apply for graduate admission
Dec. 23	Thurs.		Legal holiday—University closed (President's Day observed)
Dec. 24	Fri.		Legal holiday—University closed (Christmas Day)
Dec. 31	Fri.		Legal holiday—University closed (New Year's Day)
Jan. 17	Mon.		Legal holiday—University closed (Martin Luther King Day)
Jan. 18	Tues.	8 a.m.	Spring term begins
Jan. 27	Thurs.	6 p.m.	Last day to add a class
Feb. 4	Fri.	5 p.m.	Last day to apply for spring term graduation
Mar. 14	Mon.		Spring break begins
Mar. 20	Sun.	8 a.m.	Spring break ends
Mar. 26	Sat.	12 p.m.	Last day to withdraw with a W
May 9	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies and Research
May 15	Sun.	5 p.m.	Spring term ends
May 21	Sat.	10 a.m.	Spring Commencement

Summer 2005

Date	Day	Time	Event
Apr. 15	Fri.		Last day to apply for graduate admission
May 23	Mon.	8 a.m.	Full term, first term, and first 8-week term begin
May 27	Fri.	5 p.m.	Last day to add a class—first term
May 28	Sat.	12 p.m.	Last day to add a class—first 8-week term
May 30	Mon.		Legal holiday—University closed (Memorial Day)
May 31	Tues.	5 p.m.	Last day to add a class—full term
June 10	Fri.	5 p.m.	Last day to apply for summer semester graduation
June 16	Thurs.	5 p.m.	Last day to withdraw with a W—first-term
June 20	Mon.	8 a.m.	Second 8-week term begins
June 24	Fri.	5 p.m.	Last day to withdraw with a W—first 8-week term
June 25	Sat.	12 p.m.	Last day to add a second 8-week term class
July 3	Sun.		First term ends (final examinations are given during the last scheduled class period)
July 4	Mon.		Legal holiday—University closed (Independence Day)
July 5	Tues.	8 a.m.	Second term classes begin
July 8	Fri.	5 p.m.	Last day to add a class—second term
July 11	Mon.	5 p.m.	Last day to withdraw with a W—full term
July 17	Sun.		First 8-week term ends (final examinations are given during the last scheduled class period)
July 22	Fri.	5 p.m.	Last day to withdraw with a W—second 8-week term
July 29	Fri.	5 p.m.	Last day to withdraw with a W—second term
Aug. 8	Mon.		Deadline to submit theses to the School of Graduate Studies
Aug. 14	Sun.		Full term, second term, and second 8-week term end (final examinations are given during the last scheduled class period)
Aug. 20	Sat.	10 a.m.	Summer Commencement

Fall 2005

Date	Day	Time	Event
July 15	Fri.		Last day to apply for graduate admission
Aug. 29	Mon.	8 a.m.	Fall term begins
Sept. 5	Mon.		Legal holiday—University closed (Labor Day)
Sept. 4	Thurs.	6 p.m.	Last day for adds
Sept. 16	Fri.		Last day to apply for fall semester graduation
Oct. 29	Sat.	12 p.m.	Last day to withdraw with a W
Nov. 11	Tues.		Legal holiday—University closed (Veteran's Day)
Nov. 23	Wed.	11 p.m.	Thanksgiving academic break begins
Nov. 24	Thurs.		Legal holiday—University closed (Thanksgiving)
Nov. 25	Fri.		Legal holiday—University closed (Columbus Day observed)
Nov. 28	Mon.	8 a.m.	Thanksgiving academic break ends
Dec. 12	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies
Dec. 18	Sun.	5 p.m.	Fall term ends
Dec. 18	Sun.	2 p.m.	Fall Commencement

YOUNGSTOWN STATE UNIVERSITY

Mission

Youngstown State University provides open access to high-quality education through a broad range of affordable certificate, associate, baccalaureate, and graduate programs.

The University is dedicated to

- outstanding teaching, scholarship, and service and to forging connections among these three interactive components of its mission;
- fostering student-faculty relationships that enrich teaching and learning, develop scholarship, and encourage public service;
- promoting diversity and an understanding of global perspectives;
- advancing the intellectual, cultural, and economic life of the state and region.

Vision

Youngstown State University will become a national model for student-centered comprehensive urban universities, transforming its students into successful professionals, scholars, citizens, and leaders.

Building upon its tradition of developing the body, mind, and spirit, YSU will provide a full range of services and amenities to meet the needs of residential, commuter, and offsite students.

In partnership with schools and the corportate, public, and non-profit communities, YSU will promote diversity and excellence in teaching, research, and service to increase the educational attainment, economic prosperity, and environmental vitality of the region.

The University will be a center for intellectual and cultural activity and a catalyst for public engagement.

History

Youngstown State University is in downtown Youngstown, an industrial center in northeastern Ohio midway between Pittsburgh and Cleveland. YSU had its beginning in 1908 with the establishment of the School of Law of the Youngstown Association School, sponsored by the Young Men's Christian Association. From that point in history, YSU continues to grow:

1920: The State of Ohio empowered the school to grant the Bachelor of Laws degree. The school offered a four-year course in business administration.
1921: The school changed its name to The Youngstown Institute of Technology. Its first liberal arts classes were offered in the evening.
1927: The College of Arts and Sciences, offering daytime classes, was established.
1928: The Institute changed its name to Youngstown College.
1930: The College began to confer the Bachelor of Arts degree.
1941: Dana's Musical Institute, founded in nearby Warren in 1869, became the College's Dana School of Music
1944: YMCA trustees transferred control of the institution to members of the Corporation of Youngstown College
1946: The engineering department, organized several years earlier, became the William Rayen School of Engineering.
1948: The business administration department became the School of Business Administration.
1955: The Corporation of Youngstown College was rechartered as The Youngstown University.
1960: The department of education became the School of Education.
1967: The University joined the Ohio system of higher education and became Youngstown State University. A nine-member Board of Trustees was appointed by the Governor with concurrence by the Ohio Senate. As in the case of other state-assisted institutions in the Ohio higher education system, the University is also responsible to the Ohio Board of Regents.
1968: The Graduate School and the College of Applied Science and Technology were established.
1972: YSU, with The University of Akron and Kent State University, formed a consortium to sponsor the Northeastern Ohio Universities College of Medicine.
1974: The College of Fine and Performing Arts was established.
1981: The School of Business Administration was renamed the Warren P. Williamson, Jr., School of Business Administration.
1993: The University underwent academic reorganization and constituted itself into the following units:
the College of Arts and Sciences;
the College of Education;
the College of Engineering and Technology;
the College of Fine and Performing Arts;
the College of Health and Human Services;
the Warren P. Williamson, Jr. College of Business Administration;
the School of Graduate Studies; and
the Northeastern Ohio Universities College of Medicine.
2002: The School of Graduate Studies was renamed the School of Graduate Studies and Research.

A coeducational institution, YSU had an enrollment of 300 students in 1930, which grew to 2,000 in the 1940s, tripled by the 1950s, reached 10,000 in the mid-sixties, and totaled more than 15,000 in 1986. As of Fall, 2003, undergraduate enrollment stood at 11,598 and graduate enrollment at 1,260.

Accreditation

The University is accredited by the North Central Association of Colleges and Secondary Schools, Commission on Institutions of Higher Education (30 N. LaSalle St., Suite 2400, Chicago, IL 60602-2504, (800) 621-7440) and by appropriate professional accrediting bodies.

Degrees Granted

YSU grants the degrees of Doctor of Education, Master of Arts, Master of Arts in American Studies, Master of Arts in Financial Economics, Master of Business Administration, Master of Fine Arts, Master of Health and Human Services, Master of Music, Master of Physical Therapy, Master of Public Health, Master of Science, Master of Science in Education, Master of Science in Engineering, Master of Science in Environmental Studies, Master of Science in Nursing, Master of Social Work, Bachelor of Arts, Bachelor of Engineering, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Bachelor of Science in Applied Science, Bachelor of Science in Business Administration, Bachelor of Science in Education, Bachelor of Science in Nursing, Bachelor of Science in Respiratory Care, and Bachelor of Social Work. A broad selection of two-year programs leads to the degrees of Associate in Arts, Associate in Applied Science, and Associate in Labor Studies.

Equal Opportunity and Affirmative Action Policy

Youngstown State University is committed to a campus environment that values all individuals and groups, and to nondiscrimination and equal opportunity for all persons without regard to sex, race, religion, color, age, national origin, sexual orientation, handicap/disability, or identification as a disabled and/or Vietnam Era veteran. The University is also committed to the principles of affirmative action and acts in accordance with state and federal laws.

Although the ultimate responsibility for maintaining a viable and effective affirmative action program rests with the President of the University, the key role in its execution is delegated to the Director of Equal Opportunity and Diversity, who periodically reviews the program, discusses grievances and charges of discrimination if any, and makes recommendations toward the program's effectiveness.

The University uses all normal means of communication to make known its policies of equal opportunity and affirmative action.

The Campus

During its early years, the institution had a number of homes. Starting in the old Central YMCA building, it occupied various sites on Wick Avenue until the completion of **Jones Hall** in 1931. Additional buildings have been constructed and nearby properties converted to University use, so today the campus extends over 140 acres. Classroom buildings, however, are centrally located around an attractive, park-like central core connected by sweeping walkways. The campus has an outstanding safety record; it is well lighted and constantly patrolled by a staff of fully certified police officers.

The University has expanded its access points to suburban areas through the Metropolitan College. Located in Boardman, Ohio, the Metropolitan College offers credit and non-credit classes in a range of subjects, featuring evening and weekend classes.

Kilcawley Center was completed in 1966. The building contains dining rooms, meeting rooms, lounges, and recreational areas including rooms for billiards and television viewing. Student offices are included in the facility, as are a bookstore, a bank, a graphics center, an information center, computer terminals as well as facilities for various student publications, and the Center for Student Progress. A 67,651 square foot Student Recreation and Wellness Center will be completed in Fall 2005.

In 1967, **Ward Beecher Hall** was completed. This structure contains laboratories, classrooms, a greenhouse, a planetarium, and offices for chemistry, biology, physics, and astronomy. The planetarium has the largest seating capacity (150 seats) in Ohio.

The University opened its **Engineering Science Building** in 1968. This building houses the William Rayen School of Engineering and Technology and the geology department. The structure contains an auditorium seating 268, a fluid-flow laboratory that extends two stories, and a chemical engineering chamber that extends three floors to accommodate absorption and distillation equipment.

In September 1970, the School of Business Administration Building, made possible by The University Foundation, Inc., was dedicated. Renamed **Williamson Hall** in 1981, the six-story structure houses classrooms and faculty and staff offices of the Warren P. Williamson, Jr., College of Business Administration.

Beeghly Physical Education Center was completed early in 1972. The building houses the Department of Health Sciences and the Department of Human Performance and Exercise Science. Its facilities include a large gymnasium with spectator seating and an Olympic-size swimming pool. There are seventeen classrooms, including laboratories for health research and kinesiology; separate gymnasiums for weight lifting, gymnastics, and physical education for the handicapped; handball and squash courts; a dance studio; and a rifle range.

Cushwa Hall, completed in 1976, houses the departments and the dean of the College of Health and Human Services as well as the Media Center, WYSU-FM Radio, and the departments of Geography, Mathematics, and Social Work. The building contains 32 classrooms, 70 laboratories, 169 offices and 23 conference/seminar rooms.

A building to house the College of Arts and Sciences offices and classrooms, now named **DeBartolo Hall**, was occupied early in 1978. The departments of Economics, English, Foreign Languages and Literatures, History, Philosophy and Religious Studies, Political Science and Social Science, Psychology, and Sociology and Anthropology as well as the offices of the Dean, are located in this six-story structure. Also located in this building are five student lounge/study areas, a computer terminal room, and a 210-seat lecture hall with a stage.

Housing the College of Fine and Performing Arts, **Bliss Hall** was completed in 1976. Its facilities include the 409-seat theater, Ford Auditorium; the 237-seat Choral Recital Hall; an experimental theater with flexible seating for up to 250; a Television Production Studio; an Electronic Classroom for viewing films; 70 music practice rooms equipped with studio or grand pianos; a Schlicker performance organ and two Flentrop practice organs; 27 faculty office-studios that can be used for music instruction; a band/orchestra room with a library; two photography studios with 18 enlargers each; three computer graphics labs including one equipped with SGIS; fully equipped drawing, design, printmaking; a new 18,000 sq. ft. addition with heavy equipment for working in three-dimensional design – sculpture, metals, glass and painting; art faculty office-studios; and a student art gallery. The McDonough Museum, an 18,000 sq. ft. facility completed in 1991, functions primarily as a gallery for art by YSU faculty and students.

Meshel Hall, dedicated January 1986, houses expanded facilities for academic and administrative computer use, broadens the YSU educational programs, and provides local business and industry with highly trained personnel. The state-of-the-art center is for instruction, research, and application in advanced computer technology, including computer-assisted design and robotics that will serve the entire University community. The building contains seven classrooms, ten specialized computerized laboratories, and 18 faculty offices. The fourth floor houses the University's main computer facilities and Computer Center staff, and the second floor houses the Bursar's/Cashier Financial Aids and Registration operations. The Harry Meshel Hall total project cost was $15,000,000, which includes the structure, furnishings, and equipment.

The **All-Sports Complex** was opened in 1982. This facility, located on an 18-acre site adjacent to Beeghly Physical Education Center, includes a 20,000-seat stadium and a multipurpose sports field for football, field hockey, and soccer. The stadium, named for the late Arnold D. Stambaugh, houses offices, classrooms, gymnasiums, locker rooms, and athletic facilities.

Currently, the **Phelps Building**, occupied in 1995, houses the Public Service Institute, and geography.

Beeghly Hall, the latest addition to the campus in 1999, houses the Beeghly College of Education, including technologically advanced classrooms, the College's Curriculum Resource Center, and a community counseling clinic.

Smith Hall, recently renovated, houses the Center for Working-Class Studies and the American Studies Program.

Academic Support Services

William F. Maag Library

The six-story **William F. Maag Library** is an attractive, comfortable, and technologically advanced environment for study and research located at the center of the Youngstown State University campus. Maag Library provides comprehensive information services as well as access to information in print, analog, micro and digital formats. A professional staff provides in-depth assistance in a wide variety of disciplines. Maag Library is open for on-site use more than 85 hours per week during the term. Virtual access to library services, to the on-line catalog, and to direct digital information resources is available via MaagNet, http://www.maag.ysu.edu, providing constant access from home or office.

Maag Library is a member of OhioLINK, a statewide library and information network linking the libraries of all of Ohio's public and private colleges and universities. OhioLINK provides straightforward, easy access to a combined collection of over 39 million items. The vast majority of this statewide collection is open to patron-initiated borrowing with rapid delivery to any member site. The network also provides access to over 100 indexing and abstracting databases in a wide variety of disciplines and direct access to the full text of over 5700 scholarly journals. OhioLink is currently working to provide direct Internet access to a wide variety of audio, visual and primary-source materials.

Maag Library itself offers instructional and research materials in books, periodicals, microforms, CD-ROM, and sound recordings to a combined catalog of over 1.5 million records. These holdings number close to 300,000 government documents, 700,000 bound volumes, and 800,000 microforms. Periodicals, microforms, and micro-readers are housed on the first floor. A copy management center allows self-service. User service points such as reference and circulation, as well as most staff offices, are conveniently located on the Library's entrance floor. The book collection is in open stacks, with split-level design between stack and reading areas. Study rooms and carrels are located on five of the floors.

Maag Library is home to over 150 contemporary computer workstations, connected to a high-speed network, located throughout the building. The fourth floor of Maag houses a general-purpose productivity computer lab that is open to faculty and students as many hours as the library is open. Moreover, laptop computers with wireless network connections can be checked out for use anywhere in the library. It is expected that by 2005, any YSU faculty, staff or student with a wireless device will be able to connect to the Maag wireless hubs.

In 2004 Maag Library initiated the development of the Archives and Special Collections unit. Located on the fifth floor of Maag this unit is not only collecting and preserving documents detailing the history of YSU and its environs, but also is developing the capacity to provide searchable Internet access to its entire collection. The Multi-media center on the third floor of Maag contains over 20,000 phonograph recordings, audio and video tapes as well as audio and data disks. The collection is strong in recordings of opera, jazz, and the collected works of J.S. Bach. A significant effort is currently underway to digitize most of the collection's analog recordings.

The Curriculum Resource Center (CRC) located in the Beeghly Hall College of Education is also a vibrant part of Maag Library, offering curriculum materials and support for students in Education.

Computer Center

The Computer Center is a centralized computational facility housing the Computer Services and Network Services Departments, along with Customer Support Services personnel. The facility, which provides decentralized access to faculty, staff and students, occupies the fourth floor of Meshel Hall. Serving both academic and administrative needs, the Computer Center operates an IBM 7060-H30 S/390 MULTIPRISE 3000 SERVER with one gigabyte (over one billion characters) of main memory (RAM). The IBM H30 supports two state-of-the-art production environments via the z/OS operating system. These environments provide online access to a high-performance RAID-5 disk array, providing a data storage capacity in excess of 840 gigabytes. Application development utilizes the MODEL204 relational database and VSAM files accessed through the CICS Transaction Server. For those students, faculty, and staff needing UNIX shell services, a Sun server running Solaris 2.8 is available on the network. More than 3,000 online devices, including terminals, personal computers, printers, and projection systems are located on campus. Telephone lines are provided for remote access off campus. Lines are available at 56Kb to access Netscape and UNIX services and are serviced in digital mode.

An Ethernet backbone runs through campus and connects workstations, personal computers, Maag Library's computer system and the IBM H30 to the Internet. All campus buildings are linked with one gigabit Ethernet optical fiber network backbone consisting of five fully meshed high-speed core switches. Each building is connected to the core background with building switches at one Gb speed. 100Mb Ethernet is available to the desktop over Category 5 copper cabling.

Over 10,000 network locations have been wired with electronics to activate 5,000 concurrent connections. Campus Intranet and Internet access is available at each of these locations including all residence hall rooms. Selected classrooms are equipped with fiber optic access to facilitate broadcast quality, full-motion video distribution, and distance learning opportunities.

An IBM xSeries LINUX cluster supports the Centralized University E-mail (CUE) system providing electronic-mail services to all students, faculty, and staff. Access is maintained through standard E-mail client software supporting the POP3 and IMAP protocols (a browser-based web mail interface is also available to all account holders).

Personal computers are available on campus for instruction and research. Currently, more than 55 labs are available within the 14 campus buildings and Metropolitan College sites. Networked personal computers allow access to local software, as well as to other facilities on campus, such as Maag Library, and to Internet sites worldwide. The Electronic Campus provides faculty, staff, and students the opportunity to use global and local computer networks and current-generation computer hardware and software via this state-of-the-art network infrastructure.

Center for International Studies and Programs (CISP)

The Center for International Studies and Programs (CISP) is an integral part of the Academic Affairs Division. It was created to respond to the societal trends toward global interests and the need for internationalization of Youngstown State University.

The CISP is in partnership with the colleges of the University, assisting them with their international initiatives, and cooperates with other divisions within the University concerning international matters. The CISP supports the University community in developing a more international curriculum, fostering intercultural learning activities, providing logistical support for international activities, collecting and sharing information of ongoing activities, providing support to faculty for professional improvement abroad, and offering Council on International Educational Exchange (CIEE) international identity cards.

The CISP is responsible for international exchange agreements, faculty international development, institutional international interests in general, policy and procedures development, and international institutional representation.

In addition, the CISP also administers the International Student and Scholar Programs, the English Language Institute, and Study Abroad.

The **International Student and Scholar Programs** include advisement of international students, establishing and maintaining SEVIS regulations, International Student Orientation, and programming involving international students.

The **English Language Institute** offers English as a Second Language classes to students seeking better language skills in preparation for the Test of English as a Foreign Language (TOEFL).

The **Study Abroad** program seeks to send students abroad through various consortiums to which YSU belongs, including the Ohio International Consortium (OIC) and the College Consortium for International Studies (CCIS), or through institutional exchange agreements.

More information may be obtained at CISP.

Metropolitan College

Metropolitan College instructional centers provide a gateway to the educational resources of the University for adults and nontraditional students and works to form partnerships with regional workplaces by creating and delivering programs and services that meet when and where students need them—days, evenings, weekends, on and off campus, in a traditional classroom or out, and by using distance learning technologies to supplement other learning experiences.

YSU Metropolitan College offers degree and nondegree programs, online instruction, courses, conferences, and seminars, all specifically designed and planned to meet the varied needs of adults. The Metro College has the flexibility to build a schedule that is both comfortable and convenient for adults.

The **Office of University Outreach,** under the Metropolitan College, develops and administers courses and programs outside of traditional degree programs through Continuing Education, Education Outreach, Edutravel, and the Center for Creative Retirement. Through both credit and noncredit course offerings at a variety of convenient times and locations, it makes academic programs, along with administrative and support services, available to nontraditional students and regional workplaces. Through University Outreach, YSU attempts to make the lifelong process of education possible for the adult with family and work obligations.

The **Continuing Education** noncredit programs offer area residents a wide variety of adult study or lifelong-learning courses and seminars to meet the needs for a changing society for professional updating and upgrading, for mid-career adjustments, and for lifestyle changes.

Area residents participate annually in more than 500 noncredit programs, many of which are in the academic disciplines and professional areas, varying from half-day seminars to multiweek courses, conducted in local business and government settings and other off-campus locations as well as on campus.

Edutravel provides adults with the opportunity to explore cultural learning by visiting foreign countries to experience other lands and cultures. Travel-study programs in this series provide on-site lectures, seminars, and field experiences and include visits to sites and facilities ofren unavailable to the average tourist.

The **Center for Creative Retirement** provides area seniors with several opportunities to pursue their educational objectives. The College for the Over Sixty is a state-mandated program providing for the enrollment of Ohioans 60 years of age or older who have been state residents for the preceding 12 months in undergraduate credit classes on a space-available, noncredit basis. Seniors who meet the income requirements may earn credit toward an undergraduate degree through the College for the Over Sixty. Through the YSU-ILR, an affiliate of the Elderhostel Institute Network, seniors have the opportunity to develop, instruct, and participate in educational programs and social activities designed for this membership-based organization. During the summer, the YSU-Elderhostel provides seniors with

weeklong residential learning and social experiences through Elderhostel-approved offerings.

Further information may be obtained from the Metropolitan College, Southwoods Commons (Boardman): (330)965-5800.

Student Support Services

Career Services

The Office of Career Services provides programs, resources and services for students and alumni to achieve the following: explore career and work possibilities and make informed decisions regarding options; develop and refine the employment search skills required to successfully compete in an ever competitive job market; and foster positive relationships with employers that will generate a broad range of employment opportunities for YSU students and graduates.

Employers consistently note that excellent employment candidates are individuals who can articulate a focus to their preparation for a career and demonstrate that they have followed a carefully developed plan. The office's Career Information Center contains an extensive collection of resources that individuals can access to research possible career options and to investigate employment opportunities with a variety of organizations. The resource collection includes FOCUS, a very popular computer based career and educational planning software package. The office's staff of experienced Coordinators meets with students and alumni in individual appointments to assist them in exploring career options and developing plans to achieve their occupational and career goals.

To be successful in today's competitive job market, one must have well-developed job search skills. Throughout the year the Career Services staff conducts workshops and seminars that are designed to foster effective employment search skills. The staff also works individually with students and alumni to assist them in establishing effective job search plans; review and provide feedback on resumes and marketing letters; and help them prepare for future job interviews. Individuals can schedule appointments to participate in simulated interviews that are videotaped and reviewed to provide feedback on strengthening individual interviewing skills.

Regional, local, and national organizations send representatives to the YSU campus to recruit graduating students and recent alumni, and to promote employment opportunities available with their organizations. Currently enrolled graduate students who are registered with Career Services are eligible to interview with employers visiting the campus during the academic year. Annually in September a university-wide job fair is held on campus, which brings 70-80 employers to the YSU campus. During the spring semester YSU Career Services collaborates with 11 other colleges and universities to stage NOTED, a consortium job fair for education majors, which attracts recruiters from 80-100 school districts. Also during the spring semester YSU Career Services holds a job fair for Government and Non-Profit employers.

The Office of Career Services utilizes a web-based, very user-friendly software system to provide the most efficient employment services to our students and alumni. Students and alumni will register online with the Office of Career Services and upload resumes into the database. After online registration has been completed, students and alumni are able to: receive announcements from Career Services providing updates regarding recruiting and employment-related information and activities; view jobs being posted from local, regional, and national employers and quickly submit resumes to employers of interest; review the organizations that will be recruiting on campus and schedule interviews; post resumes to the appropriate resume books for employers to search online; and track all individual recruiting and job search activities.

The Office of Career Services is located in 1034 Jones Hall. During the fall and spring semesters, office hours are 8:00 a.m. – 5:00 p.m. Monday, and Wednesday – Friday. On Tuesday office hours are 8:00 a.m. – 7:00 p.m. During summers and breaks between semesters, office hours are 8:00 a.m. – 5:00 p.m.

Monday – Friday. For more information, call (330) 941-3515, or visit our website at http://www.ysu.edu/career-services.

Student Health Clinic

The Student Health Clinic is located on the first floor of Kilcawley House, which is adjacent to Kilcawley Center. The entrance to the Clinic is located off University Plaza.

The Clinic provides health care to all currently enrolled YSU students—both resident and commuter students. Licensed physicians staff the Health Clinic twelve (12) hours per week during the semester. Appointments are required. Student must call 330-941-3489 to schedule an appointment. During break weeks and summer term, physicians have limited hours; however, registered nurses are available daily, year around.

Health care is available for illness, injury, first aid, and routine health checks. Health screening tests, physical exams for sports and academic programs, gynecological exams, as well as consultations and referrals, are provided. Flu and other immunizations are also given; however, there are charges for these injections. General health care information is also available on the Clinic's web site at http://cc.ysu.edu/student-services/healthservices/.

Office visits are free. Students do not need to have student health insurance to use the Clinic's services. Blood tests, X-rays, lab tests, etc., ordered by a YSU Health Clinic physician, are done off campus at the student's choice of provider and at the student's expense.

Student records are kept strictly confidential. Information cannot be released to anyone without the written consent of the student. Certain public health diseases, however, must be reported to the Department of Health as required by law.

The Student Health Clinic also provides information and registration forms for Student Health Insurance. Details and insurance claims forms are available on the Clinic's web site at http://cc.ysu.edu/student-services/healthservices/.

Student Ombudsperson

The **Student Ombudsperson** has the official role of ensuring the interests and rights of *all* students (undergraduate and graduate) enrolled at Youngstown State University by being an impartial, trustworthy person to oversee conflict-resolving procedures and assure due process for all parties. The Ombudsperson works to produce informal resolutions for disputes; advises students of their rights; and identifies and refers students to the correct offices or individuals to address their concerns. Achieving informal resolutions depends substantially on helping disputants to appreciate their true situation and understand the options available to them. The purpose of the office is to protect the rights of the student. The Ombudsperson strives to maintain an atmosphere of confidentiality and fairness and to promote an environment conducive to learning and reasoned discourse.

The Ombudsperson is K.J. Satrum. Any student may make an appointment by calling (330) 941-3571 or by stopping by her office in the Kilcawley Center Staff Offices.

Special Programs and Testing

The Testing Office supervises and administers national admission and certification tests. These include the American College Test, the College Level Examination Program, the Graduate Record Exam (subject only), the Miller Analogies Test, the Law School Admissions Test, the Medical College Admissions Test, and the Praxis Exam.

Veterans

Efforts are made to give all necessary guidance and assistance to military veterans and others eligible for VA educational benefits. Additional information may be obtained by contacting Financial Aid, 201 Meshel Hall, (330) 941-3505.

Bookstore

The Youngstown State University Bookstore is located at the west end of the

Kilcawley Center complex. The bookstore is a full-service operation that carries required texts and supplies as well as a wide array of emblematic apparel, gifts, stationery, specialty items, computer software, and an extensive trade and general book area. The bookstore can be reached by calling (330) 941-3589 or by visiting the Web site at www.ysubookstore.com.

Housing

YSU owns and operates five housing facilities for students: Kilcawley House, located on University Plaza; Lyden House and Cafaro House on Madison Avenue; and the Wick and Weller Houses on Wick Avenue. On-campus options for students range from traditional residence hall-type facilities to apartment-style housing. In addition to the facilities operated by the University, YSU works closely with two private housing operations that are on campus. The University Courtyards is ideal for graduate students because if offers apartment-style housing with private bedrooms.

On-campus living provides students many advantages and opportunities. University housing facilities are structured environments. Each is a small community, and as such, has procedures and regulations addressing such things as noise, safety, guests, and security. University Houses have full-time professional and part-time student staff that oversee the operation of the Houses and assist students with the issues of daily college life. Each facility has state-of-the-art building security systems. On-campus living is a good place to get to know many students in a short period of time. Sharing bathrooms, lounge space, and corridors makes forming friendships easy. Being on campus also means that classes, the library, the student center, and a computer lab are never very far away.

Kilcawley House

Kilcawley House was constructed in 1965. All areas of this facility have been refurbished recently. Public areas, bathrooms, and student rooms are attractive and modern. This traditional type, seven-story housing facility can accommodate 238 students. Kilcawley residents live in double occupancy rooms, complete with bunk beds, wall-to-wall carpeting, individually room-controlled heating and air conditioning units, built-in desks and armoires, telephone jacks with voice mail access, Internet access, cable TV, and plenty of closet and drawer space. Lounges are available on each floor.

A computer lab with Internet access is located in the basement. The basement also contains a game room equipped with a TV and VCR; ping-pong, pool, and foosball tables; kitchenette with vending machines; fitness equipment; and two music practice rooms. Its residents have the advantage of being located in the heart of the YSU campus and can use all of Kilcawley Center's facilities, including Home Savings and Loan, computer center, and copying service without going outdoors.

Lyden House

When **Lyden House** opened in the fall of 1990, a new era began for on-campus housing at Youngstown State. The impressive five-story structure reflects a traditional collegiate gothic style with clean, contemporary lines.

Lyden House, located just north of campus along Madison Avenue, houses 300 students. A typical student room is approximately 12' x 17' and houses two students. In addition to a bunk bed, which can be stacked or separated, each student has a desk and chair, a dresser, a shelving unit, and an armoire wardrobe unit. The furniture is uniquely designed to interchange to suit the individual student's tastes in personal decor.

Rooms also feature individually room-controlled heating and air conditioning units, cable TV, telephone with voice mail access, Internet access, decorator vertical window blinds, overhead lighting, and tiled floors. All rooms in Lyden are handicapped accessible.

Each wing of this beautifully designed residence hall includes convenient shower and restrooms, quiet study rooms, and comfortable conversation lounges. Students have full access to a kitchenette/vending area, fitness room, a computer lab with Internet access, and laundry facilities in the lower level of Lyden. A convenient parking area is also available adja-

cent to Lyden House.

Cafaro House Honors Residence

Cafaro House, our coed residential honors facility, opened fall 1995 and houses 274 students from the University Scholars Program, B.S.M.D. program, and Honors Program. The facility has enclosed suites that accommodate six to 18 residents and individual rooms that branch off each suite area that house two to three residents. Each room has cable TV, Internet access, and telephone jacks with voice mail.

In addition to providing a variety of lounge and recreational spaces similar to Kilcawley and Lyden, this facility also has academic spaces such as a seminar room, a computer lab with Internet access, and music practice rooms.

Weller House/Wick House

Both Wick and Weller Houses are located along Wick Avenue next to the Arms Family Museum of Local History and near the Butler Institute of American Art. Both of these houses were purchased by the University and were then completely renovated. Weller House accommodates 24 upper-class, junior, senior, and graduate tenants. Wick House can accommodate 36 residents. Complete renovations of these houses included all new energy-efficient windows, heating and air conditioning units, carpeting, and lighting. Furnishings provided for each person are similar to those previously listed for Lyden House residents.

Weller House opened in fall 1991, offering apartment-style on-campus living, each unit having a full bathroom with tub and/or shower, a kitchen furnished with modern cabinets, Internet access, telephones with voice mail access, cable TV, an electric range, refrigerator/freezer, and a garbage disposal. Apartments vary in size and are designed to accommodate two to three students.

Weller also offers students a comfortable, group lounge with convenient laundry facilities and fitness equipment on the lower lever.

Wick House, constructed in 1906, offers the traditional architecture style of the turn of the century. This four-story former mansion features an impressive, historically preserved dual staircase. It offers a wide variety of housing options, ranging from single occupant rooms to rooms accommodating four people. Rooms vary in size and share showers and restroom facilities. Wick House is used for various programs throughout the year, including camps and conferences.

Wick House residents enjoy security monitoring, a conversation lounge, computer lab, cable TV, telephones with voice mail access, and laundry facilities.

Private On-Campus Housing

The University Courtyard Apartments opened in the fall of 2003. Independently owned and operated, this is an ideal option for students wishing to live on campus but not in a University residence hall. The University Courtyard Apartments are located in the Wick Oval, close to the center of campus and adjacent to the Dana School of Music. There are one, two, or four bedroom apartments available (one student per bedroom). Each apartment comes equipped with ceiling fans; wall-to-wall carpet; appliances including dishwasher, microwave, and garbage disposal; and mini-blinds. In addition, every apartment comes fully furnished. In the apartment complex, there are planned resident activities, a study center including a computer lab, and a choice of fitness and recreation opportunities. The rent for the apartment is all-inclusive, which means the residents pay one amount for absolutely everything—central heat and air, electricity, water and sewer, local telephone, high speed Internet access, and basic cable TV. Complete with a comprehensive and thorough safety and security plan, the University Courtyard Apartments are an ideal way to study hard and live easy. For more information, please call (330) 941-1999 or visit http://www.universitycourtyard.com.

Buechner Hall, a privately owned and operated women's residence hall, is located near the center of campus. Although this facility is

not operated by Housing Services, cooperation and regular communication ensures that the women residents are integrated into campus life.

Buechner Hall, designed and built expressly for women, is operated by the Buechner Foundation, a private, not-for-profit corporation, and is maintained by funds from the original bequest. The Foundation partially underwrites every resident's cost. Located on the YSU campus, Buechner Hall houses 75 women in single and double rooms. The air-conditioned rooms are completely furnished, including linens and telephones, and are cleaned weekly by the housekeeping staff. The dining room provides 15 home-cooked meals a week, and weekend cooking facilities are also available. The building has an elevator and sprinkler system, and laundry facilities on each floor. Staff and security guards provide maximum 24-hour security service. A beautiful and immaculately maintained building, Buechner Hall is conducive to a quiet study environment, 620 Bryson Street, Youngstown, OH 44502 (330) 744-5361.

Application for Housing

Applications are available from the **Housing Services Office**. You can request an application by mail, by phone (330) 941-3547, in person, or print the application from YSU's Web site (www.ysu.edu). If you indicate an interest in housing on your application for admission, an application will be sent to you.

In order to be accepted for University housing, a student must first be admitted to the University. Space is allocated on a first-come first-served basis. If you have not yet applied to the University, contact the School of Graduate Studies and Research at (330) 941-3091.

Campus Dining

Students residing in Kilcawley, Lyden, Wick and the Cafaro Houses have a choice of one of three resident meal plans as part of their room-and-board package. Residents of Weller House and University Courtyard Apartments may purchase an off-campus meal plan package that fits their needs. Both residents and commuters are eligible to participate in meal plans offered by Dining Services.

Residents and commuters are welcome at **Christman Dining Commons**. Located adjacent to both Lyden House and Cafaro House and easily accessible from Elm Street, Madison Avenue, and Custer Street, the Commons serves students with an on-campus resident meal card or on a per-meal cash basis. It offers a wide variety of menu options, and hours of service are Monday through Thursday from 7:00 a.m. until 8:00 p.m., Friday from 7:00 a.m. until 7:30 p.m., and Saturday and Sunday from 10:30 a.m. until 1:00 p.m./4:00 p.m. until 6:30 p.m. A mini-convenience store located within the Commons, **Time Out C-Store**, is open Sunday through Thursday from 9:00 a.m. until midnight, and Friday and Saturday from 4:00 p.m. until 6:00 p.m.

Dining facilities within Kilcawley Center include the **Market Place Café**, a campus food court, open from 7:30 a.m. until 2:00 p.m.; **Noodles Restaurant**, a full-service dining facility, open from 11:00 a.m. until 2:00 p.m.; the **Bagel Stop**, an express food service, open from 7:00 a.m. until 2:00 p.m.; and **Arby's**, a fast food service, open from 7:00 a.m. until 8:00 p.m.

Other dining options include the **Corner Café** on the Wick Avenue Bridge, open from 7:30 a.m. until 2:30 p.m.; **Bagel Stop Express**, located within Williamson Hall, open Monday through Thursday from 8:00 a.m. until 2:00 p.m., and 4:30 p.m. until 8:00 p.m., and on Friday from 8:00 a.m. until 1:00 p.m.; and **Café a la Cart**, located in Beeghly College of Education, open Monday through Thursday from 8:00 a.m. until 2:00 p.m., and 4:30 p.m. until 8:00 p.m., and on Friday from 8:00 a.m. until 2:00 p.m. **Peaberry's Café** offers students a great place to relax and sip on a latte or mocha while watching the big screen TV, enjoying entertainment on stage, playing billiards, Air Hockey, PlayStation 2, Darts, or surfing the web on the Café's computers. Peaberry's menu includes freshly brewed coffees, espresso-based drinks, as well as fresh baked goods, daily soups, sandwiches on French bread, and snacks. Peaberry's is open for breakfast and lunch daily, and Monday through Thursday evenings until 8 pm for late dining

during the academic year.

Kilcawley Center

Kilcawley Center is often referred to as the heart of campus. This refers not only to its central location on campus, but also to the services, conveniences, programs, and amenities it provides to the University community. The Center's casual atmosphere, comfortable lounges, and attractive dining areas are aimed at making free-time activity an integral part of a YSU education. Active with cultural, social, and recreational programming, Kilcawley Center provides for rich and diverse experiences outside the classroom. Visit Kilcawley's web site at www.kc.ysu.edu for details on Kilcawley's services, staff directory, the daily calendar of events, and student job postings.

The Center's services are many and include the Candy Counter and the Bagel Stop for quick in-between- class snacks, a bank and ATM machines, quick copy services, a travel agency, fax service, a U.S. Mail drop and stamp machines, as well as offices for Student Government and student organizations.

Kilcawley Center's several study lounges are renowned for their comfy overstuffed chairs and couches for relaxing or catching a nap. Newly dedicated is the Lariccia Family International Student Lounge located on the lower level of Kilcawley.

There are also twenty seminar rooms, a computer training classroom, and a large multipurpose room in Kilcawley, which are filled daily with luncheons, workshops, seminars, lectures, organization meetings, and programs.

Graphic Services, located on the lower level of the Center, designs flyers, banners, posters, brochures, and graphics to fit whatever the need may be. Graphic Services also offers for sale a wide variety of helium balloons for every occasion.

On the upper level of Kilcawley is a computer lab called Bytes 'n Pieces. Students, faculty, and staff may use the popular software or access the Internet. The only fee charged is for laser printouts. Bytes 'n Pieces serves as the Information Center and Lost & Found for the University, registers students for campus locker rentals, and provides estimates for Kilcawley Resume and Typing Service.

The YSU Bookstore is also located on the upper level of the Center, as well as the Kilcawley Staff Offices, Room Reservations, the Office of Campus Life, Student Activities, the Women's Center, and the University Dining and Catering office.

Kilcawley's west wing, located under the YSU Bookstore, houses the Center for Student Progress. The east wing of Kilcawley Center is Kilcawley House, where the Housing Services Office and the Student Health Clinic are located on the first floor.

Research at YSU

Youngstown State University is committed to fostering high quality, nationally competitive research to promote faculty and student development in support of the teaching mission of the University. As stated in its mission statement: "The School of Graduate Studies and Research supports the continued development of faculty scholarship and serves as the principal point of coordination for both internally- and externally-funded programs at Youngstown State University." These coordination efforts are directed at obtaining the resources necessary to mount and maintain scholarly and educational programs of excellence and, in some cases, to target specific areas for regional and/or national prominence.

The PACER Program

While there have always been a number of exemplary faculty members actively involved in competitive research, during the 1997–1998 academic year, several "centers of excellence" were established in an effort to focus the research interests of the faculty in areas where the capacity for nationally competitive research excellence was apparent. These centers are designated PACER Centers (Presidential Academic Centers for Excellence in Research) and are funded and administered by the School of Graduate Studies and Research. They are collaborative, interdisciplinary research centers, and involve faculty and students in nationally

competitive research endeavors that have been externally reviewed. Considerable internal resources are devoted to establishing these centers' national reputations.

The PACER program has effectively utilized the human and intellectual resources of the University to focus on a few research areas where the capacity for excellence has been identified. The program is part of an overall grants development effort at Youngstown State University, which has increased external funding from $1.8 million in 1994 to the current (2004) $6.54 million level. The University will continue its investments to build the research infrastructure in support of the scholarly and intellectual environment on the campus, and also in support of economic development in the region. Current PACER Centers include:

Center for Advanced Numerics, Complexity, and Networking

Parallel computing systems offer the promise of a quantum leap in the computing power that can be brought to bear on many important problems. The advancement of parallel computing is the focus of this Center, which will require a diverse group of scientists specializing in parallel algorithm development, mathematical biology, artificial intelligence, wave propagation, and parallel programming education.

Since Youngstown State University is part of the Ohio statewide users group, all licensed software at the Ohio Supercomputer Center is available. The faculty research efforts will involve a mix of graduate and undergraduate students, who will be exposed to the MP environment. MP is a programming environment for message passing parallel computers; students who master advanced computing skills are prized in industry and commerce.

Center for Biotechnology

Established in 2000, this center's activities are focused on bacterial infections that show resistance to antibiotics. The goals are to produce recombinant antibodies that have potential as therapeutic agents and/or clinical reagents in the diagnosis of bacterial infections and give opportunities to students for research experiences, which prepare them for careers in the pharmaceutical and biotechnical industries. Faculty from the Department of Chemistry and the Department of Biological Sciences are the mainstay of this center, which is currently funded by grants from the American Chemical Society (Petroleum Research Fund) and Research Corporation, the National Institutes of Health, and the Ohio Board of Regents.

Center for Environmental Monitoring and Restoration

This center's main goal is to assist in the restoration of the Mahoning River and to support environmental protection and restoration projects as an interdisciplinary team with a spectrum of complementary skills and resources. Team members have expertise in ecology, microbiology, botany, chemistry, geology, as well as environmental engineering and community planning.

The center is designed to monitor and evaluate the restoration of the Mahoning River. Participants will establish baseline ecological, chemical, and physical data before a large-scale river restoration project, which will then be used to guide and enhance the proposed restoration activity.

Center for Hydraulics Research and Education

This center is divided into four components: a Hydraulics Laboratory, a Computational Lab, a Technical Assistance Program, and an Educational Assistance Program. The Hydraulics Lab is a collaboration between Youngstown State University and Parker Hannifin Corporation that aims to advance the study of hydraulics and pneumatics through interdisciplinary industrial research projects. Youngstown State University faculty and students will be able to engage in a high level of applied research related to fluid power and control. The Computational Lab will be used for flow modeling and analysis, interactive analysis, modeling and system simulation, and to simulate micro- and nano-systems. Technical Assistance will allow Parker Hannifin access to the expertise and assistance of YSU faculty and resources.

Electromagnetic Field Research and Instrumentation Center (EFRIC)

The main focus of this center is research in MRI optimization, optical and radio frequency communications, the development and characterization of novel non-linear materials, and electromagnetic compatibility (EMC). These research efforts apply to the medical field, as well as communications and automotive industries. Technical support will be provided by Advanced Imaging Research, Inc. of Cleveland, the EMC engineering team at Packard Electric Systems of Delphi Corporation, Internet provider cboss, Inc., and the Youngstown Business Incubator. The Center will provide co-op opportunities and encourage collaboration with local hospitals and the NEOUCOM (Northeastern Ohio Universities College of Medicine) program.

Other Centers

The following centers outside the School of Graduate Studies and Research also receive external funds in support of research and scholarship:

Beecher Center for Technology in the Arts

As a partnership between Youngstown State University and the Butler Institute of American Art, the Beecher Center provides opportunities for the creation, exhibition, archiving, and dissemination of technology-based art. There are only a handful of centers in the world with the technical capabilities of the Beecher Center. The Center has received over $800,000 of external funding since its opening and collaborates with ZKM of Carlsbad, Germany (recognized as the premier such center in the world). The center is regularly visited by world-renowned artists and provides students and faculty with interactive venues rarely available at similar universities.

The Center for Historic Preservation

Established in 1997, this center's activities draw upon the expertise of faculty members from the Butler Institute of American Art and seven University departments including: History, Geography, Anthropology and Sociology, Art, and the Center for Urban Studies. The Center is committed to making the most of existing resources by celebrating and safeguarding our nation's historic architecture, industrial and engineering sites, and cultural resources. Students are included in all aspects of the center's activities which include Historic American Building Survey/Historic American Engineering Record documentation, National Register and National Historic Landmark nominations, Historic Resource Surveys and Determination of Eligibility Reports, Phase I, II, and III testing, significance evaluation, and data recovery. The Center collaborates with the Mahoning Sanitary District on the Youngstown Water Works, the Institute for History of Technology and Industrial Archeology, The Youngstown Historical Center of Industry and Labor, and the Mahoning Valley Historical Society. The Center is funded by grants from The Ohio Historic Preservation Office, Battle of Homestead Foundation, City of Salem, and Phillips/Schanick Architects.

Center for Human Services Development

The center is a resource for health and human service organizations and community leaders. It works with the community to identify problems and needs, develop solutions, and evaluate activities in the health and human services field.

Center for Urban and Regional Studies

This center is a part of Youngstown State Universities Public Service Institute. It provides research and technical assistance that focuses on challenges to urban and regional development. Seven programmatic areas include reduction in poverty, local government assistance, economic development, urban and environmental planning, urban data (including census) services, and crime reduction. The center is funded by grants from the U.S. Department of Housing and Urban Development, Mahoning County, Trumbull Metropolitan Housing Authority, Home Builders Association, and the

American Architectural Foundation.

Center for Working Class Studies

The Center for Working Class Studies is the first center of its kind in the United States focusing on working-class life and culture. The mission is to foster multidisciplinary research in the area, support the development of courses that focus on work and class, and serve the greater Youngstown community by providing public programs as well as education. The center is funded by grants from the Ford Foundation and the Ohio Humanities Council.

Lake Erie Center for Enology Research

Established in 2000, the center is a group of institutions and private organizations in northeastern Ohio, western Pennsylvania, and western New York with strong intellectual interest in winemaking and fermentation processes and their corresponding relationships to product quality. The center's mission is to enhance the health and competitiveness of Ohio wine and grape producers via fundamental and applied research on enology and viticulture and to support the research priorities of the American Viticulture Association. In partnership with Cleveland State University and the Lake Erie Quality Wine Alliance, Youngstown State University is the lead institution for the center, which resides on its campus. Faculty from the Departments of Chemistry and Biological Sciences at YSU and from the Department of Biology, Geology and Environmental Studies at CSU constitute the scientific leaders for the research efforts. Undergraduate and graduate students from both campuses are involved in the work of the center, which has been funded by the Ohio Plant Biotechnology Consortium and the Ohio Grape Industries Council. Current research projects are underway at three different vineyard locations in northeastern Ohio (Harpersfield Vineyard, Klingshirn Winery, and Marko Vineyard).

The Research Program in Photon Induced Processes

Established in 1997 as a PACER center, this research initiative is a focal point for faculty from the Departments of Physics and Astronomy, and Chemistry whose activities focus on both fundamental and applied research in a variety of laser related and facilitated areas. Included are nonlinear optical materials synthesis and characterization, gamma- ray laser development, and the development of optical tools and measurement techniques for sensing, imaging, and spectroscopic applications. The CPIP provides extensive opportunities for student research and a focal point for collaborations with other universities, national government laboratories, and industry. Current or past collaborators include: NASA Lewis Research Center, Case Western Reserve University, Colorado State University, University of Texas at Dallas, Sandia National Laboratory, the Institute for Nuclear Physics, Technical University of Darmstadt, Institute for Radiation Physics, University of Stuttgart, Butech Corporation of Salem, Ohio, and Applied Vision Systems, Inc. of Akron, Ohio. The center is or has been funded by grants from the U.S. Air Force Office of Scientific Research, the National Science Foundation, U.S. Office of Navel Research, the Department of Defense/ Sandia National Laboratories, and Research Corporation.

The Paula and Anthony Rich Center for the Study and Treatment of Autism

The Rich Center is dedicated to improving the lives of individuals with autism by providing innovative education, research and support facilities to professionals and to families of autistic individuals. The Center was named the "Program of the Year" by the Autism Society of America and is externally funded by grants from the Hine Memorial Fund, the Wean Foundation, Toys-R-Us, The Crandall Foundation, Ronald McDonald Charities, the Paul Newman Foundation and others.

In addition to these formal "centers" focused on research and scholarship, faculty at Youngstown State University are heavily invested in scholarship on an individual basis. Graduate Faculty research interests are listed for each degree program in the Graduate Bulletin. The School of Graduate Studies and Research also maintains program brochures for

each graduate degree program. These brochures are available on request from the graduate school office (330) 941-3091.

THE SCHOOL OF GRADUATE STUDIES AND RESEARCH

Mission Statement

As a state-assisted metropolitan university, the instructional mission of Youngstown StateUniversity is focused on the educational, scholarship, research, and service requirements of residents and students of northeastern Ohio and western Pennsylvania, as well as a broader region including all of Ohio and its surrounding states. This mission is designed to meet a variety of needs, including those in the industrial, professional, business, educational, social, and cultural areas. In support of this mission the fundamental responsibility of the School of Graduate Studies and Research is to make quality graduate education available to all qualified persons desiring it. Graduate study at Youngstown State University provides an integrated program of advanced study leading to discipline mastery and an understanding of related subjects. A thorough training in research skills and/or professional applications associated with the base of knowledge for each discipline is implicit in all graduate programs. Because of the very nature of graduate work itself, a more than average investment and initiative in learning, inquiry, research, and scholarship will be required on the part of candidates for an advanced degree. Thus the School of Graduate Studies and Research seeks to develop and maintain programs of high stature which achieve appropriate professional accreditation and attract quality students to the University.

Graduate programs which yield students who have mastered their discipline require a faculty of teacher-scholars who are active in their respective fields of study whether they are professionally oriented or involved in more traditional scholarship, research, and creative activities. Individuals who meet these requirements constitute the Graduate Faculty.

The School of Graduate Studies and Research supports the continued development of faculty scholarship and serves as the principal point of coordination for both internally- and externally-funded programs at Youngstown State University. These coordination efforts are directed at obtaining the resources necessary to mount and maintain scholarly and educational programs of excellence and, in some cases, to target specific areas for regional and/or national prominence.

Development and Organization

On March 28, 1967, the Trustees of The Youngstown University authorized the President and faculty of the University to begin developing graduate programs at the master's degree level, starting in the fall of 1968. In May 1967, the Faculty Senate of The Youngstown University authorized the development of master's degree programs in various academic departments of the University. At its first meeting on August 15, 1967, the Youngstown State University Board of Trustees established the office of the Dean of the Graduate School and the general regulations governing the appointment of a graduate faculty. It also identified and authorized the initial graduate degree programs that were to be offered. These programs gained approval from the Ohio Board of Regents on December 15, 1967. Preliminary accreditation was given by the Commission on Colleges and Universities of the North Central Association of Colleges and Secondary Schools in July 1968; continued accreditation was awarded in 1974, 1978, 1988, and 1999. The School of Graduate Studies and Research is a member of the Council of Graduate Schools in the United States and the Midwestern Association of Graduate Schools.

The School of Graduate Studies and Research is administered by a Dean who is also a member of the Graduate Council. The elected members of the Graduate Council consist of one representative from each college's Graduate Studies Committee, one at-large member from Arts and Sciences, one at-large member from Education, one graduate student member, and one Program Director from each college. Standing committees of the Graduate Council are Curriculum; Policy; Assistantships Allocation; Graduate Student Recruitment and Retention, and Graduate Student Grievance.

Admission

Admission to the School of Graduate Studies and Research is granted by the Dean of Graduate Studies and Research upon recommendation of

Graduate Programs

The following graduate degree programs are offered by Youngstown State University:

- Doctor of Education (Educational Leadership)
- Master of Arts (American Studies; Economics; English; Financial Economics; History)
- Master of Business Administration (Accounting; Executive; General)
- Master of Computing and Information Systems
- Master of Fine Arts
- Master of Health and Human Services
- Master of Music (Jazz Studies; Music Education; Music History and Literature; Music Theory and Composition; Performance)
- Master of Physical Therapy
- Master of Public Health
- Master of Science (Biology; Chemistry; Criminal Justice; Environmental Studies; Mathematics)
- Master of Science in Education (Counseling; Educational Administration; Master Teacher Programs for Elementary, Secondary, and Special Education Teachers)
- Master of Science in Engineering (Civil/Environmental and Chemical; Electrical and Computer; Industrial and Systems; Mechanical)
- Master of Science in Nursing (Chronic Illness Care; Nurse Anesthetist; School Nurse)
- Master of Social Work
- Early Placement Program for Ph.D. in Engineering with Akron University.

the department in which the applicant wishes to do major work. Students in combined baccalaureate/master's programs must follow standard procedures for admission to the School of Graduate Studies and Research. Admission is required before registration in any course for graduate credit (also see **Graduate Courses for Undergraduates**). The complete application for admission, including supporting materials, should be received by the School of Graduate Studies and Research at least four weeks before the beginning of the term in which the applicant plans to register. YSU admits graduate students in the fall, spring, and summer semesters, except students majoring in Physical Therapy, who must enter only during the summer semester, and Social Work, who may enter only during the fall semester.

Admission Procedure

The Application for Graduate Program Admission is available in the School of Graduate Studies and Research office. The form is also available as a PDF file on the School of Graduate Studies and Research website. Online admission is also available. Contact the School of Graduate Studies and Research or visit our website at http://www.ysu.edu/GradSchool/index.htm for more information about these options.

International students must apply for admission on the Application for Graduate Admission for International Students. It is currently available in hard copy form by contacting the School of Graduate Studies and Research at (330) 941-3091 or graduateschool@ysu.edu. The forms are also available on the School of Graduate Studies and Research website at http://www.ysu.edu/GradSchool/index.htm.

Students utilizing the online application are required to pay the admission fee by credit card or electronic check as part of the process. Paper applications are submitted with the application fee to the Bursar's Office. Applicants must send one transcript from each college or university attended, except YSU, to the School of Graduate Studies and Research. **Official transcripts must be sent directly from the institution to the School of Graduate Studies and Research.** Personal or unofficial transcripts issued to the student or those delivered or sent by the applicant instead of the institution will not be accepted.

Applications for admission cannot be reviewed until official transcripts of all previous college or university work are received. The applicant must see that these reach the School of Graduate Studies and Research at the earliest possible date. Omission of information on the application form will necessitate requests for additional information and therefore delay processing of the application, so the applicant should provide all the information requested in the first submission of materials. International applicants should also see the section International Student Admission for additional requirements. As soon as possible after receipt of application materials, the Graduate Dean will notify the student of the action taken on the application and, if the student is admitted, will provide information on registration procedures.

Test Information

In certain master's programs, test results must be submitted as part of the admission procedure. The Graduate Record Examination and Graduate Management Admission Test are available at Sylvan Learning Center locations. Arrangements for taking the Miller Analogies Test on campus may be made directly with the Testing Office in Room 3101, Beeghly College of Education.

Admission Requirements

Minimum requirements for admission to the School of Graduate Studies are:

Minimum requirements for admission to the School of Graduate Studies and Research are:

1) A bachelor's degree from a college or university certified by a regional accrediting agency (e.g. North Central Association of Colleges and Schools), approved by the U.S. Department of Education.

2) An unrecalculated cumulative grade-point average in undergraduate work of

at least 2.7 (on a 4.0 scale). If an undergraduate course has been repeated, all grades received will figure in the calculation of the grade-point average.

3) Satisfactory preparation for the graduate program in which the student wishes to enroll as specified by the department of the major.

4) A test of written/spoken English, which the University reserves the right to request, of any entering graduate student whose primary language is not English.

5) Degree-seeking students having an undergraduate GPA below 2.7 must present a satisfactory score on the general test of the Graduate Record Exam, the Miller Analogies Test, or graduate-level subject specific exam as specified by the department of the major.

The applicant is reminded to check specific admission requirements of the program in which he/she wishes to enroll to determine whether there are any additional requirements.

Types of Admission

Regular

Regular admission will be granted to students who satisfy the admission requirements for the master's program in which they wish to enroll. Other categories are available as noted.

Provisional

Upon recommendation of the Program Director and/or Chair and subject to the approval of the Dean of Graduate Studies and Research, a student may be accepted with provisional admission if his/her undergraduate record shows slight deficiencies compared to the admission requirements of the program to which the student seeks entrance. Students who are admitted with provisional status may be required to make up deficiencies by taking the appropriate tests and/or courses without graduate credit. The academic record of provisional students will be reviewed when nine semester hours of degree-credit coursework are completed. The Program Director and/or Chair will change the student's status from provisional to regular if those deficiencies have been met and the student's record justifies such a change. The advisor will report the change to the Dean of Graduate Studies and Research on the Action on Provisional Status form.

Nondegree

Nondegree status provides an opportunity for individuals who hold a baccalaureate or higher degree to enroll in graduate classes for professional or personal development, personal enrichment, or to explore the possibility of entering a graduate degree program, without completion of the regular graduate admission process. Departments may require prior approval for nondegree student registration in departmental courses.

Status as a nondegree student is not an admission to a School of Graduate Studies and Research Degree or Graduate Certificate Program. Nondegree applicants are not required to submit credentials. Nondegree students must complete a nondegree application for graduate studies, which indicates their academic area of choice and includes a signed statement attesting that they have earned the baccalaureate degree. Nondegree students are required to pay the regular application fee. If students decide to seek admission to a graduate program, no further application fees will be assessed, but all required credentials must be submitted. Within the nondegree status category, the Dean of Graduate Studies and Research may permit a student to take courses as a **Special Nondegree Student.**

Nondegree students are ineligible for any financial aid or assistantships through the School of Graduate Studies and Research. Nondegree students may seek advisement from the chairperson or program director in the academic area to which they have been permitted to take courses. A maximum of nine semester hours taken as a nondegree student may be applied toward a degree program if accepted by the department in which he/she wishes to earn a degree, and if the department's recommendation is approved by the Dean of Graduate Studies and Research. This transfer

limit may not be appealed. However, all graduate courses taken as part of a graduate certificate may be counted toward a degree program, if the student is subsequently accepted into the program and the certificate courses are applicable.

Transient

Transient admission may be granted to a degree-seeking student at any accredited graduate school and who submits a graduate transient student form, signed by the dean of the student's home graduate school, showing that he/she is a graduate student in good standing. The form to be used in such cases may be secured from the YSU School of Graduate Studies and Research office. Under some circumstances, transient admission may be renewed for a second semester, but the graduate deans of both universities must approve the renewal. If a transient student later wishes to become a regular graduate student, he/she must be admitted to a degree program by following the usual admission procedures.

Workshops

Students who wish to take a workshop for graduate credit but who have not completed the regular School of Graduate Studies and Research admission process will be permitted to register in the School of Graduate Studies and Research as nondegree students. Graduate workshops are graded on an S/U (satisfactory/unsatisfactory) basis.

Youngstown State University workshop courses, upon approval of the graduate advisor, may later be applied to degree work if regular admission to the School of Graduate Studies and Research is obtained and if those courses are part of the degree program. Workshop courses are those specifically designated as such in this catalog or by the Graduate Council.

Transfer Credits

Transfer hours will be considered for acceptance at the time of application/acceptance to the School of Graduate Studies and Research. After admission to a program of study, a student who wishes to attend another university to complete coursework toward a YSU graduate degree must complete the Request for Transient Status form available from the Office of Graduate Studies and Research in order to transfer credits to a YSU degree. Every transfer course must either replace a required course of the program or, if not a direct replacement, integrate satisfactorily into the student's program. While transfer of a quarter-based course may generate excess semester hours, such hours may not count toward degree requirements unless they replace a complete course in the program.

Master's Degree: Up to nine semester hours (12 quarter hours) of graduate work completed at other accredited institutions may be applied toward a master's degree at YSU, provided the student earned a grade of A or B in such courses.

Doctoral Degree: Up to 18 semester hours (24 quarter hours) of post-master's degree graduate work completed at other accredited institutions may be applied toward a doctoral degree at YSU, provided the student earned a grade of A or B in such courses.

An "accredited" institution is one that is approved or accredited by the appropriate regional accrediting agency (e.g. North Central Association of Colleges and Schools) for graduate-level work.

Credits for courses in which grades of S or CR were received will not be transferred. The number of transfer credits to be accepted in each case will be determined by the Graduate Dean upon evaluation and recommendation by the department of the student's major. It is the responsibility of the student to initiate a request for the approval of transfer credits. Transfer hours are not included in the calculation of the student's cumulative grade-point average.

In general, workshop format courses are not acceptable for transfer. Professional development workshops are not acceptable. However, if the workshop fulfills the following requirements, credit may be considered for transfer to Youngstown State University:

1) The workshop must be taught as part of

a master's degree curriculum of the university at which the course was taken;

2) The workshop should consist of a minimum of 12 ½ contact hours per semester hour;

3) The workshop must include exposure to the disciplinary research literature appropriate to the course;

4) The workshop must include the opportunity for outside work such as term or research papers or other major assignments appropriate to a graduate course;

5) Credits for courses in which grades of S or CR were received will not be transferred.

International Student Admission

International applicants must complete an application for admission and provide all materials required at least three months prior to the semester they wish to be considered for admission. In addition to the regular admission requirements, the following must also be submitted:

1) An original or certified copy of the degree earned and all course and examination records, including grades received, beyond the secondary-school level. If credentials are not in English, *official translations* must be provided.

2) A minimum score of 550 on the paper-based or 213 on the computer-based Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service, Princeton, New Jersey, by graduates of foreign universities who are non-native English speakers; or a minimum score of 80 on the Michigan English Language Battery (MELAB) administered by the English Language Institute, Ann Arbor, Michigan; or a Letter of Certification from the Youngstown State University English Language Institute stating that the applicant has completed the program of study and is proficient in English at a level appropriate to pursue a graduate degree and present an English language Thesis if one is necessary as a degree requirement. Prior to full admission to graduate study, students may be tested and placed in special English classes, if necessary, to ensure an adequate level of English proficiency.

For F-1 or J-1 visa certification:

3) Evidence of financial support and sponsorship during the period of study at YSU, including documents of verification.

YSU enrolls students in accordance with the policy of the United States Bureau of Citizenship and Immigration Services.

Registration

Advisement

Before initial registration, the student must consult with the faculty member in charge of the program to which the student has been admitted or with an assigned advisor for advice in developing a program of study that leads to the desired degree. The ultimate responsibility for selection of graduate courses, based upon the requirements of the student's program as set forth in the Bulletin, remains with the student. Continued consultation with the advisor is encouraged. Because of the nature of certain programs, an advisor may require consultation before each registration.

Registration Procedure

Students register through the SOLAR (Student Online Advisement and Registration) system. Appointment times are mailed to all students by the Registrar's Office. Appointment times for current students are also in the *Schedule of Classes* published each semester.

Registration through SOLAR requires that the student agree to pay all tuition and fees associated with the registration. Failure to withdraw in a timely manner does not release the student from his/her financial obligation incurred by registration. Registration is not completed until all tuition and fees are paid and must be concluded no later than the date published for the Late and Final Registration for the particular semester. All significant dates

are published in the catalog and in the Schedule of Classes for each specific semester.

Change of Registration

A registered student who wishes to alter a schedule must process a Change of Registration form through SOLAR. No student may add a course for credit or audit after the seventh calendar day of the semester or after the fifth calendar day of a summer term.

Withdrawal from a course must be accomplished through the Change of Registration procedure. Failure to attend class or notification to an instructor is insufficient. A grade of F will be recorded unless a student officially withdraws. If a student withdraws from one or more classes during the first two weeks of classes, no entry will be made on that student's permanent record for the withdrawn class(es).

Complete Withdrawal of Registration

The student who wishes to withdraw from all classes in a particular semester must contact the Registrar's Office. If a student withdraws from all classes during the first two weeks of the semester, the academic record will contain the statement: Student Completely Withdrew During the First Two Weeks of the Semester. The student who withdraws from all classes will automatically receive a permit to register for the subsequent three semesters.

Cross-Registration of Courses Among Northeast Ohio Public Universities

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 at the university delivering instruction. The course should contribute to the student's program of study and be unavailable when needed to complete the student's program at the student's home institution. The student must be in good standing (GPA > 3.0) and be within the time limits for completion of the program. 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, KSU, or UA. Registration for such a course is controlled by the home department and will be permitted only upon receipt of the form, Approval for Acceptance of Course Work at Northeast Ohio Public Universities, which is available from the Office of Graduate Studies and Research. Any department that has no established special topics or independent study course may not participate in this cross-registration program.

Other Regulations

Time Limit

Master's Degree: All coursework, including transfer credits, offered in fulfillment of the minimum credit-hour requirement for the degree, all comprehensive exams, and thesis (if required) must have been taken within the six-year period immediately preceding the date on which the last requirement is completed.

Doctoral Degree: All post-master's coursework, including transfer credit, must be taken within an eleven-year period.

Matriculation to Doctoral Candidacy: Doctoral students shall be granted a six-year period to successfully complete the general examination and acquire candidacy status.

Doctoral Candidacy to Final Dissertation Copy: Doctoral candidates will have five years from the acquisition of candidacy status to file the final dissertation copy. Failure to meet this time frame will result in cancellation of the candidacy. With the approval of the dissertation advisor and the College Graduate Studies Committee, the student may take a supplemental general examination to reacquire candidacy. If the supplemental general examination is passed, the student is readmitted to candidacy and must complete the dissertation within two years. The supplemental general examination may be repeated once.

In special cases, with appropriate justifica-

tion by the student, the Dean of Graduate Studies and Research may grant an extension of the coursework time limit upon the written request of the Chair or Program Director of the department of the master's or doctoral study.

Graduate Courses

Courses in which graduate credit may be earned are:

1) 8100-level courses, which are for doctoral students only.

2) 6900- and 7000-level courses, which are open to graduate students (see **Graduate Courses for Undergraduates**). At least one-half of the credits applied toward the master's degree must be earned in courses in the 6900- and 7000-series.

3) Upper-division undergraduate swing courses (5800-level), in which the student may enroll for graduate credit only.

Only certain upper-division undergraduate courses may be taken for graduate credit. Those in this category are listed in the **Courses** section of this catalog. To earn graduate credit in an upper-division course, the student must be admitted to the School of Graduate Studies and Research *before* the course is taken. Graduate students in undergraduate courses that offer graduate credit will be required to pursue the subject matter in greater depth than the undergraduate student.

Graduate students may register for 4000-level or lower courses, but these courses do not apply toward the requirements of a graduate degree. Although the grades received and semester hours for such courses appear on the student's record, the hours and quality points are not included in the student's cumulative totals.

Seminar

A seminar generally consists of a group of advanced students studying a subject under a professor, each making some pertinent contribution and all exchanging results through informal lectures, reports, and discussions.

Thesis or Dissertation

Certain programs accept or require a thesis or dissertation as partial fulfillment of the requirements for the degree. Students follow the style manual used by the field as determined by the department. The deadline to submit theses is the first day of final examinations of the graduating semester. Additional thesis and dissertation presentation information is available from the School of Graduate Studies and Research and individual departments.

Second Master's Degree

A student who has a master's degree from YSU and desires a second master's degree must earn a minimum of 12 semester hours of credit in addition to the total that the student had when requirements for the first degree were completed, and he/she must complete the requirements for another graduate program. Students with a master's degree from another university will be limited to a maximum of nine semester hours of transfer credit.

Interrupted Enrollment

Students who interrupt their attendance for six or more semesters (two calendar years) must apply for readmission as former students at least two weeks before Late and Final Registration.

Graduate students who fail to take courses or otherwise pursue their graduate education for two years will be readmitted only under regulations in force at the time of reapplication and after review by the department for approval of the readmission.

Academic Standards

A cumulative grade-point average of at least 3.0 (on a 4.0 scale) is required for graduation. All graduate courses taken at YSU are included in the grade-point average calculation (see **Grading System** for grades less than C). Good academic standing for graduate students is a cumulative grade-point average of at least 3.0 (on a 4.0 scale) for all graduate credit courses taken at YSU.

Satisfactory Academic Progress

Satisfactory academic progress at the graduate level is maintained by satisfying the following criteria:

1) A degree-seeking graduate student must maintain a minimum grade-point average of 3.0 (on a 4.0 scale.) Any course grade of D or F must be repeated and passed with a grade of A or B.

2) A degree-seeking graduate student must successfully meet the requirements including the time requirement of all comprehensive examinations of the degree program.

3) A degree-seeking graduate student must complete with a passing grade any thesis requirements (or the equivalent) of the degree program.

4) A nondegree graduate student must maintain a minimum grade-point average of 3.0 (on a 4.0 scale).

Academic Suspension

A graduate student who is not maintaining satisfactory academic progress as determined by the graduate academic Program Director or department Chairperson and Graduate Dean may be excluded from registration and dropped from the program in which he or she is enrolled. Such action constitutes academic dismissal from the School of Graduate Studies and Research.

Academic suspension is automatic if:

1) the cumulative grade point average is below the minimum after two semesters during which the student registered "not in good standing;"

2) the student fails to pass a comprehensive exam after three tries.

Registration for any session or continuous registration during a full summer counts as one semester for these purposes.

A graduate program may utilize additional academic standards to determine satisfactory academic progress and/or standards for academic suspension; however, such standards must be distributed in writing to all graduate students in the program and must be filed and approved by the Dean of Graduate Studies and Research.

Readmission Procedures

1) Under exceptional circumstances and with the approval of the Dean of Graduate Studies and Research, a program may readmit a suspended student. In such cases, the normal six-year limitation on coursework shall be applied.

2) Graduate students suspended for failing to maintain satisfactory academic progress may appeal their suspensions within one year in writing to the Graduate Council. The decision of the council is final.

3) After a period of one year, a graduate student who has been suspended for academic reasons may reapply to the School of Graduate Studies and Research in order to begin a new degree program or to pursue studies in nondegree status. A readmitted graduate student is not permitted to register for any courses offered by the program from which he or she was academically suspended.

Full-Time Status

Full-time students carry nine or more semester hours for credit. Graduate students who complete less than nine hours per semester may lose eligibility for federal financial aid as a full-time student.

Reduced Load for Employed Students

The School of Graduate Studies recommends that the employed student carry less than a full academic load as determined in consultation with his/her academic advisor.

Graduate Courses for Undergraduates

The Application by Undergraduate to Enroll in a Graduate Course form is available in

the School of Graduate Studies office. Eligible students may choose to take such courses for graduate or undergraduate credit.

For Graduate Credit:

An undergraduate student, who is enrolled as a senior at Youngstown State University or at another member institution of the Academic Alliance (currently including: Lake Erie College, Slippery Rock University of Pennsylvania, Thiel College, Walsh University, and Westminster College) or another institution of higher education with which YSU has a formal academic agreement at the graduate level and who has an unrecalculated grade-point average of at least 2.7 may enroll in 6900- and 7000-level graduate courses, provided the total schedule for the semester (including undergraduate courses) does not exceed 12 semester hours. Before registering for courses the student must have the approval of the Program Director in the program where the credit will be applied, the course instructor, and the Dean of Graduate Studies and Research. The credit earned may be used for graduate credit at YSU only after the student is admitted to the School of Graduate Studies and Research and the credit is accepted by the department in which the student continues graduate work. (Such coursework intended for graduate credit cannot count toward the fulfillment of the requirements for a bachelor's degree at Youngstown State University.) The maximum amount of such credit acceptable at YSU is nine hours.

For Undergraduate Credit:

Permission for undergraduates to enroll in graduate courses for undergraduate credit will be granted only to students with proven exceptional academic ability; such permission will be based on a petition prepared by the student's major department containing a statement of criteria used to determine "exceptional" and approved by the Chair of the department offering the course and the Dean of Graduate Studies and Research. (Such coursework intended for undergraduate credit cannot count toward fulfillment of the requirements of a master's degree.)

Grading System

The following grading system is used in reporting a final evaluation of the work of graduate students in courses or thesis research: A, B, C, D, and F. The grade-point equivalents are 4, 3, 2, 1, and 0, respectively. *A graduate student may not elect to take a course under the credit/no credit option.*

Grades of D and F carry no graduate credit but will be used to determine the student's grade-point average. Failure will normally be indicated by a D; a grade of F indicates that the student has not achieved even a minimum grasp of the essentials of the course; this grade can also result from failure to withdraw officially from a course (see **Change of Registration and Reduction/Refund of Fee Charges Upon Withdrawal**). A student has the privilege of repeating a course once, but the repetition is treated merely as another course, along with the first, in calculating the student's grade-point average. Any course grade of D or F must be repeated and passed with a grade of A or B.

On petition by the student and concurrence of the advisor and Program Director, the Dean of Graduate Studies and Research may approve for exclusion from the calculation of the student's grade-point average courses that do not apply to the current degree program. In no case may courses be excluded from calculation of the grade-point average once a graduate degree has been conferred.

Graduate workshops are graded on an S/U (satisfactory/unsatisfactory) basis.

A grade of I (incomplete) may be given to a student who has been doing satisfactory work in a course but who, for reasons beyond the student's control and deemed justifiable by the instructor, does not complete all requirements for a course by the time grades are submitted. A written explanation of the reason for the I and a date by which all course requirements will be completed (which must be within one year), will be forwarded to the Office of the Registrar for inclusion in the student's permanent record, with copies to the student and the Department Chair. The instructor will initiate

a grade change upon completion of the course requirements. If no formal grade change occurs within one year, the I automatically converts to an F. If graduation occurs within the one-year time period, the I grade will be converted to an F before graduation. Department chairs are granted authority to convert grades of I into final grades in cases where instructors may have severed connections with the University or have been incapacitated before converting the grade.

The grade of W will be given for all withdrawals properly processed during the third through sixth weeks of any semester (or from the fifth calendar day through the third week of each six-week summer term). ("Properly processed" describes withdrawals made in conformity with the instructions on the official Change of Registration form.) A grade of W does not appear on the student's academic record if withdrawal occurs before the end of the second week of classes, although it does appear on the grade report received by the student. A withdrawal made after the three- to six-week withdrawal period (beyond the third week during summer) will be recorded as an F unless the withdrawal was the result of circumstances over which the student had no control as shown by evidence presented by the student in a petition to the Dean of Graduate Studies and Research. Any grade of F assigned because of absence may be reviewed upon petition to the Dean of Graduate Studies and Research. Where withdrawals change the student's status from full-time to part-time, the student immediately forfeits any privileges contingent upon full-time status, and all interested parties will be notified by the appropriate university officials.

In the case of thesis work, independent study, and other courses where research or scholarship is still in progress at the time grades are to be reported, a PR may be reported in place of a conventional grade. The PR grade is intended to indicate that it is the nature of the scholarship rather than the student's ability to complete the work that is preventing the issuance of a conventional grade. A PR grade must be converted to a regular grade prior to graduation.

AU signifies that the student was enrolled in the class as an auditor.

Grade Changes

Applications for grade changes may be secured from the Office of Records, must be completed by the instructor, and must contain the signature of the Dean of Graduate Studies and Research unless the change is from Incomplete (I) or Progress (PR). All grade changes must be submitted to the Records Office by the dean or instructor; they will not be accepted from the student. In no case may a grade be changed after a student has received a graduate degree for the purpose of changing the grade-point average of the completed degree.

Intra-University Transfer (Change of Curriculum)

A student must request in writing a transfer from one graduate program to another. A transfer is not complete until an advisor in the program to which the student is transferring has been appointed and has accepted the student as an advisee, and when the change has been reported to and approved by the Dean of Graduate Studies and Research. In such cases of transfer, courses taken in the original curriculum that also apply toward the degree in the new curriculum will be accepted. The student's academic record and grade-point average will reflect all graduate courses taken.

Auditing Courses

A graduate student may register for and attend any course as an auditor. An auditor is not held responsible for the regular classwork, class attendance, and preparation of assignments and receives no credit for the course. The student pays the regular tuition as well as any other applicable fees for the course(s) audited. Assistantships and scholarships do not cover audited courses. Audit courses are carried in a student's load only for fee purposes. A student who has registered for a course for audit may not change that status to credit after the last day to withdraw with a W. An AU may be given only to a student who has begun a course as an auditor or who has changed status

to that of auditor on or before the last day to drop with a W.

Foreign Language Proficiency Examinations

The Department of Foreign Languages and Literatures administers proficiency examinations in the following languages: French, German, Italian, Latin, Russian, and Spanish. The graduate student should consult the major department to learn specific degree requirements. A grade of pass or fail on the proficiency examination will be registered with the School of Graduate Studies and Research.

It is the responsibility of neither the University nor the Department of Foreign Languages and Literatures to tutor students or to recommend tutors for these examinations.

Commencement

The Intention to Apply for Graduation form, the Application for Graduation form, and the cap and gown forms must be filed before 5 p.m. on the third Friday of the semester in which the student intends to graduate. Ed.D. candidates must apply for graduation the semester preceding the semester they intend to graduate. Submission of the graduation application is the student's responsibility. Late applications will be accepted through the Friday of the sixth week of the semester in the Bursar's Office but will require a late application fee payment. A copy of the Intention to Apply for Graduation form will be sent to the student's major department. There are three graduation ceremonies each year: Fall Commencement at the end of the first semester in December, Spring Commencement at the end of the second semester in May, and Summer Commencement at the end of the summer session in August.

Student Rights, Responsibilities, and Conduct

In accordance with *The Code*, formal disciplinary sanction may be imposed by the University whenever student and/or group/organization behavior interferes with the University's responsibility to ensure a positive educational environment; its subsidiary responsibilities to protect the rights, health, and safety of persons in the University community; to maintain and protect property; to keep accurate records; and to provide necessary services and non-classroom activities.

In extraordinary circumstances, the President of the University may suspend a student and deny access to the University campus for a reasonable period of time pending consideration of the case. In event of acquittal, every consideration shall be given to the student for completion of academic work.

Copies of **The Code** are available in the Office of the Vice President for Student Affairs, 141 Tod Hall.

2004–2005 Student Fees and Charges

Tuition

Instructional Fee (including audit)

Graduate Students, 1–11 credits (both graduate and undergraduate)	$250	per credit
12–16 credits	3000	per semester
Credits in excess of bulk semester rate	250	per credit
Master of Public Health, all credits	403	per credit

General Fee

All Students, 1-11 credits	42	per credit
All Students, 12-16 credits	504	per semester
All Students, over 16 credits	42	per semester

Nonresident Tuition Surcharge

The YSU Regional Service Area, for nonresident tuition surcharge purposes, includes the counties of Chautauqua, New York; Allegheny, Armstrong, Beaver, Butler, Clarion, Crawford, Erie, Fayette, Forest, Greene, Indiana, Jefferson, Lawrence, Mercer, Venango, Warren, Washington, and Westmoreland, Pennsylvania; and Brooke, Hancock, Marshall, and Ohio, West Virginia.

Regional Service Area:

Graduate students registering for 1–11 credits	120	per credit
12–16 credits	1,440	per semester
more than 16 credits	120	per credit

Outside of Regional Service Area:

Graduate students registering for 1–11 credits	231	per credit
12–16 credits	2,773	per semester
more than 16 credits	231	per credit

Housing

Room and Board (per academic year)	6,100	
(Payable as follows: $200 room reservation fee, $3,250 Fall Semester, and $2,850 Spring Semester)		
Security Deposit (paid first semester)	100	
Single Room Surcharge	700	per semester

Voluntary Meal Plans (for students not living in University housing)

Fourteen-meal plan per week	875	per semester
Ten-meal plan per week	695	per semester
Five-meal plan per week	400	per semester

Special Purpose Fees and Service Charges

Application Fee, Graduate	30	
Check Replacement Fee	25	
Child Preschool Laboratory Fee	150	per semester
Credit by Examination	20	per credit
Duplicate Diploma Fee	40	
Fingerprinting Fee (Webcheck)	30	

Human Performance and Exercise Science Locker and Towel		
Students Enrolled in HPES Courses	no charge	
Campus Recreation Locker and Towel Fee	38	per semester
Campus Recreation Lock Replacement	6	
Campus Recreation Towel Replacement	6	
I.D. Replacement	20	
Inoculation Fee, Hepatitis series	125	
Inoculation Fee, Measles,mumps, rubella	40	
Inoculation Fee, Meningitis	75	
Inoculation Fee, Tetanus	10	
Installment Fee	10	
International Student Credentials Evaluation	45	
Late Graduation Application (after third week of the semester)	35	
Late Class Add Fee	25	per course
Late Payment Fee	25	
Late Registration Fee	50	
Parking Permit	68	per semester
Parking Permit - Summer term	25	
Parking Per Day Without Permit	4	
Peace Officer Training Academy Fee	300	per semester
Performance Music Fee (plus tuition)	75	per credit
Proficiency Examination	45	per course
Registration Reinstatement Fee	25	
Returned Check or Credit Card Charge	30	
Rich Autism Center Pre-school Program	125	per week
Student Health Insurance (Fall Semester)	304	Fall
Student Health Insurance (Spring Semester)	430	Spring
Student Locker Rental (paid at Kilcawley per academic year)	20	per year
Technology Fee	9.54	per credit
Technology/Laboratory Materials Fee: Level 1	35	per course
Level 2	50	per course
Level 3	65	per course
Level 4 (gross anatomy)	187	per course
Testing Fee, MAT test	40	
Thesis Binding	25	per copy
Transcript Rush Fee (same day, in-person, or U.S. Mail)	10	
Transcript Rush and Overnight Express Fee	25	

Fines

Library/Curriculum Center

Overdue book: 10 cents per day to a maximum of $11, plus cost of book replacement.

Overdue reserve book: 55 cents per day to a maximum of $11, plus cost of book replacement.

Parking

Class I: All violations except those in Class II: $10.

Class II: Parking in a handicap zone without proper permit, parking at a no parking sign, tow away zone, loading zone, official use only sign, fire lane, or in the campus core area: $50.

THE UNIVERSITY RESERVES THE RIGHT TO CHANGE ANY FEE WITHOUT NOTICE

Fees, Service Charges, and Fines

Payment of Tuition and Fees

Tuition and fees for the semester are due on or before the date published in the *Schedule of Classes* (see **Important Dates**). You may pay your bill in person at the payment windows on the second floor of Meshel Hall or by mail to the Office of the Bursar. You may pay by check (payable to Youngstown State University), or with Visa, MasterCard, or Discover card. Several payment plans are also available that allow you to spread your payments out over a longer period.

Graduation and transcripts will be held until all University bills are paid. Any balance owed must be sent to the Office of the Bursar no later than the payment notice due date in order to avoid assessment of a late penalty fee.

Your enrollment at the University creates an implied contract between you and YSU. If you choose not to attend the University, you must officially withdraw from all courses by accessing the Complete Withdrawal Option on the Student On-Line Advisement and Registration System (SOLAR) or by completing a change of registration form at the Enrollment Information Counter in Meshel Hall. Nonattendance of class or notification to the instructor or department does not constitute an official withdrawal.

If you fail to withdraw by the deadline date stated in the *Schedule of Classes*, you must pay all charges in full. If no effort is made to pay the outstanding bill, collection measures will be implemented.

Fees

Tuition. The sum of the Graduate Instructional Fee and the General Fee is the tuition for a student.

Graduate Instructional Fee. This fee is assessed all students each semester. The rate is per academic semester hour of credit of registration. This fee supplements the state subsidy and is a revenue of the University's Educational General Fund.

General Fee. This fee is also assessed all students each semester; the rate depends upon the number of credits for which the student is registering. This fee is for noninstructional services such as Kilcawley Center, intercollegiate athletics, intramural sports, performing artists and lecture programs, Student Government, and Career Services.

Auditing Courses. Students may audit courses (i.e., register to take a course without receiving credit). The fees are the same as if the course was taken for credit.

Nonresident Tuition Surcharge. As noted above, all students pay the instructional fee and the general fee. Those students who are not legal residents of Ohio must also pay a surcharge. Students who are legal residents of the regional service area pay a lesser surcharge than do students who are legal residents of other areas. The regional service area includes 23 counties in New York, Pennsylvania, and West Virginia.

Multi-Service Fee. This fee is assessed to all students each semester; the rate depends upon the number of credits for which the student is registered. This fee is designed to partially offset the expenses associated with various administrative services such as career services credentials, graduation, transcripts, add/drop, diploma mailing, diploma replacement, diploma cover, I.D. validation sticker replacement, withdrawal, and other miscellaneous services.

Performance Music Fee. This fee is in addition to the regular instructional fee. It is assessed students taking music lessons and applied on a per-credit basis.

Technology Fee. This fee is charged to all students and is based on the number of credits for which the student is registered. This fee provides increased Internet service; an open computer laboratory in Maag Library; increased computer laboratory reliability and technical assistance; and, support for Network and Electronics Maintenance Services. This fee also provides partial general support for the cost of maintenance of centralized mainframe computing capabilities, including, but not limited to, systems used for admissions, student registration, financial aid, and bursar operations.

Technology/Laboratory Materials Fee. This fee is designed to partially offset expenses associated with courses that make use of supplies, equipment, or personnel support beyond that associated with typical lecture courses. Examples include chemical supplies, engineering equipment, computers, software, and lab monitors.

Other Fees

Application Fee. A nonrefundable application fee must accompany the initial application for admission to the School of Graduate Studies and Research.

Late Application for Graduation Fee. There is a late application for graduation fee charged to anyone who applies after the third week of the semester.

Late Registration Fee. A fee is charged a currently enrolled student who fails to register for the next term at the assigned time.

Parking Permit Fee. A permit to park in YSU parking facilities will be issued to students and employees of the University upon payment of the fee. The fee is for the academic semester and does not guarantee an available space in any particular lot. Some facilities are restricted (e.g. for students only, for faculty and staff only, or resident hall residents only). The current *Driving and Parking Regulations* pamphlet and parking lot map should be consulted. A daily fee is charged anyone without a permit who wishes to park in facilities designated for cash business. Persons other than employees and students who are on campus for a short period of time to conduct business may park in one of the visitor's lots if space is available. The parking permit fee is refundable only if the student returns the permit access card and current validation sticker prior to the end of the 100% tuition refund period. If a student completely withdraws, the permit access card and current validation sticker must be returned within five days of either the withdrawal date or the last date of the 100% tuition refund period—whichever is earlier—in order to obtain a refund for this fee.

Proficiency Examination Fee. A fee is charged for an examination provided by an academic department to determine a student's proficiency for some reason other than assignment of academic credit.

Registration Reinstatement Fee. A nonrefundable fee is charged to any student whose current registration is cancelled for any reason (including delinquent payment), and who is subsequently permitted to reregister. This fee is in addition to any other applicable fees, fines or penalties. Registration in the same course(s) cannot be guaranteed since the course(s) may have closed in the meantime.

Service Charges

Check Replacement Fee. A nonrefundable fee is charged for each request to have a student refund check replaced.

Locker and Towel Fee. Students enrolled in an activity class requiring a locker, basket, or towel service in Beeghly Physical Education Center or the Sports Complex do not pay a fee. Other authorized persons pay a fee each academic semester. Loss of or damage to the lock or towel will result in assessment of a replacement charge.

Identification Card Replacement Charge. A charge is made for replacement of an ID.

Housing Charge. University housing is available for the academic year and summer terms. The residence contract includes room and a flexible meal plan. A security deposit is required. Payment and refunds are as scheduled in the housing contract. Meal tickets are also available for students who are not residents of University-owned housing.

Returned Check or Credit Card Charge. A charge is made to anyone whose check or charge card is returned unpaid by the bank. Any late payment fee applicable is also assessed. Failure to pay billing of return check and/or charge within six days and/or a second check/charge return will result in the University's refusal to accept this type of payment at any of its collection points, and may subject the student to financial suspension for the term.

Student Locker Charge. A limited number of lockers are available in various buildings for the convenience of commuting students. Payment and assignments are made at the Kilcawley Information Center.

Thesis Binding Charge. A charge is made for each copy of a thesis bound by the Maag Library.

Transcript of Credits Charge. While no charge is made for each transcript issued, transcripts will not be issued for students or alumni with outstanding debts owed the University. Only a student may order a transcript; however, students are cautioned that most graduate and professional schools and many employers accept transcripts only if sent directly by the University.

Fines

Parking Violation Fine. Parking without a permit, parking in such a manner as to impede regular traffic flow, occupancy of more than one identified space (assuming lines are not obscured), and other offenses as identified in the *Driving and Parking Regulations* will result in a citation issued to the student responsible for the vehicle (e.g., student driving parents' car). Payment of a fine removes the citation. Vehicles may be towed in certain cases. See the regulations for detailed information.

Library Fines. Fines are assessed for failure to return books on time as stipulated or for the unauthorized removal of a reserved book. Willful damage or defacement of library materials or other property is a violation of state law and is punished as such.

Reduction/Refund of Fee Charges Upon Withdrawal

To withdraw from a single course or all courses a student must access the Change of Registration option, or the Complete Withdrawal option on the Student-on-line Advisement and Registration System (SOLAR) or complete a change of registration form at Enrollment Information Counter in Meshel Hall. Nonattendance of class or notification to the instructor or department does not constitute official withdrawal.

Please see the **Official Tuition Refund Schedule** in the *Schedule of Classes* for further information.

Application for Involuntary Withdrawal

If a student withdraws for reasons beyond his/her control (e.g., illness, military service, job transfer, or shift change imposed by the employer that creates a direct conflict with the class schedule), the fee charges may be reduced in direct proportion to the number of weeks in attendance. An Application for Involuntary Withdrawal can only be processed for courses in which the student has already received a grade of W (withdrawn). The aforementioned applications will only be considered for semesters falling within the immediately preceding year (three semesters). Appeals pertaining to semesters beyond this one-year time limit will not be accepted. All Applications for Involuntary Withdrawal must be documented and are processed only by mail on forms provided by the Bursar. Address such correspondence to the Fees & Charges Appeals Board, c/o Bursar, Youngstown State University, One University Plaza, Youngstown, OH 44555. The decision of the Board is final and not subject to reappeal.

State Residency Status

Place of residency for tuition purposes will be determined at the time of admission or readmission by the Office of Recruitment and Admissions on the basis of the residency rules stated in this section and information supplied on the Application for Admission form.

If the student has any questions about appropriate classification, at the time of application, or any time thereafter, he/she should immediately bring it to the attention of the Office of Recruitment and Admissions for review, as changes to resident status cannot be made retroactive if supporting documentation is received after the first day of the requested semester. Charges may be made to any student improperly classified as an Ohio resident.

Resident Status Appeal

Appeal for a change in residency classification should be made in writing to the Office of Recruitment and Admissions, who may require the student to complete an Application for Nonresident Tuition Surcharge Exemption form. A decision will be sent in writing to the student, who may then appeal the classification in a personal interview.

The student may request the Office of Recruitment and Admissions to arrange an appearance before the Residence Classification Board. Such appearances ordinarily occur within two weeks of the request, if possible. The Residence Classification Board's appellate decision is final.

Ohio Student Residency for State Subsidy and Tuition Surcharge Purposes

A) Intent and authority:

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

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

B) Definitions for purposes of this rule:

1) A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under section 5747.02 of the revised code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be, or allowed himself or herself to remain, a resident of any other state or nation for any of these or other purposes.

2) "Financial Support" as used in this rule shall not include grants, scholarships, and awards from persons or entities who are not related to the recipient.

3) An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college, or private medical or dental college, which receives a direct subsidy from the State of Ohio.

4) In determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, "domicile" is a person's permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one domicile may be maintained at a given time.

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

C) Residency for subsidy and tuition surcharge purposes:

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

1) A dependent student, at least one of whose parents or legal guardian has been a resident of the State of Ohio for all other legal purposes for 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/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 child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time 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 or spouse of the student is employed full-time in Ohio.

b) A copy of the lease under which the parent or 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 the parent or spouse is the owner and occupant; or if the parent or spouse is not the lessee or owner of the residence in which he/she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

D) ADDITIONAL CRITERIA THAT MAY BE CONSIDERED 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 state welfare benefits; and/or

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 welfare benefits, or student loan benefits (if the student qualified for that loan program by being a resident of that state or nation); and/or

b) If a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits (see paragraph D-2-a of this rule).

E) EXCEPTIONS TO THE GENERAL RULE OF RESIDENCY FOR 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 on active duty status in the United States military service while a resident of Ohio for all other legal purposes, and his/her dependents, shall be considered a resident of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

3) A person on active duty status in the United States military service who is stationed and resides in Ohio, and his/her dependents, shall be considered residents of Ohio for these purposes.

4) A person who is transferred by his/her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia, while a resident of Ohio for all other legal purposes, and his/her dependents, shall be considered a resident 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/her tax liability to the state of Ohio for at least the tax year preceding enrollment.

F) PROCEDURES:

1) A dependent person classified as a resident of Ohio for these purposes under the provisions of section C-1 of this rule and who is enrolled in an institution of higher education when his/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/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 paragraph 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 University for reclassification as a resident of Ohio for enrollment 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/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 University that may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.

5) Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification. Ohio residency status will not be granted retroactively.

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/her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence that it may deem necessary to a full and complete determination under this rule.

FINANCIAL ASSISTANCE

ASSISTANTSHIPS

Applications for assistantships must be accompanied or preceded by application for admission to the School of Graduate Studies and Research. First-year international graduate students with superior credentials and/or prior academic study in the United States may apply for graduate assistantships.

The assistantship program is predicated on the idea that graduate students, given an opportunity to assist the faculty, provide a service to the institution and also gain valuable experience through this work in association with the faculty. Appointments to assistantships are made by the Dean of Graduate Studies and Research only upon recommendation by the student's academic department. In those instances in which the student indicates acceptance of an assistantship award prior to April 15, the student may not accept another appointment without first obtaining formal release for this purpose.

Graduate assistants may be assigned to instructional, research, and/or other academic duties as determined by the department in which the assistant is appointed and as approved by the Dean of Graduate Studies and Research. Assistantships require 20 hours per week including exam week for duties to be assigned by the department chair. Graduate assistants assigned to classroom or laboratory

duties are under the direct supervision of a full-service faculty member who will retain full responsibility for the maintenance of high academic and pedagogical standards. The oral English proficiency of each graduate assistant providing classroom-related services, including lab assistants, will be determined by an interview with and certification by the department chair. In the event the department chair cannot certify that the student is proficient in English, the student will be required to complete remedial courses satisfactorily before being assigned instructional duties. International students must also submit a score of the Test of Spoken English (TSE) to the School of Graduate Studies and Research. TSE scores in the range of 45-60 (Foreign Service Institute scale level 2 to 3) are normally considered the minimally accepted standards. In the absence of the TSE, international students may be required to undergo other testing.

Research assignments afford the assistant the opportunity to participate in authorized faculty or University research programs.

Normally, assistantships are awarded for a period of two semesters, beginning with the fall semester. To remain eligible for the assistantship, an appointee must discharge his/her duties satisfactorily and maintain good academic standing. An appointee must maintain enrollment in at least 18 semester hours of degree credit course work for the regular academic year and not fewer than 9 semester hours of degree credit course work for any one semester. (With the advisor's approval, graduate coursework that is not part of the graduate assistant's degree program may be counted toward the 18 semester-hour minimum for the assistantship.) Approval to carry more than 12 semester hours or fewer than 9 semester hours in any semester will be granted by the Dean of Graduate Studies and Research only upon clear justification from the student's academic program department. (Exception: For a teaching assistant who is the instructor of record and has a teaching load of 5 semester hours or more, the minimum required enrollment is 6 semester hours. For a teaching assistant who is the instructor of record and has a teaching load of 4 semester hours or less, the minimum required enrollment remains at 9 semester hours.)

Graduate assistants shall not hold other full-time employment but may accept occasional or temporary employment outside the University during the term of the assistantship, subject to the approval of the department chair or the program director of the department. Other employment *on the YSU campus* requires the approval of the Dean of Graduate Studies and Research.

Each assistantship carries a stipend and remission of instructional fees for up to 12 semester hours per semester, including the nonresident tuition surcharge and music performance fee, if applicable. It does not cover other fees that may be applicable, such as the general fee, technology fee, or charges for parking permits. Assistantships do not cover 1) courses taken on an audit basis, 2) undergraduate courses, or 3) graduate coursework that is not related to the degree program. The same remission will be applicable for the summer semester up to 12 semester hours for those who have held an assistantship during each of the two preceding semesters. The remission may be used for thesis hours taken in the summer, provided that the thesis advisor is available for frequent consultation in the summer and that arrangements are made with the department for the workload credit given the thesis advisor to be charged against a semester of the regular academic year rather than against Summer Semester. Financial assistance will be terminated once the student has completed degree requirements.

Further information on assistantship stipends may be obtained from the School of Graduate Studies and Research.

Graduate Assistant/Interns

A special category of graduate assistant, designated as a Graduate Assistant/Intern (GA/I), provides opportunities for university offices or departments, community companies or agencies, or other appropriate external sponsors to involve graduate students as academic assistants/interns in "real life" experiences related to their fields of study. The department/agency of service will provide a stipend

to the University, which will be paid to the student through the normal stipend process. Remission of instructional fees will be made in the manner described under "Assistantships," above. The GA/I will be expected to work in the internship work environment 20 hours per week. Eligibility rules will be the same as for regular graduate assistants, except that the student must be a newly admitted graduate student at YSU. The GA/I will normally be eligible to remain funded for two years in order to complete the program of study.

Further information about Graduate Assistant/Intern appointments may be obtained from the School of Graduate Studies and Research.

Federal Financial Aid

Graduate students enrolled in degree programs at YSU may apply for federal financial aid in the Financial Aid and Scholarships office, 202 Meshel Hall (see Full-Time Status as it relates to eligibility for federal financial aid).

On-Campus Student Employment

Graduate students enrolled in degree programs are eligible for on-campus student employment. For information on how to apply, contact Office of Student Life, Kilcawley Center.

Scholarships

Youngstown State University makes funds available to provide scholarships and grants-in-aid to eligible graduate students. An application must be submitted for each semester for which a scholarship or grant-in-aid is sought. Applications for a given semester are accepted during the first through the tenth day of classes (Monday through Friday) of the preceding semester. Whenever there are more eligible applicants than funds available, awards will be made on the basis of grade-point average. Applications received after the deadline will not be considered. Minimum grade-point averages, application deadlines, award levels, and eligibility criteria are subject to change without notice. Detailed information on scholarships and grants-in-aid is available at the School of Graduate Studies and Research.

Fellowships and Awards

The **Earl E. Edgar Memorial Scholarship Fund** was established in 1980 by friends and family of the late Dr. Earl E. Edgar, Vice President for Academic Affairs at YSU. This scholarship provides an annual $750 award to a graduate student at YSU studying the Humanities. Selection of the recipient will be based on financial need and academic excellence. The selection committee comprises the deans of the School of Graduate Studies and Research and the College of Arts and Sciences.

The **Dr. Eugene D. Scudder Graduate Student Teaching Award** is a cash award given to a chemistry graduate student for outstanding performance in teaching.

The **Dr. James A. Reeder Graduate Scholarship Award** is given to a current chemistry graduate student who will be enrolled at YSU at least part time during the next academic year.

The **Gertrude E. Hendricks Family Life Scholarship** is available each year to a graduate student whose undergraduate major has afforded preparation for an effective contribution in the family life area.

The **Dr. Robert A. DiGiulio Scholarship**, a grant of $500, is awarded each year to a student selected on the basis of the following criteria:

1) A graduate student in the Department of Counseling;

2) an earned grade-point average of at least 3.00;

3) a nontraditional female student (over the age of 25 years); and

4) a promising student with evidence of need.

Application forms may be obtained from the Department of Counseling. The deadline for submission of applications is April 15.

Graduate Student Representation

Within the first month of the fall semester, the Graduate Studies Committee of each college will make sure that a graduate student and an alternate from that college is elected to represent graduate student interests on the College Graduate Studies Committee. The six graduate student representatives to the six College Graduate Studies Committees also constitute the Graduate Dean's Graduate Student Advisory Council.

Those eligible to be members of GSAC are full-time graduate students as defined in the graduate catalog, graduate assistants, or part-time students who have completed 12 or more hours of graduate credit, excluding transfer credit, before the fall semester in which the representatives are chosen.

The GSAC will choose from its own membership:

1) a graduate student member of Graduate Council, and

2) a graduate student member to serve on each of the following graduate committees: Policy; Curriculum; Assistantship Allocation.

The GSAC will recommend to Council three graduate-student members of the Grievance Committee, at least one of whom comes from GSAC.

Graduate students serving on graduate committees shall be voting members of the committees on which they serve. Members of GSAC have the right to participate in graduate faculty meetings without voting. Vacancies in GSAC will be filled by Graduate Council. A vacancy will occur automatically if a student representative resigns his/her position or if he/she is not registered for courses carrying graduate credit. The GSAC may request Council to declare a vacancy if the student is delinquent in his/her duties. If there are no available students from a given school, the Council may fill the vacancy with a student from another school.

Course Numbering System, Abbreviations, and Reference Marks

Courses listed in this bulletin are of two types. Courses in the 5800-series are upper-division undergraduate courses in which the graduate student may enroll for graduate credit with the approval of the advisor.

Courses in the 6900- and above series are graduate-level courses normally open only to graduate students but which undergraduates may elect under conditions outlined in **Graduate Courses for Undergraduates**. Courses in the 8100-series are doctoral-level courses.

The abbreviation *s.h.* at the end of a course description stands for semester hours of credit. Thus, credit for a three-hour, two-semester course is indicated by the notation 3+3 s.h., meaning three semester hours of credit each semester.

Prereq. stands for prerequisite.

Comma. Ordinarily, a comma between numbers (e.g., 6907, 6908) indicates that the course extends throughout the year, but that credit toward graduation is given for each course individually.

Hyphen. A hyphen between numbers (e.g. 6907–6908) indicates that credit is not given toward graduation for the work of the first semester until the work of the second semester is completed, except when special permission is granted by the Chair of the department in which the course is given. The first semester of such a course is prerequisite to the second.

GRADUATE PROGRAMS

Doctor of Education – Educational Leadership

Program Director: Robert J. Beebe
Beeghly College of Education
4103 Beeghly Hall
(330) 941-1437

Program Description

The Doctor of Education (Ed.D.) program in Educational Leadership provides terminal professional preparation for public and nonpublic school administrators in the northeastern Ohio and western Pennsylvania areas served by the University. The program is designed to serve administrative personnel in P-12 schools and central and county office positions.

The program focuses on the preparation of professionally committed practitioners who reflect the current state of knowledge and best practice in Educational Leadership. Central to the preparation of such professionals are the refinement and transmission of competencies in the areas of scholarship, instruction, leadership, management, external relations and personal development.

The Ed.D. program is administered by the Department of Educational Administration, Research and Foundations in the Beeghly College of Education.

Faculty Research Interests

Robert J. Beebe, Ed.D., Professor and Chair
Administrative theory; human resources administration; leadership development

Gunapala Edirisooriya, Ph.D., Associate Professor
Information systems; research design; statistics

Charles Vergon, J.D., Professor
Education law; policy development; educational change

Accreditation

Accreditation for the Ed.D. program in Educational Leadership has been granted by the North Central Association of Colleges and Schools and from the National Council for the Accreditation of Teacher Education.

Application Procedure

Program information may be obtained from the Department of Educational Administration, Research and Foundations. Application and financial aid information may be obtained from the School of Graduate Studies and Research. All application materials must be sent to the School of Graduate Studies and Research. Please confirm all deadline dates with the School of Graduate Studies and Research.

Admission Requirements

Acceptance into the Ed.D. program reflects superior qualifications. Admission is by cohort, based upon a competitive evaluation of applications by the doctoral program faculty of the Department of Educational Administration, Research and Foundations. Ethnic and sexual diversity among students is desirable. In addition to the admission requirements of the School of Graduate Studies and Research, applicants must meet the following departmental standards:

Professional Potential

1) Possession or qualification for certification or licensure as an educator in the state in which they wish to practice.

2) Completion of at least three years of teaching experience.

3) Completion of at least two years of administrative experience or demonstration of exceptional leadership skills in schools.

High Academic Achievement

1) Completion of an accredited master's degree program with a minimum grade-point average in graduate study of 3.50.

2) Scores at or above the 50th percentile on the General Test of the Graduate Record Examination. This test must have been completed within the past five years. Applicants must plan to register for this examination in advance. Provisional admission may be granted to otherwise outstanding applicants who fail to achieve the cutoff scores.

Professional References

Presentation of three letters of reference attesting to the applicant's good moral character, educational leadership and management potential, professional plans, success in teaching, professional commitment, interpersonal skills, and special professional capabilities.

Narrative

1) Submission of two 500- to 750-word essays: one personal essay and one essay on a professional topic.

2) Submission of a proposed timetable for completing the program.

Faculty Interview

1) Completion of a writing sample on campus as part of the interview process.

2) A personal interview with the doctoral faculty of the Department of Educational Administration, Research and Foundations for applicants who are successful in an initial screening based upon the standards previously listed.

3) Approval of the applicant by the doctoral faculty.

Degree Requirements

Students admitted to the Doctoral Program in Educational Leadership must enroll for a minimum of six semester hours each academic year. Students who fail to comply will have to be readmitted to the program upon the Doctoral Admission Committee's recommendation.

Students must also meet with advisors each semester for advising purposes.

Cohort Activities

Beginning with an orientation session shortly after admission and once each semester, students are required to participate in scheduled cohort activities. These activities provide an opportunity for students to establish and maintain supportive, informal relations among themselves and with the program faculty. The cohort activities also provide a setting for short seminars, colloquia, simulations, journal writing, and study sessions, relating to important areas of professional development.

Residency

Concentrated effort, continuing peer and faculty interaction, and scholarly reflection relatively free from distraction are needed if the student is to develop a considered and mature vision of the profession. Each student is required to meet a minimum residency requirement of enrollment for 18 semester hours during the period of three consecutive semesters, including summer session(s). No Ed.D. student may enroll for more than six semester hours unless his/her advisor approves such enrollment. Dissertation credits may not be used to satisfy the residency requirement.

Coursework

The coursework required for the Ed.D. in Educational Leadership consists of a minimum of 69 semester hours, to include dissertation, of graduate study beyond the master's degree. While completion of YSU's approved 33 semester hour M.S. in Education in Educational Administration is not required for admission, students admitted to the program will be required to complete the equivalent coursework as a prerequisite to completing doctoral coursework. A minimum of 39 semester hours of graduate credit beyond the master's degree, exclusive of dissertation credits, must be earned at YSU. Students can transfer up to 18 semester hours of post-masters work into the doctoral program. Transfer credits may be accepted within the policies of the School of Graduate Studies and Research.

See the **Courses** section of this catalog for required prerequisite study for each course. Certain courses reflect the particular vision of the YSU program and are to be completed at YSU. This information is noted in parentheses. Doctoral-only courses bear numbers of 8100 and above.

1) Educational Leadership Core (15 semester hours)

EDADM 8122	Leadership in Education	3 s.h.
EDADM 8125	Educational Politics & Policymaking in the United States	3 s.h.
EDADM 8140	Seminar in Administrative Theory	3 s.h.
EDADM 8155	Seminar in Current Educational Issues	3 s.h.
FOUND 8102	Perspectives on Leadership Among Diverse Populations	3 s.h.

2) Educational Research Core (15 semester hours)

FOUND 8104	Research Strategies in Educational Administration	3 s.h.
FOUND 8110	Theories of Inquiry	3 s.h.
FOUND 8112	Qualitative Research for Educators	3 s.h.
FOUND 8114	Advanced Research Design & Statistics	3 s.h.
EDADM 8185	Seminar in Educational Research/Dissertation Proposal	3 s.h.

3) Educational Leadership Electives (Minimum of 12 semester hours as approved by advisor)

4) Teaching and Learning Electives (Minimum of 9 semester hours as approved by advisor)

5) Professional Skill Development

EDADM 8100 Professional Skill Development Seminar	3 s.h.

6) Field Experience in Educational Leadership (choose one):

EDADM 7022E Clinical Experience: Elementary Principalship	3 s.h.
EDADM 7022M Clinical Experience: Middle School Principalship	3 s.h.
EDADM 7022S Clinical Experience: Secondary Principalship	3 s.h.
EDADM 7050 Clinical Experience: Superintendency	3 s.h.

7) Dissertation Study (minimum of 12 semester hours)

EDADM 8190 Dissertation Study	12 s.h.

Comprehensive Examinations

Comprehensive examinations consist of a written examination covering six competencies and an oral examination assessing the overall suitability of the individual as a leader in schools or school systems. Satisfactory completion of these examinations qualifies the student as a candidate for the Ed.D. degree and signifies readiness to begin the dissertation study.

Special Notes:

The student's program must include the 57 semester hours of course work in the doctoral program (a minimum of 39 semester hours of YSU graduate credit), exclusive of dissertation credits.

Departmental Policies and Procedures governing the operation of the Ed.D. program are set out in the program *Administrative Handbook* and *Student Handbook*.

Graduate Studies and Research policies concerning transfer credits, time limits, and other academic matters must be followed. See front section of *Graduate Bulletin* and Graduate Faculty minutes for current information.

With appropriate selection of courses, this program may provide licensure in either principalship or superintendency, or both.

Master of Arts — American Studies

Program Director: Stephanie Tingley
245 Debartolo Hall
(330) 941-2482
satingley@ysu.edu

It is anticipated that the Master of Arts in American Studies will admit its first students Spring Semester 2005.

Program Description

The M.A. in American Studies program is designed to provide students with training in the content, theory, and methods for studying the history and culture of the United States, and is designed to provide both training and experience in developing and implementing public humanities and educational programs. Special emphasis is placed on the application of the humanities in community, museum, and school settings. The program offers a core of courses in American Studies, art and literature, history, working-class studies, and public practice, along with opportunities to work in local museums, schools, community projects, and other public humanities programs. Courses for the program have been drawn from five different colleges, providing students the chance to gain a truly broad and diverse education while deepening their knowledge of American culture. The M.A. in American Studies also offers a teaching track designed for secondary teachers.

Faculty Research Interests

L. Diane Barnes, Ph.D., Assistant Professor of History
Nineteenth-century American history; historical editing

Donna M. DeBlasio, Ph.D., Associate Professor of History
Historic preservation; oral history

Gordon Frissora, Ph.D., Assistant Professor of Criminal Justice
Social structure and stratification; administration of justice; research methods and statistics; American studies

John M. Hazy, Ph.D., Assistant Professor of Criminal Justice
Community health; life course issues; teaching effectiveness

Thomas E. Leary, Ph.D., Assistant Professor of History
Historic preservation; labor and industrial history

Sherry Lee Linkon, Ph.D., Professor of English
19th- and 20th-century American studies; feminist criticism; popular culture; working-class studies

Gail Y. Okawa, Ph.D., Associate Professor of English
Multicultural literacy; cultural rhetorics; sociolinguistics; teaching force issues

Martha Pallante, Ph.D., Professor and Chair of History
Early American studies; material culture; pedagogy

John Russo, Ed.D., Professor of Management
Labor relations; industry studies; working-class studies

James J. Schramer, Ph.D., Professor of English
Early American literature; technical writing; travel literature

Rick Shale, Ph.D., Professor of English
Film study; popular culture; American studies

Linda J. Strom, Ph.D., Associate Professor English
Working class literature; women's studies; 20th-century American literature

Stephanie A. Tingley, Ph.D., Professor of English
American literature; film studies; pedagogy

Louis A. Zona, D.A., Professor of Art
Twentieth-century art; museum studies

Admission Requirements

Students must have an unrecalculated grade point average in undergraduate study of 3.0 (on a 4.0 scale). The bachelor's degree may be in any field, but students should have taken at least 12 hours of upper division coursework in some combination of the arts, humanities, and/or social sciences.

Degree Requirements

1) Students must complete 36 semester hours of coursework at the graduate level

Required core courses (6 s.h.):

AMER 6900	Approaches to American Studies	3 s.h.
AMER 6990	Independent Project in American Studies	3 s.h.

Practice Area (6 s.h.):
Choose one track
Teaching track:
Select two of the following:

AMER 6970	Teaching Working-Class Studies	3 s.h.
AMER 6975	Interdisciplinary Teaching	3 s.h.
ENGL 6907	Teaching of Writing	3 s.h.
ENGL 6906	Teaching of Literature	3 s.h.
ENGL 6974	English Education Workshop	3 s.h.
ENGL 6976	Studies in English Education	3 s.h.
HIST 6950	Studies in the Teaching of History	3 s.h.
SEDUC 6936	Fundamentals of Curriculum Development	3 s.h.

OR
Public Practice Track:

AMER 6930	Humanities in the Community	3 s.h.
AMER 6980	Public Humanities Internship	3 s.h.

Focus Area (12 s.h.):
Students must select at least four courses (12 s.h.) from *one* of the following areas:

Cultural Studies		
ANTHR 6910	Special Anthropological Problems	3 s.h.
ART 5881	Twentieth-Century Art to 1960	3 s.h.
ART 5882	Twentieth-century Art from 1960	3 s.h.
ENGL 6915	Early American Studies	3 s.h.
ENGL 6917	Nineteenth-Century American Studies	3 s.h.
ENGL 6922	Twentieth-Century American Studies	3 s.h.
ENGL 6923	Working-Class Literature	3 s.h.
ENGL 6963	Perspectives in Multicultural Studies	3 s.h.
ENGL 6965	Studies in Film	3 s.h.
FNLG 6900	Seminar	3 s.h.
HIST 5806	American Architectural History I	3 s.h.
HIST 5607	American Architectural History II	3 s.h.
HIST 6940	Oral History	3 s.h.
SOCIO 6900	Special Sociological Problems	3 s.h.
American History		
FOUND 6905	Emotional Challenges in Historical Perspective	3 s.h.
HIST 6902	American Historiography	3 s.h.
HIST 6910	Readings in American History	3 s.h.
HIST 6912	Research Seminar in American Colonial History	3 s.h.
HIST 6913	Research Seminar in Nineteenth-Century America	3 s.h.
HIST 6914	Research Seminar in Twentieth-Century America	3 s.h.
HIST 6941	American Material Culture	3 s.h.
Working-Class Studies		
AMER 5850	Class and Culture	3 s.h.
AMER 6910	Introduction to Working-Class Studies	3 s.h.
AMER 6970	Teaching Working-Class Studies	3 s.h.
ENGL 6923	Working-Class Literature	3 s.h.
HIST 6939	Labor History	3 s.h.
HIST 6945	Interpretation and Preservation of the Industrial Built Environment	3 s.h.
MGMT 5845	Work in America	3 s.h.
Public History		
HIST 5810	Conservation of the Historic Built Environment	3 s.h.
HIST 6942	Introduction to Applied History	3 s.h.
HIST 6943	Practicum in Applied History	3 s.h.
HIST 6955	Museum Curation and Interpretation I	3 s.h.
HIST 6956	Museum Curation and Interpretation II	3 s.h.
HIST 6957	Special Topics in Applied History	3 s.h.
HIST/ENGL 6946	Historical Editing	3 s.h.

CRJUS 6960	Program Planning and Evaluation	3 s.h.
EDADM 6933	Educational Policy, Politics, and Change	3 s.h.
ENGL 6944	Document Design and Production	3 s.h.
ENGL 6953	Publications Issues and Management	3 s.h.
ENGL 6992	Professional Communication	3 s.h.

Distribution Requirement (12 s.h.):

Students must select four additional courses, with at least one from each of the other focus areas above.

2) The required course, AMER 6900: Independent Project in American Studies, requires each student to complete an independent project, such as a major research project, the design and promotion of a special exhibit at a museum, the development of an education program at a local library, or the completion of a planning project in cooperation with a local community development agency. Students will work closely with a committee of YSU faculty and community specialists to design and implement their individual projects.

Master of Arts — Economics

Program Director: Theresa Riley (2004-05)
308 DeBartolo Hall
(330) 941-1675 Desk
(330) 941-3428 Department
triley@ ysu.edu

Program Description

The M.A. in Economics program is designed to provide students with a background in applied economics which would lead to professional employment in business, government, or education. Special emphasis is placed on the use of data analysis to investigate public policy issues and business decisions. Supplemented by upper level courses in mathematics, the program can also help prepare students for doctoral study in economics or related fields. Through choosing the thesis option, a well prepared student may complete the M.A. degree in a single academic year by taking 12 semester hours in both the Fall and the Spring semesters and completing the thesis during the Summer.

Faculty Research Interests

Richard H. Bee, D.B.A, Professor
Applied macroeconomics; economics of education; time series

Yih-Wu Liu, Ph.D., Professor
Applied econometrics; forecasting; Asian economy

Joseph Palardy, Ph.D., Assistant Professor
Macroeconomics; time series econometrics

Dennis Petruska, Ph.D., Professor
Financial markets; macroeconomics; monetary theory

Tod Porter, Ph.D., Professor and Chair
Labor markets; school finance; computer-aided instruction

Teresa Riley, Ph.D., Professor
Labor economics; health care financing; computer-aided instruction

Rochelle Ruffer, Ph.D., Associate Professor
Industrial organization; antitrust regulation

Ebenge Usip, Ph.D., Professor
Econometrics; time series analysis and forecasting; mathematical economics

Yaqin Wang, Ph.D., Assistant Professor
Futures markets; behavioral finance

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, applicants must have completed at least one course in each of the following areas: principles of microeconomics, principles of macroeconomics, statistics, and calculus. Students who do not meet the requirements may be admitted on a provisional basis.

Non Thesis Option

Students must complete 30 semester hours of graduate credit with a grade-point average of 3.0 or higher for the M.A. in Economics. The requirements for the degree include the following core courses plus three electives that account for a total of nine semester hours.

The core courses in the program include:

ECON 6904	Quantitative Methods	3 s.h.
ECON 6912	Microeconomic Theory	3 s.h.
ECON 6922	Macroeconomic Theory	3 s.h.
ECON 6945	Public Finance	3 s.h.
ECON 6939	The Economics of Financial Markets and Institutions	3 s.h.
ECON 6976	Econometrics	3 s.h.
ECON 6998	Research Seminar	3 s.h.

The paper produced in the research seminar will be reviewed by a committee of three graduate faculty from the department. Electives are 6900-level graduate courses in the department that are included in the M.A. program. One elective may be either an 5800-level economics swing course or a graduate level course taught outside the department that has been approved by the graduate coordinator.

Thesis Option

A thesis may be substituted for the research seminar and a three-semester hour elective. The thesis, which will be a maximum of six semester hours of credit, must be submitted according to the general requirements of the School of Graduate Studies and Research. The student will defend the thesis in an oral examination before a committee of three or more faculty members of the department. Students wishing to write a thesis must submit a thesis proposal and the names of three faculty members who are willing to serve on a thesis committee to the graduate coordinator prior to registering for thesis credit hours.

Master of Arts — English

Program Director: James Schramer
211 DeBartolo Hall
(330) 941-3423
jschramer@ysu.edu

Program Description

The M.A. Program in English offers courses in literature research, history, and theory; genre and figure studies; creative and professional writing; linguistics and composition theory; film; and the teaching of writing and literature. Faculty members strive to offer students an understanding of the traditions of literary study and familiarity with the latest multicultural and interdisciplinary approaches. The M.A. in English prepares graduates to pursue opportunities in teaching, professional writing, and further graduate study.

Working closely with their advisors, students design individual programs to meet their interests and goals. Students are encouraged to explore a variety of approaches to the study of literature, language, and writing and to develop their abilities as readers, critics, writers, and teachers. The program requires 30 semester hours of coursework in English, during which students complete and present a thesis or portfolio of their representative work to a faculty review committee.

Faculty Research Interests

Salvatore Attardo, Ph.D., Professor
Linguistics (semantics and pragmatics); humor theory

Kevin Ball, Ph.D., Assistant Professor
Composition and rhetoric; literacy studies; community literary practices

Rebecca Barnhouse, Ph.D., Associate Professor
Medieval studies; early British literature; contemporary fiction

Bege Bowers, Ph.D., Professor
19th-century British studies; professional and technical editing; rhetoric; composition

Philip Brady, Ph.D., Professor
Modern Irish literature; creative writing; modern world literature

Steve Brown, Ph.D., Professor
Applied linguistics; English as a second language

Jeffrey M. Buchanan, Ph.D., Assistant Professor
Rhetoric and composition; English education

Suzanne Diamond, Ph.D., Assistant Professor
Theory and politics of written expression/confession; heredity narratives; college composition; instruction development

Timothy Francisco, Ph.D., Assistant Professor
Shakespeare; Jacobean drama; journalism

Julia M. Gergits, Ph.D., Professor
Victorian literature; women's studies; technical writing; literature and the other arts

Jay Gordon, Ph.D., Assistant Professor
Rhetoric, professional and technical writing

Betty T. Greenway, Ph.D., Professor
Children's literature; prose fiction

William Greenway, Ph.D., Professor
Poetry writing; poetry; modern British and American literature

Scott A. Leonard, Ph.D., Professor
19th-century British literature; critical theory; composition/rhetoric

Sherry Lee Linkon, Ph.D., Professor
19th- and 20th-century American studies; feminist criticism; popular culture; working-class studies

Virginia R. Monseau, Ph.D., Professor
Adolescent literature; children's literature; English education

Steven Reese, Ph.D., Professor
20th-century British literature; creative writing

Gary M. Salvner, Ph.D., Professor and Chair
English education; adolescent and children's literature; composition

James J. Schramer, Ph.D., Professor
Early American literature; technical writing; travel literature

Rick Shale, Ph.D., Professor
Film study; popular culture; American studies

Linda J. Strom, Ph.D., Associate Professor
Working class literature; women's studies; 20th-century American literature

Stephanie A. Tingley, Ph.D., Professor
American literature; film studies; pedagogy

Admission Requirements

Students must have an undergraduate English major or other preparation judged satisfactory by the department and an unrecalculated grade-point average in undergraduate study of at least 2.7 on a 4.0 scale. Applicants who do not have an undergraduate major in English must complete a sequence of undergraduate prerequisite courses prior to admission to the M.A. program. Such students should check with the program director when applying.

Degree Requirements

1) Students must complete 30 semester hours in English courses at the graduate level; exceptions must have prior approval of the department Chair and Graduate Program Director. All M.A. students must take four courses to fulfill the broad area requirements listed below:

Two literature courses (choose any)
One theory or methods course (excluding 6989; graduate assistants must take 6907)
One language, discourse, or writing course

Students may then complete a concentration or focus area with their remaining courses, although they are not required to complete a focus area. Possible focus areas include: professional writing and editing, linguistics, literature, composition and rhetoric, TESOL, and children's and young adult literature.

2) Students must submit a thesis or portfolio.

a) The thesis option is designed especially for, but not limited to, students planning to pursue a doctorate. Students choosing this option must select a committee consisting of a thesis director and two additional faculty members. This committee must approve a thesis proposal before the student can register for the thesis course. Students must demonstrate through the thesis a familiarity with appropriate sources and an ability to interpret this material and properly document the research. Students selecting the thesis option may count up to three semester hours of thesis credit (English 6999) toward their total of 30 semester hours of coursework.

b) The portfolio consists of selected work written during graduate school. Most of this writing will come from class assignments; however, up to 15 pages of personal writing done outside of the classroom may be included. The student will present the portfolio to a faculty review committee no later than the eighth week of the final semester. Students selecting the portfolio option will take 30 hours of coursework.

Handouts on thesis and portfolio guidelines are available from the program director.

Graduate Certification

Graduate Certificates in Professional Writing and Editing, Teaching of Writing, Literature for Children and Young Adults, and Teaching English to Speakers of Other Languages (TESOL) are available through the English Department. Please see the appropriate information in the **Graduate Certificates** section of this catalog.

Advising

1) All students should have their schedules approved by a graduate faculty advisor every semester. After initial enrollment in the program, the student and his/her advisor will establish a coursework plan including alternate course selections.

2) Students who anticipate graduate study beyond the M.A. are strongly advised to acquire basic reading competence in at least one foreign language.

Master of Arts — Financial Economics

Program Director: Theresa Riley
308 DeBartolo Hall
(330) 941-1675 Desk
(330) 941-3428 Department
triley@ ysu.edu

It is anticipated that the Master of Arts in Financial Economics will admit its first students Spring Semester 2005.

Program Description

The M.A. in Financial Economics program is designed to provide students with a background in economic theory and to train students how to analyze financial markets. This program is intended to lead to professional employment in the financial services industry, including banking, insurance and financial advising. Coursework in the program includes coverage of micro and macro economic theory, econometrics, financial markets, management of financial capital, and analysis of the valuation of stocks. Electives allow students an opportunity to pursue additional topics such as international finance. Supplemented by upper level courses in mathematics, the program can also help prepare students for doctoral study in finance, economics or related fields. Through choosing the thesis option, a well-prepared student may complete the M.A. degree in a single academic year by taking 12 semester hours in both the Fall and the Spring semesters and completing the thesis during the Summer.

Faculty Research Interests

Richard H. Bee, D.B.A, Professor
Applied macroeconomics; economics of education; time series

Joseph Palardy, Ph.D., Assistant Professor
Macroeconomics; time series econometrics

Dennis Petruska, Ph.D., Professor
Financial markets; macroeconomics; monetary theory

Tod Porter, Ph.D., Professor and Chair
Labor markets; school finance; computer-aided instruction

Teresa Riley, Ph.D., Professor
Labor economics; health care financing; computer-aided instruction

Rochelle Ruffer, Ph.D., Associate Professor
Industrial organization; antitrust regulation

Ebenge Usip, Ph.D., Professor
Econometrics; time series analysis and forecasting; mathematical economics

Ronald P. Volpe, Ph.D., Professor
Financial planning; financial literacy; investing

Yaquin Wang, Ph.D, Assistant Professor
Futures markets; behavioral finance

Fran Wolf, Ph.D., Professor
Financial management; advanced financial analysis

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, applicants must have completed at least one course in each of the following areas: principles of microeconomics, principles of macroeconomics, statistics, and calculus. Students who do not meet the requirements may be admitted on a provisional basis.

Non Thesis Option

Students must complete 30 semester hours of graduate credit with a grade-point average of 3.0 or higher for the M.A. in Financial Economics. The requirements for the degree include the following core courses plus two electives that account for a total of six semester hours.

The core courses in the program include:
Courses that may be waived:

FIN 6900	Financial Accounting and Finance for Decision Making	4 s.h.
ECON 6904	Quantitative Methods	3 s.h.

Required Courses:

ECON 6912	Microeconomic Theory		3 s.h.
ECON 6922	Macroeconomic Theory		3 s.h.
ECON 6939	The Economics of Financial Markets and Institutions		3 s.h.
ECON 6976	Econometrics		3 s.h.
ECON 6998	Research Seminar		3 s.h.
FIN 6921	Financial Management		3 s.h.
FIN 6924	Securities Analysis		3 s.h.
FIN 6953	Advanced Financial Analysis	or	3 s.h.
FIN 6939	Multinational Accounting and Finance		3 s.h.

The paper produced in the research seminar will be reviewed by a committee of three graduate faculty from the department. Electives are 6900-level graduate courses in the department that are included in the M.A. program. One elective may be either an 5800-level economics swing course or a graduate level course taught outside the department that has been approved by the graduate coordinator.

Thesis Option

A thesis may be substituted for the research seminar and a three-semester hour elective. The thesis, which will be a maximum of six semester hours of credit, must be submitted according to the general requirements of the School of Graduate Studies and Research. The student will defend the thesis in an oral examination before a committee of three or more faculty members of the department. Students wishing to write a thesis must submit a thesis proposal and the names of three faculty members who are willing to serve on a thesis committee to the graduate coordinator prior to registering for thesis credit hours.

Master of Arts — History

Program Director: Anne York
529 DeBartolo Hall
(330) 941-3535
nun333@aol.com

Program Description

The Department of History offers a graduate program leading to the Master of Arts degree. Its curriculum combines American, European, and Third World areas. The program prepares students for doctoral study in history or related fields, advancement in secondary and elementary education with a concentration in history and the social sciences, certification in Historic Preservation, and additional graduate study in a variety of professional areas. Alternatively, the program provides the knowledge base for those pursuing history as an avocation. The program concentrates on research and primary materials, written analysis of research results, study of important monographs in all fields of history, and training in a number of special fields such as oral history and historic preservation. The department prides itself on its small classes and close personal attention for all of its master's candidates.

Faculty Research Interests

Daniel Ayana, Ph.D., Associate Professor
Africa; social and economic

L. Diane Barnes, Ph.D., Assistant Professor
Nineteenth-century American history; historical editing

Frederick Blue, Ph.D., Professor Emeritus
19th-century United States; Ohio

Eleanor Congdon, Ph.D., Assistant Professor
Medieval; Renaissance; Mediterranean world; maritime history

Donna M. DeBlasio, Ph.D., Associate Professor
Historic preservation; oral history

Leslie Domonkos, Ph.D., Professor Emeritus
Medieval; Renaissance Europe

Saul Friedman, Ph.D., Professor
Middle East; Jewish

William Jenkins, Ph.D., Professor
20th-century United States; social

George Kulchytsky, Ph.D., Professor Emeritus
Russia; Eastern Europe

Thomas E. Leary, Ph.D., Associate Professor
Historic preservation; labor and industrial history

Martha Pallante, Ph.D., Professor and Chair
Early American studies; material culture; pedagogy

Lowell Satre, Ph.D., Professor Emeritus
Modern British

David Simonelli, Ph.D., Assistant Professor
Britain; British Empire

Anne York, Ph.D., Associate Professor
Early modern and revolutionary France; Vietnam; women's history

Admission Requirements

Students must have an unrecalculated grade-point average in undergraduate study of at least 2.75 (on a 4.0 scale) and a minimum of 16 semester hours of study in the field of history as an undergraduate (this may be waived upon petition to the Department of History). Each entering student is required to submit a score on the Graduate Record Examination and a graded academic writing assignment from a class.

Degree Requirements

The Department of History offers three options to candidates for a Master of Arts degree in history. Option I is designed primarily for students who wish to continue studies toward a doctorate. Option II is designed primarily to meet the needs and improve the effectiveness of secondary teachers. Option III, the Certificate in Applied History, is designed to prepare students for career opportunities in that field.

Each candidate for the M.A. in History must pass a written and an oral examination in three fields of concentration. The Examination will require factual and interpretative material as well as bibliography and historiography.

Option I

1) A total of 30 semester hours of graduate credit including thesis (six semester hours).

2) Completion of a course in Historiography (6902 American or 6904 European) and 6900 Historical Research.

3) A required thesis.

4) Successful completion of general written and oral examinations.

Students working in American or British history will, in most instances, not be required to pass a foreign language examination. In areas where a foreign language is essential for research, the student will have to meet the requirement set by the department.

Before any student under Option I is allowed to take the written and oral examinations, the advisor will designate to the Chair of the Graduate Committee of the Department of History which foreign language, if any, the student is required to know and how this requirement has to be met.

Students under Option I are reminded that the Department of History expects that the thesis shall display a capacity for research in a variety of historical sources and the ability to interpret factual information and shall constitute a properly documented report of the completed research.

Option II

1) A total of 33 semester hours of graduate credit.

2) Completion of a course in Historiography (6902 American or 6904 European) and 6900 Historical Research.

3) Two satisfactory (B or better) graduate seminar papers submitted to two different instructors. The papers will be deposited with the graduate program director to remain permanently on file.

4) Successful completion of general written and oral examinations.

Foreign language examination is not required.

Option III (Certificate in Applied History)

The M.A. in History with Certificate in Applied History is designed both to give students a grounding in American history and historical research at the graduate level, and to introduce them to ideas and techniques useful in applied history of the built environment. Students earning the Certificate may find work with state or local preservation groups, museums or government agencies. Students choose from among three possible tracks and then complete an additional 15 semester hours as described below.

1) A total of 33 semester hours of graduate credit.

2) Completion of the coursework in one of the three tracks listed below.

Track I

Historic Preservation:

HIST 5806	American Architectural History I	3 s.h.
HIST 5807	American Architectural History II	3 s.h.
HIST 5810	Conservation of Historic Built Environment	3 s.h.
HIST 6942	Introduction to Applied History	3 s.h.
HIST 6943	Practicum in Applied History	3 s.h.
HIST 6944	Applied History Internship	3 s.h.

Six courses = 18 s.h.

Track II

Museum Studies:

HIST 6941	American Material Culture	3 s.h.
HIST 6942	Introduction to Applied History	3 s.h.
HIST 6943	Practicum in Applied History	3 s.h.
HIST 6944	Applied History Internship	3 s.h.
HIST 6955	Museum Curation and Interpretation I	3 s.h.
HIST 6956	Museum Curation and Interpretation II	3 s.h.

Six courses = 18 s.h.

TRACK III

Applied History Sequence:

HIST 5806	American Architectural History I	3 s.h.
HIST 6940	Oral History	3 s.h.
HIST 6941	American Material Culture	3 s.h.
HIST 6942	Introduction to Applied History	3 s.h.
HIST 6944	Applied History Internship	3 s.h.
HIST 6946	Historical Editing	3 s.h.

Six courses = 18 s.h.

3) Completion of at least one course from one of the tracks listed above that is not the student's primary track.

4) Completion of 6900 Historical Research, 6902 American Historiography, at least one seminar outside of applied history, and at least one readings course.

5) Two satisfactory (B or better) graduate seminar papers submitted to two different instructors. One shall be from a history seminar and must be a research paper using primary sources. The other shall be based upon a paper begun in a preservation course, expanded through additional research and reading as directed by the instructor. The papers will be deposited with the graduate program director to remain permanently on file.

6) Successful completion of general written and oral examinations.

Foreign language examination is not required.

Master of Business Administration

Dean of the College of Business Administration: Betty Jo Licata
503 Williamson Hall
(330) 941-2737
bjlicata@ysu.edu

M.B.A. Coordinator: Linda J. Mohn
506 Williamson Hall
(330) 941-3069
ljmohn@ysu.edu

Program Description

The M.B.A. program is designed primarily to prepare students for increasing levels of managerial responsibilities and executive positions. The program provides qualified students with a broad-based knowledge of accounting, finance, management, marketing, and their interrelationships and applications. MBA graduates are educated to be capable of identifying complex problems, conducting critical analyses, and making informed and ethical decisions in the dynamic global environment.

Accreditation

The Master of Business Administration program is fully accredited by the Association to Advance Collegiate Schools of Business (AACSB) International. Fewer than one-third of the 1200 business schools in the United States have earned this prestigious accreditation.

Faculty Research Interests

Cynthia E. Anderson, Ed.D., Professor of Marketing
Marketing of higher education; recruitment and retention strategies of higher education; advertising/public relations.

Louis K. Falk, Ph.D., Associate Professor of Marketing
Public relations; internet marketing

Birsen Karpak, D.B.A., Professor of Management
Management science; operations management

Ram Kasuganti, D.B.A., Professor and Chair of Management
Quality management; strategy and policy; international business; materials management

Bart Kittle, Ph.D., Associate Professor of Marketing
Internet marketing

Anthony J. Kos, Ph.D., Associate Professor of Management
Organizational behavior; human resource management; strategic management

Anne McMahon, Ph.D., Professor of Management
Workplace diversity; organizational behavior

Clement Psenicka, D.B.A., Professor of Management
Management science; operations management

Jane Simmons Reid, Ph.D., Professor of Marketing
Gender differences of presenters in television commercials; marketing efforts of nonprofit organizations; marketing of higher education

John Russo, Ed.D., Professor of Management
Labor relations; industry studies

C. Louise Sellaro, D.B.A., Professor of Management
Strategic management; health care management

David E. Stout, Ph.D., Professor of Accounting and Finance
Accounting curriculum development; practice-based case studies; cross-disciplinary studies

Mark Toncar, Ph.D., Associate Professor of Marketing
International marketing

Ronald P. Volpe, Ph.D., Professor of Accounting and Finance
Financial planning; financial literacy; investing

Fran Wolf, Ph.D., Professor of Accounting and Finance
Financial management; advanced financial analysis

Peter Woodlock, Ph.D., Professor of Accounting and Finance
Executive compensation; corporate governance

Admission Requirements

Regular Admission. Requirements for regular admission to the program are a baccalaureate degree from an accredited institution, an unrecalculated undergraduate grade-point average of 2.7 (on a 4.0 scale) or above, and a minimum Graduate Management Admissions Test (GMAT) score of 460. Regular admission may, on occasion, be granted to students who have below a 460 GMAT score if they demonstrate exceptional credentials that indicate a high probability of success in MBA studies.

Provisional Admission. Individuals who do not meet the GPA or GMAT requirements for regular admission, but feel they have other outstanding qualifications or extenuating circumstances, will be considered for provisional admission on an individual basis by completing a formal application and petitioning the M.B.A. Graduate Studies Committee for provisional admission.

Students should note that an undergraduate degree and a GMAT score are mandatory admission requirements.

All applicants to the M.B.A. program should submit a resume and a letter of application stating professional goals and objectives. All applicants considered for provisional admission may be asked to submit at least one letter of recommendation and schedule an interview with the M.B.A. Coordinator and Program Director.

Degree Requirements

There are three levels of coursework in the M.B.A.:

Level I—foundations (waiveable)	18 s.h.
Level II—advanced requirements	22 s.h.
Level III—electives	8 s.h.
Total Hours:	30–48 s.h.

A student entering with undergraduate business administration and economics coursework may receive waivers of Level I courses. The total number of hours required to complete the M.B.A. program consists of 30 to 48 semester hours of credit, depending upon Level I coursework required. **Level I foundations courses should be satisfied before proceeding to the corresponding advanced course disciplines in Levels II and III.**

Level I: M.B.A. Foundations Courses

Students who have met Level I requirements as a part of their undergraduate degree may be eligible for course waivers. Students are required to demonstrate computer proficiency, in addition to the following required courses:

Students who have met Level I requirements as a part of their undergraduate degree may be eligible for course waivers. Students are required to demonstrate computer proficiency, in addition to the following required courses:

FIN 6900	Financial Accounting and Finance for Decision Making	4 s.h.
ECON 6900	Statistical Problems	3 s.h.
ECON 6901	Basic Economic Analysis	3 s.h.
MKTG 6900	Foundations of Marketing	2 s.h.
MGT 6900	Foundations of Management	2 s.h.
MGT 6916	Quantitative Analysis for Business Decisions	2 s.h.
MGT 6917	Information Systems for Management	2 s.h.
	Total Foundations:	18 s.h.

Level II: M.B.A. Advanced Courses

MKTG 6942	Strategic Marketing Management		3 s.h.
ACCTG 6902	Management Accounting Systems	or	3 s.h.
ACCTG 6912	Advanced Management Accounting *		3 s.h.
FIN 6921	Financial Management		3 s.h.
FIN/MKTG/MGT 6920	Global Business Environments**		3 s.h.
MGT 6921	Operations Management		3 s.h.
MGT 6961	Organizational Behavior		3 s.h.
MGT 6965	Strategic Management and Leadership***		3 s.h.
MGT 6967	The MBA Integrated Project****		1 s.h.
	Total Advanced Courses:		22 s.h.

*Students who completed undergraduate cost accounting in the last five years must take ACCT 6912.
**Cross-listed courses
***Taken as the last course in the program of study
****Taken concurrently with MGT 6965

All Level I coursework and six semester hours of Level II coursework should be completed before proceeding to Level III electives.

Level III: Elective Courses

Total Elective Courses:	8 s.h.
Total M.B.A. Hours Required:	30–48 s.h.

Accounting Specialization:

Effective in the year 2000, Ohio residents wishing to sit for the Certified Public Accountants (CPA) Exam are required to have completed 150 semester hours of education. To assist our students in meeting that requirement and to enhance their preparation for the exam, the M.B.A. with an accounting specialization is strongly recommended. M.B.A. coursework for the accounting option is the same as the regular M.B.A. in terms of advanced courses and total hours; however, specific course requirements should also be met. With proper planning, both an undergraduate degree and a graduate degree may be earned in five years by taking graduate courses in the senior year. Advanced planning is essential to meet degree and time requirements. Please see the program coordinator or department chair for a curriculum sheet and further details.

Executive M.B.A.

The Executive M.B.A. is designed for currently employed middle and upper level managers with five years or more of progressive management and supervisory experience. Increased demands placed on today's business professionals dictate that they must broaden their perspectives if they wish to be effective in their current positions and continue in their professional advancement. The dynamic, interactive learning environment of the E.M.B.A. builds on the diverse management experience that participants bring to the classroom.

Highlights of the E.M.B.A. Program

- Integrative curriculum designed to build on the existing skills of participants
- Highly motivated and experienced students
- Small interactive classes
- Eighteen month program with classes conveniently held on Saturdays
- Highly qualified faculty and guest lecturers from the business community
- Five-day residency at onset of program
- First-hand exposure to global issues through the required international trip

Admission Requirements

YSU's Executive M.B.A. program is open to all individuals with at least five years of management work experience who exhibit an ability to perform well in an interactive graduate classroom environment. A business undergraduate degree is not required. Each application is reviewed on an individual basis. Admission is competitive and based on achievement in undergraduate study and the Graduate Management Admission Test (GMAT). Also taken into consideration are management background and the unique contributions candidates can make to the E.M.B.A. learning experience.

Admission requirements include:

- Current employment level at middle management or higher
- Five years of progressive management and supervisory experience

- Employer endorsement
- Letters of recommendation
- Bachelor's degree from an accredited university
- Satisfactory performance on the GMAT
- Personal Interview

E.M.B.A. Program Structure and Curriculum

Courses are structured in a prescribed sequence, with class members moving together through the curriculum as a cohort. Because of the diverse background and experience of the participants, most foundation (Level I) courses are built into the program, enabling all members to acquire the tools necessary for advanced coursework.

Adhering to M.B.A. curriculum requirements, foundation courses are taught at the onset of the program. Following these, core and specialized courses are taught each semester for the remainder of the program. A required international trip during the second year of study allows participants to obtain firsthand exposure and insight into the cultures, economies, and business environments of other countries. The next Executive M.B.A. class will begin in Fall 2005.

Total hours required for E.M.B.A. 48 s.h.

Master of Computing and Information Systems

Program Director: John Sullins
333 Meshel Hall
(330) 941-1806
john@cis.ysu.edu

It is anticipated that the Master of Computing and Information Systems will admit its first students for Spring Semester 2005.

Program Description

The Master of Computing and Information Systems is designed to emphasize important applied areas of computing, providing background in the overall structure of information systems, in-depth knowledge in vital areas such as databases and networking, and opportunities to learn a variety of other important, emergent, and current areas of computing such as electronic commerce, multimedia authoring, web design, and Internet programming.

The program is designed to serve students with some background in computing (possibly work-related), but who need additional deeper, more comprehensive, or more up-to-date knowledge of computing/information systems in order to make career advancements or to better utilize the technology that they are required to use on a daily basis.

Like most applications of information systems, the program is also interdisciplinary in nature, to allow students with a background in areas other than information systems to learn how to apply information systems to those areas. A number of interdisciplinary courses are supported, and students may take elective courses outside of the department.

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, students must also have previous courses in information systems equivalent to CSIS 1590: Survey of Computer Science and Information Systems; previous courses in computer programming equivalent to CSIS 2610: Programming and Problem Solving and CSIS 2617: Data Structures and Objects; previous courses in databases equivalent to CSIS 3722: Development of Databases; and previous courses in networking equivalent to either CSIS 3723: Networking Concepts and Administration or CSIS 3783: Cisco Networking Academy II. Equivalent employment-related experience may be substituted for some of these requirements. The experience must be described in detail and reliably documented (in a letter of recommendation from an employer, for example).

Students are also required to submit a resume and a written statement describing their past experience in computing/information systems (both employment and academic), and their reasons and goals for applying to the program.

Students not satisfying all admission requirements may be admitted with provisional status subject to the approval of the graduate program director and the graduate dean. Such students will generally be required to take specified undergraduate and/or foundation courses (which will not count towards the Masters degree).

Degree Requirements

A minimum of 33 approved semester hours of credit (at least half of which must be at the 6900 level) is required for the Master of Computing and Information Systems. CSIS 6920, 6940, and 6950 are required of all students. Additionally a minimum of 21 semester hours of graduate electives, consisting of approved graduate and/or swing courses are also required. Up to 9 semester hours may be taken in departments other than Computer Science and Information Systems. For graduation, the student must complete a capstone project (at least 3 semester hours of 6990). This project is meant to explore and apply some area of computing and information systems, and is subject to the approval of the major advisor.

The student's course of study will be determined in conjunction with the student's major advisor, and possibly with an advisor from outside of the department (particularly if the student is interested in applying information systems to some other area). This course of study will be based on the student's area of specialization, background interests, and career interests. It may also include graduate courses from other areas where appropriate. A cohesive individual curriculum program of approved elective courses will be developed in conjunction with the student's major advisor after 9 semester hours of core courses has been completed.

Master of Fine Arts

Program Director: Philip Brady
238 DeBartolo Hall
(330) 941-1952
psbrady@cc.ysu.edu

It is anticipated that the Master of Fine Arts will admit its first students Spring Semester 2005.

Program Description

The M.F.A. Program at Youngstown State University is part of the Northeast Ohio Universities Master of Fine Arts in Creative Writing. The NEO MFA is a multidisciplinary, interdepartmental, and inter-institutional program that provides opportunities for students to pursue the terminal degree in creative writing. The NEO MFA draws its faculty from departments at Youngstown State University, Cleveland State University, Kent State University, and The University of Akron.

This program offers workshops in poetry writing, fiction writing, creative non-fiction writing, and playwriting, as well as courses in literature, literary craft and theory, literary translation, and professional writing and editing. The M.F.A. prepares graduates to pursue opportunities in arts management; in many areas of communication, publicity, and marketing; and in teaching creative writing, literature, and expository writing. Graduates of the program are ready to contribute to the literary life of the nation and the cultural life of the community. The program requires 48 semester hours of coursework.

Faculty Research Interests

Maggie Anderson, M.A., Professor, English Department
Poetry
Kent State University

Nuala Archer, Ph.D., Associate Professor, English Department
Poetry
Cleveland State University

Brian James Baer, Ph.D., Associate Professor, Department of Modern and Classical Language Studies
Comparative literature; Russian; translation
Kent State University

Sharon Masingale Bell, Ph.D., Assistant Professor, Department of Modern and Classical Language Studies
Literary translation; Caribbean literature in French; Caribbean folklore; French
Kent State University

Philip Brady, Ph.D., Professor, English Department
Poetry; creative non-fiction
Youngstown State University

Neal Chandler, Ph.D., Coordinator, English Department
Fiction
Cleveland State University

Maryann DeJulio, Ph.D., Professor, Department of Modern and Classical Language Studies
French; literary and cultural translation
Kent State University

Zee Edgell, Ph.D., Associate Professor, English Department
Fiction
Kent State University

Radd K. Ehrman, Ph.D., Associate Professor, Department of Modern and Classical Language Studies
Classical philology
Kent State University

Mike Geither, MFA, Assistant Professor, English Department
Playwriting
Cleveland State University

John Gerlach, Ph.D., Chair, English Department
Fiction
Cleveland State University

Elton Glaser, MFA, Professor Emeritus, English Department
Poetry
University of Akron

Adrienne Gosselin, Ph.D., Associate Professor, English Department
African-American literature; American literature; creative writing
Cleveland State University

William Greenway, Ph.D., Professor, English Department
Poetry
Youngstown State University

Donald Hassler, Ph.D., Professor, English Department
Literary criticism
Kent State University

Brooke Horvath, Ph.D., Professor, English Department
Poetry
Kent State University

Wayne Kvam, Ph.D., Professor, English Department
Literature; translation
Kent State University

Carol Maier, Ph.D., Professor, Department of Modern and Classical Language Studies
Translation
Kent State University

Francoise Masardier-Kenney, Ph.D., Professor, Department of Modern and Classical Language Studies
Translation
Kent State University

Craig Paulenich, Ph.D., Associate Professor, English Department
Poetry
Kent State University

Robert Pope, MFA, Professor, English Department
Fiction
University of Akron

Steven Reese, Ph.D., Professor, English Department
Poetry
Youngstown State University

Sheila Schwartz, MA, Associate Professor, English Department
Fiction
Cleveland State University

Admission Requirements

Applicants to the MFA program must gain admission to a consortial graduate degree program in English. In addition to the minimum School of Graduate Studies and Research admissions requirements, applicants must submit three letters of recommendation and a substantive portfolio of creative work which includes either 15-20 pages of poetry or literary translation of poetry, or 30 pages of fiction, creative non-fiction, playwriting, or prose literary translation. All portfolios must include at least one finished work. All items in the portfolio should be double-spaced. The letters of recommendation should come from individuals familiar with the applicant's academic or professional background. The letters should include an assessment of the applicant's current work quality and ability to successfully complete graduate training. Application to the MFA program authorizes staff members at participating institutions to have access to all student academic records and application materials.

Degree Requirements

All M.F.A. students must complete 48 semester hours in graduate level courses. There are six areas of course work in the MFA: Writing Workshops (15 s.h.), Craft and Theory Courses (6 s.h.); Literature Courses (9 s.h.), Internship (3 s.h.), Electives (9 s.h.), and Thesis (6 s.h.). The thesis must be submitted according to the general requirements established by the School of Graduate Studies and Research. The student is required to defend the thesis in an oral presentation before a committee of graduate faculty from a minimum of two consortium schools.

Advising

All students should have their schedules approved by a graduate faculty advisor every semester. After initial enrollment in the program, the student and his/her advisor will establish a coursework plan including alternate course selections. An advisor may be chosen from the faculty of any consortium school.

Master of Health and Human Services

Program Director: Carol Mikanowicz
Bitonte College of Health and Human Services
1086 Cushwa Hall
(330) 941-3658
ckmikanowicz@ysu.edu

Program Description

The Master of Health and Human Services is a collaborative degree between the Bitonte College of Health and Human Services and the Warren P. Williamson, Jr. College of Business Administration. The program accommodates students from health and human services professions who require the skills and abilities for supervisory/managerial positions, or who desire competence in health promotion or physical education skills and methods in the community. The program is structured as a weekend college program with classes offered evenings and on Saturday during the day. After completion of an "academic core" of coursework, students may concentrate in either health promotion, administration for health and human service professions, or physical education.

Faculty Research Interests

John M. Hazy, Ph.D., Assistant Professor
Violence prevention; community health; methodology

Carol Mikanowicz, Ph.D., Professor
Community assessment; program planning; evaluations; health behaviors

C. Louise Sellaro, Ph.D., Professor
Strategy/policy communication; health care management

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, applicants must complete undergraduate courses in methodology, statistics, ACCT 2602, CSIS 1514, and MGT 3725 or AHLTH 4810, or their equivalent. Deficiencies in any of these courses must be eliminated before completion of the second semester of graduate work. Also, students must submit three letters of reference: one from a faculty member, one from an employer, and one from another source, or two from faculty members and one from another source. Regular admission requires an unrecalculated cumulative undergraduate grade-point average of at least 3.0 (on a 4.0 scale).

Degree Requirements

There are three areas of course work in the MHHS: an Academic Core (23 s.h.) with Tools (5 s.h.), Management Skills (6 s.h.), and Issues in Health and Human Services (12 s.h.); Concentration Areas (10–14 s.h.) in Health Promotion (6 s.h.), Administration for Health and Human Service Professions (6 s.h.) or Physical Education (6 s.h.); and Thesis (4 s.h.) or Non-thesis (8 s.h.) option. Students with inadequate professional experience will be required to complete a 1–2 s.h. practicum. The thesis must be submitted according to the general requirements established

by the School of Graduate Studies and Research. The student is required to defend the thesis in an oral presentation before a committee of graduate faculty from a minimum of two academic disciplines. Students selecting the non-thesis option must successfully complete a comprehensive examination and additional courses for graduation.

The breakdown of the course requirements for all students is as follows:

Academic Core (23 semester hours required)

Tools (5 semester hours required)

CRJUS 6942	Research and Statistics	3 s.h.
MGT 6917	Management Information Systems	2 s.h.

Prerequisites for the Tools courses include: undergraduate methodology, statistics course, ACCT 2602, and CSIS 1514 or equivalent.

Management Skills (6 semester hours required)

MGT 6961	Organizational Behavior	3 s.h.
MGT 6962	Organizational Staffing Process	3 s.h.

Prerequisite for the Management Skills component is MGT 3725, AHLTH 4810, or equivalent.

Issues in Health and Human Services (12 semester hours required)

CHHS 6949	Principles of Community Health Practice	3 s.h.
CHHS 6953	Health Behavior	3 s.h.
CHHS 6958	Health Services Issues	3 s.h.
CHHS 6980	Seminar	3 s.h.

Students must choose a concentration area from the following options:

Concentration Areas (10–14 semester hours with thesis/nonthesis option stated below)

Health Promotion (6 semester hours required)

CHHS 6959	Foundation and Planning	3 s.h.
CHHS 6960	Implementation and Evaluation	3 s.h.
		or

Administration for HHS Professions (6 semester hours required)

CHHS 6918	Program Planning and Evaluation	2 s.h.
CHHS 6922	Planning and Fiscal Management	4 s.h.
		and

Thesis Option (4 semester hours required):

CHHS/HMEC6999 Thesis	1–4 s.h.
	or

Non-Thesis Option: Elective Courses (8 semester hours required):

CHHS 6981	Grant Writing (required)	2 s.h.
CHHS 6950	Professional Codes in Healthcare	3 s.h.
MGT 6971	Business and Society	3 s.h.
AHLTH 5840	Comparative Health Care Systems	4 s.h.
AHLTH 5807	Epidemiology for the Health Care Practitioner	3 s.h.
COUNS 6926	Introduction to Chemical Dependency	2 s.h
HMEC 6925	Current Concepts in Nutrition	3 s.h.

SOCIO 6905	Social Gerontology	3 s.h.
FNUTR 5873	Nutrition and Aging	3 s.h.
FNUTR 5872	Maternal and Child Nutrition	3 s.h.

or other appropriate courses with prior approval of the faculty advisor.

Total hours for degree 33–37 s.h.

Note: CHHS 6990 Practicum for Health and Human Services (1–2 semester hours) may also be required for some graduate students after the faculty advisor evaluates student's professional experiences.

Physical Education (6 semester hours required)

HPES 6900	Pedagogical Analysis	3 s.h.
HPES 6903	Curriculum Development	3 s.h.

plus the following 3 required courses (total 8 semester hours) for the Non-Thesis option

HPES 6905	Contemporary Issues in Sport Pedagogy	3 s.h.
HPES 6920	Mechanical Analysis of Motor Movements	3 s.h.
CHHS 6981	Grant Writing	2 s.h.

or 4 semester hours of thesis for the Thesis Option:

CHHS/HMEC 6999 Thesis 1-4 s.h.

Master of Music

Program Director: Darla J. Funk
3144 Bliss Hall
(330) 941-1829
djfunk@cc.ysu.edu

Program Description

Master's degrees are offered in music education, performance, music history, music theory/composition and jazz studies through the Dana School of Music, which was founded in Warren, Ohio, in 1869 as Dana's Musical Institute. A member of the National Association of Schools of Music, Dana currently enrolls 300 undergraduate and graduate students. The Dana School of Music is designated an All-Steinway School, featuring 68 Steinway pianos in addition to six mechanical action organs, two harpsichords, an electronic music laboratory, and 80 acoustically treated practice rooms, all housed in the $6 million Bliss Hall. In addition, the University library contains a large music section, especially notable for its collected and scholarly editions, while the Multi-Media Center holds several thousand records, tapes, CDs, and practical edition scores.

Faculty Research Interests

Stephen W. Ausmann, Ph.D., Associate Professor
Music teacher preparation/retention; urban teacher (music) education

Michael Crist, Ph.D., Professor
Music performance (trombone); music aesthetics; music teacher training; computers in music

Silvio J. dos Santos, Ph.D., Assistant Professor
Alban Berg's Lulu; music and culture in fin-de-siècle Vienna; twentieth-century American music; life and works of Heitor Villa-Lobos; Latin American music

Kent Engelhardt, Ph.D., Assistant Professor
Charlie Parker, Bebop, Kansas City Jazz

Darla Funk, Ph.D., Professor
Music in early childhood; teacher education

Stephen L. Gage, Ed.D., Professor
Instrumental music education; conducting

David S. Morgan, Ph.D., Assistant Professor
Jazz performance; composition; music theory

Caroline Oltmanns, D.M.A., Associate Professor
Piano performance

Robert Rollin, D.M.A., Professor
Music composition; music theory and analysis; 20th-century music; crosscultural connections between

Glenn Schaft, D.M.A., Associate Professor
Percussion; classical, contemporary, jazz, Afro-Cuban, and Brazilian music

William B. Slocum, M.M., Professor
Horn in solo, orchestral, and chamber music contexts

James Umble, D.M.A., Professor
Technology in education; music technology; music performance and pedagogy (saxophone); curriculum development in the arts; integrated arts

John C. Wilcox, M.M., Associate Professor
Violin teaching and performance

Misook Yun, D.M.A., Assistant Professor
Vocal performance

Admission Requirements

Applicants for admission to graduate study in the M.M. degree must present a baccalaureate degree in music from an accredited college or university. Admission requires an unrecalculated undergraduate grade-point average of at least 2.7 (on a 4.0 scale). Students with less than a 2.7 average must provide satisfactory scores on the aptitude portion of the Graduate Record Examination. Upon admission and before the end of the first semester of graduate study, each student must take a placement examination in music history and music theory. Failure to do so will result in an addition of six semester hours (three semester hours in music theory, three semester hours in music history) to the 32 semester-hour degree program. Theory/composition applicants must submit evidence of compositional or analytic activity. All performance degree applicants must audition on their principal instrument for acceptance to the appropriate applied music level. Students with a major in conducting performance must show evidence of conducting skill through an audition and interview.

Degree Requirements

1) Completion of all requirements outlined in respective courses of study (see next page).

2) Candidates must meet whatever undergraduate foreign language requirements are appropriate to their major. Music history and literature majors must pass a written examination in at least one foreign language, preferably French or German, before initiating thesis research. Students with a major in voice performance are expected to have completed four semester hours each in French, German, and Italian, or the equivalent.

3) Students who fail to meet the standards set by the School of Music may, upon recommendation of the Dana Graduate Committee, be required to withdraw at the end of the semester. Any student with an overall grade-point average below 3.0 (i.e., not in good standing) for two consecutive semesters shall be dismissed from the master's program in music.

4) A final qualifying examination is required of all M.M. candidates. Procedural regulations governing the final qualifying examination are available from the office of the faculty member in charge of graduate studies in music.

5) Students who write a thesis must complete an oral defense that shall be conducted by a committee composed of three graduate faculty members, one of whom will be from outside the student's major area. The thesis committee shall be appointed by the student's advisor when the

thesis proposal is accepted by the Graduate Committee.

6) Thesis students who have completed 6990 and 6991, Thesis I and II (2+2 s.h.), and have completed all course requirements but have not defended the thesis, are required to maintain current student status if they expect to receive advisor or committee assistance or utilize University services (e.g., library, computer, parking, and so forth). This can be accomplished by registering for one hour of Music 6991.

7) Performance majors will submit a document supporting the recital. Information about the recital document is available from the faculty member in charge of graduate studies in music.

PERFORMANCE	
6900-level Applied*	12 s.h.
6942 or 6973	3 s.h.
Music History/Music Theory Electives (B-A)**	9 s.h.
Music Literature (F)	3 s.h.
Music Electives (A-F)	5 s.h.
Total:	32 s.h.

MUSIC HISTORY AND LITERATURE	
Music History/Literature (B/E)	15 s.h.
6942 or 6973	3 s.h.
Music Theory (A)	3 s.h.
5800- or 6900-level Applied or Electives (A-F)	7 s.h.
Thesis (2+2 s.h.)	4 s.h.
Total:	32 s.h.

* Conducting majors must take four s.h. of vocal or instrumental applied and eight s.h. of applied conducting.

** Both areas must be represented in the coursework.

MUSIC THEORY AND COMPOSITION	
Music Theory (A)***	15 s.h.
6942 or 6973	3 s.h.
Music History (B)	3 s.h.
5800- or 6900-level Applied or Electives (A-F)	7 s.h.
Thesis (2+2 s.h.)	4 s.h.
Total:	32 s.h.

MUSIC EDUCATION	
Music Education (C)****	9 s.h.
6970 and 6978	6 s.h.
6942 or 6973	3 s.h.
Music History/Music Theory Electives (A-B)	9 s.h.
5800- or 6900-level Applied or Electives (A-F)	5 s.h.
Total:	32 s.h.

JAZZ STUDIES	
6935, 6936, and 6946	9 s.h.
6942	3 s.h.
Music Theory (A)	3 s.h.
Music History (B)	3 s.h.
Jazz Ensemble	2 s.h.
Jazz Combo	2 s.h.
Applied Study or Electives (A-F)*****	6 s.h.
Thesis (2+2 s.h.)	4 s.h.
Total:	32 s.h.

(A) Courses to be selected from List A
(B) Courses to be selected from List B
(C) Courses to be selected from List C
(D) Courses to be selected from List D
(E) Courses to be selected from List E
(F) May include up to two semester hours of ensemble courses and up to four additional semester hours of applied music courses. Selection is subject to results of entrance placement examination in music theory and music history. All music electives must be approved by the advisor.

*** Students in the theory emphasis should take MUSTC 6913, *Pedagogy of Theory.*

**** Music education majors may count up to four s.h. of S/U graded workshops toward degree fulfillment.

***** Must represent two areas.

Music Theory and Composition (A)

5821, 5822 Composition for Minors	2+2 s.h.
5828 Music Technology	3 s.h.
5830 Materials of 20th-century Music	3 s.h.
5831 Modal Counterpoint	3 s.h.
5832 Tonal Counterpoint	3 s.h.
5833 Theory Seminar	3 s.h.
5834 Electronic Music	3 s.h.
5840 Instrumentation	3 s.h.
6903, 6904 Advanced Composition	3+3 s.h.
6913 Pedagogy of Theory	3 s.h.
6916 Fugue	3 s.h.
6921, 6922 Seminar in Materials of Music	3+3 s.h.
6930, 6931, 6932, 6933 Baroque, Classic, Romantic, 20th Century	3+3+3+3 s.h.

Music History (B)

5871 Baroque	3 s.h.
5872 18th Century and the Viennese Classical School	3 s.h.
5873 Opera History	3 s.h.
5874 19th Century: The Romantic Period	3 s.h.
5878 Selected Topics in Music History	3 s.h.
6940 Music in the Middle Ages	3 s.h.
6941 Music in the Renaissance	3 s.h.
6943 Seminar in Musicology	3 s.h.

Music Education (C)

5814 Selected Topics in Music Education	2 s.h.
5841 Music Workshop	1–3 s.h.
6970 Foundations of Music Education	3 s.h.
6972 Seminar in Music Education	3 s.h.
6975 Music and the Humanities	3 s.h.
6976 Directed Study in Conducting	3 s.h.
6978 Contemporary Trends in Music Education	3 s.h.
6979 Workshop in Music Education	1–3 s.h.
6981 Elementary School Music Practicum	3 s.h.
6982 Secondary School Music Practicum	3 s.h.

Pedagogy (D)

5858 Piano Pedagogy	3 s.h.
5880 Vocal Pedagogy	1 s.h.
6913 Pedagogy of Theory	3 s.h.
6950 Conducting Pedagogy	2 s.h.

Music Literature (E)

5860 Keyboard Literature	3 s.h.
5879 Vocal Literature	3 s.h.
6944 Seminar in Symphonic Literature	3 s.h.
6945 Selected Topics in Music Literature	3 s.h.

MUSIC ELECTIVES (F)

6935 Jazz Theory	3 s.h.
6936 Jazz Composition	3 s.h.
6942 Introduction to Music Bibliography	3 s.h.
6946 Jazz History	3 s.h.
6973 Research Methods & Materials in Music Education	3 s.h.
6990 Thesis 1	2 s.h.
6991 Thesis 2	2 s.h.
6992 Independent Projects	1–4 s.h.

Master of Physical Therapy

Interim Program Director: Suzanne Giuffre (Interim Chair, 2004-2005)
B086 Cushwa Hall
(330) 941-3227
smgiuffre@ysu.edu

Program Director: Marleen Iannucci McClelland
B086 Cushwa Hall
(330) 941-2419
mmcclelland@ysu.edu

Program Description

The Master of Physical Therapy Program (MPT) is a professional program for the preparation of physical therapists. The program is an entry-level postbaccalaureate program consistent with the accreditation requirements of the Commission on Accreditation in Physical Therapy Education (CAPTE). Students who are admitted on a competitive basis enter the three-year program of professional coursework and clinical education affiliations.

Faculty Research Interests

Suzanne M. Giuffre, MS, PT, P.C.S., Assistant Professor
Clinical education; pediatric neurology

Nancy C. Landgraff, MHS, PT, Ph.D, Assistant Professor
Functional deficits in carotid artery occlusion; orthotic use in spasticity

Kenneth E. Learman, M.ED., PT, O.C.S., Assistant Professor
Physical therapy interventions for the spine

Marleen Iannucci McClelland, Ph.D., PT, Associate Professor and Chair
Discourse of health care and chronic illness; interdisciplinary clinical decision-making

Cathy Bieber Parrott, MS, PT, Assistant Professor
Research methodology and program outcomes; health outcome measures

Mollie Venglar, MSPT, N.C.S., D.Sc., Assistant Professor
Parkinsons and exercise

Admission Requirements

Youngstown State University students may be provisionally accepted into the MPT Program as undergraduates during the summer semester of their senior year. They are not, however, admitted as graduate students until their application for graduate program admission has been accepted and approved and they are admitted to the School of Graduate Studies and Research. Under no circumstances will this admission take place prior to their receipt of the bachelor's degree.

In addition to the overall GPA (3.0 minimum), priority will be given to applicants with a 3.0

or higher in the following prerequisite courses (with a C- or better in each): anatomy, biology, chemistry, physics, physiology, and psychology. In addition, applicants must have completed or be scheduled to complete an undergraduate degree no later than the end of the first fall semester in the professional program and meet minimum School of Graduate Studies and Research requirements. A satisfactory score on the Graduate Record Examination (general test) is also required.

Degree Requirements

Undergraduate students admitted to the program are not permitted to progress past the first fall semester of the program unless they have received the undergraduate degree and have been admitted to the School of Graduate Studies and Research. There are four areas of program requirements that must be satisfactorily completed to be granted the MPT degree: professional coursework, professional conduct, clinical affiliations, and critical inquiry project. Students not making satisfactory progress may be required to repeat that year of the program or be dismissed based on established standards.

There are three levels of coursework in the MPT program:

Level I-foundations (waiveable)	12 s.h.
Level II-program core	67 s.h.
Level III-electives	1–12 s.h.
Total Hours:	67–91 s.h.

Level I: MPT Foundation Courses

Students may be eligible to waive these courses.

PHYTH 5800	Pathology	4 s.h.
BIOL 5868	Gross Anatomy I	4 s.h.
BIOL 5869	Gross Anatomy II	4 s.h.
Total Foundation Courses:		12 s.h.

Level II: MPT Program Core Courses

PHYTH 6901	Clinical Decision Making I	6 s.h.
BIOL 5829	Neuroanatomy	4 s.h.
PHYTH 6902	Functional Anatomy	3 s.h.
PHYTH 6903	Language, Culture, and Health	2 s.h.
PHYTH 6904	Clinical Education I	3 s.h.
PHYTH 6905	Clinical Decision Making II	6 s.h.
PHYTH 6906	Critical Inquiry	1 s.h.
PHYTH 6907	Special Topics-Pediatrics	3 s.h.
PHYTH 6908	Legal and Ethical Issues in P.T.	2 s.h.
PHYTH 6909	Clinical Decision Making III	6 s.h.
PHYTH 6910	Critical Inquiry II	2 s.h.
PHYTH 6911	Special Topics-Geriatrics	2 s.h.
PHYTH 6912	Posture, Movement, and Health	1 s.h.
PHYTH 6913	Management and Leadership in P.T.	2 s.h.
PHYTH 6914	Clinical Education II	3 s.h.
PHYTH 6915	Clinical Decision Making IV	6 s.h.
PHYTH 6917	Problem-Based Cases: Electives	1 s.h.
PHYTH 6916	Critical Inquiry III	2 s.h.
PHYTH 6918	Professional Issues	2 s.h.

PHYTH 6919	Clinical Education III	2 s.h.
PHYTH 6920	Clinical Education IV	8 s.h.
Total Program Core Courses:		67 s.h.

Level III: MPT Electives

Students are not required to take electives to be granted the MPT degree. Electives can be taken for either undergraduate or graduate credit.

PHYTH 6921	Independent Study	1–6 s.h.
PHYTH 6922	Research	1–6 s.h.
Total Electives:		1–12 s.h.

Master of Public Health

Program Directors: John J. Yemma, NEOU MPH Program Director, YSU
Dean, Bitonte College of Health and Human Services
2064 Cushwa Hall
(330) 941-3320
jjyema@cc.ysu.edu

Kathy Akpom, YSU Campus Coordinator and Advisor
1080 Cushwa Hall
(330) 941-1901
kakpom@cc.ysu.edu

Amy Lee, NEOU MPH Administrative Director
Division of Community Health Sciences
NEOUCOM
(330) 747-2247 or (330) 325-6164

Program Description

The Master of Public Health (MPH) Program at Youngstown State University is part of the Northeast Ohio Universities Master in Public Health. The NEOU MPH is a multidisciplinary, interdepartmental, and inter-institutional program that provides opportunities for graduate studies in public health. It is housed in the Bitonte College of Health and Human Services. Although the MPH degree is awarded by Youngstown State University, the MPH Program is consortium-based. It draws its faculty from several departments at Cleveland State University, Kent State University, the Northeastern Ohio Universities College of Medicine (NEOUCOM), Ohio University, The University of Akron, and Youngstown State University.

The mission of the Northeastern Ohio Universities Master of Public Health program is to improve public health by the preparation of students for public health practice in the region through collaboration among the participating academic institutions, graduate students, public health practitioners, and the community. Graduates are prepared for significant health roles through practice, community-based research, and community service. Other unique features of the program include the use of distance learning, and Saturday course offerings accommodate the typical student's work schedule.

The program is structured as a weekend college program with core courses scheduled on Saturdays from 9:00 a.m. to 4:00 p.m. Alternate scheduling will be considered to accommodate students with special circumstances. Students take core courses at any one of the distance learning sites on the participating campuses. Electives are taken at YSU, The University of Akron, Cleveland State University, NEOUCOM, or Kent State University. Electives are taken on the campus where they are being offered and may be taken anytime during the program.

Faculty Research Interests:

Matthew Adeyanju, Ph.D., M.P.H., Professor, School of Health Sciences
Health behavior, education, and promotion; epidemiology
Ohio University

Kathy Akpom, Ph.D., M.P.H., Associate Professor, Department of Health Professions
Health services administration in public health; program planning and evaluation; grant writing
Youngstown State University

Guang-Hwa (Andy) Chang, Ph.D., Professor, Department of Mathematics and Statistics
Biostatistics
Youngstown State University

Marguerite Erme, D.O., M.P.H., Epidemiologist
Public health concepts
Akron City Health Department

Alan M. Jacobs, Ph.D., Professor, Department of Geological and Environmental Sciences
Environmental health sciences in public health
Youngstown State University

C. William Keck, M.D., M.P.H., Professor, Community Health Sciences
Public health concepts
NEOUCOM

Elizabeth Kinion, E.D.D., M.S.N., Professor, Department of Nursing
Health services administration; grant writing
The University of Akron

Amy Lee, M.D., M.P.H., M.B.A., Assistant Professor of Community Medicine, Division of Community Health Sciences
Public health concepts
NEOUCOM

Doo Hee Lee, Ph.D., M.P.H., Assistant Professor, Health Administration
Epidemiology
Cleveland State University

DuWayne Porter, M.P.H., Registered Sanitarian
Environmental health sciences in public health
Portage County Health Department

Brenda Stevenson Marshall, Ph.D., M.P.H., Associate Professor, Health Administration
Health services administration in public health
Cleveland State University

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admissions requirements, applicants must hold a bachelor's degree from an accredited college or university, with a minimum GPA of 2.75. Applicants must have successfully completed a college-level mathematics or statistics course, and a college social science or natural science course, and have acceptable GRE scores within the last five years.

GRE scores may be waived if the applicant has a professional degree (master's or doctorate) in a relevant area. TOEFL is required from applicants from countries where English is not the language of instruction; the minimum score is 550 (paper-based) or 213 (computer-based). Two years of work experience in a relevant field is highly recommended. The applicant must provide three letters of recommendation from individuals familiar with the applicant's academic or professional background. If you have not been involved in an academic institution for two years or more, you may submit letters of recommendation by supervisors from your place of employment. The letters should include an assessment of your current work quality and ability to successfully complete graduate training. Letters are to be addressed to:

MPH Admissions Committee
NEOUCOM
Division of Community Health Sciences
4209 State Route 44
PO Box 95
Rootstown, Ohio 44272

Degree Requirements

The curriculum consists of eight core courses and electives. In addition, one grant project, a capstone project, a portfolio, and an exit presentation will be required. Students should plan on taking the core courses as a cohort. Core courses will be offered on Saturdays, one course in the morning and one in the afternoon. You may take core courses in any one of the distance learning classrooms at the partner universities. Distance learning will involve interactive electronic technology and web-based learning. You may take electives at any time in the program. Students may select an elective from any of the partner universities from a list of approved electives.

If the student is interested in an elective that is not on the approved list, an Elective Approval Form must be submitted, along with the course syllabus, for review and approval by:

NEOUMPH Curriculum Committee
MPH Program Office
NEOUCOM
Division of Community Health Sciences
4209 State Route 44
PO Box 95
Rootstown, Ohio, 44272

You will be assigned an advisor upon entering the program. The advisor will offer guidance on choosing electives appropriate to student career goals and interest. Students must maintain a minimum GPA of 3.0.

Core Courses: (24–36 s.h.)		
MPH 6901	Public Health Concepts	3 s.h.
MPH 6902	Social and Behavioral Sciences in Public Health	3 s.h.
MPH 6903	Epidemiology in Public Health	3 s.h.
MPH 6904	Biostatistics in Public Health	3 s.h.
MPH 6905	Health Services Administration in Public Health	3 s.h.
MPH 6906	Environmental Health Sciences in Public Health	3 s.h.
MPH 6907	Grant Writing in Public Health Practice	3 s.h.
MPH 6996	Practicum	3–6 s.h.
MPH 6997	MPH Capstone Project	3–6 s.h.
Electives		3–12 s.h.
Total hours for degree		39 s.h.

Master of Science — Biology

Program Director: Mark D. Womble
4021 Ward Beecher Hall
(330) 941-4727
mdwomble@ysu.edu

Program Description

The Department of Biological Sciences offers a graduate program leading to the M.S. degree. This program provides both a strong foundation in fundamental principles and theories and an understanding of the advanced application of this information within the diverse disciplines of the life sciences. Students prepare, through coursework and faculty-guided original research, to pursue career paths in the professions, academia, research, business, and industry.

The Department of Biological Sciences is organized into the following divisions: 1) Molecular Biology, Microbiology, and Genetics; 2) Physiology and Anatomy; and 3) Environmental Biology. Students may pursue specific areas of specialization within these divisions, including: ecology, microbiology, molecular biology, genetics, immunology, parasitology, entomology, vertebrate physiology, neuroendocrinology, neurobiology, cell biology, or human anatomy.

The department is housed in Ward Beecher Science Hall, with advanced research laboratories in Microbiology and Physiology in Cushwa Hall. Specialized facilities include an analytical research laboratory housing modern analytical instruments, an electron microscopy laboratory, tissue culture laboratories, animal facility, laboratories equipped for molecular and cellular research, and an extensive greenhouse facility. The department has exclusive use of two (2) unique outdoor laboratories for field studies: the Youngstown State University Arboretum (a 115-acre reserve) and Meander Reservoir, a 6,000-acre wildlife refuge and water impoundment, which collectively provide a valuable resource for environmental biology.

Faculty Research Interests

David K. Asch, Ph.D., Associate Professor
Gene regulation in eukaryotic organisms; carbon catabolite repression in Neurospora crassa

Chester R. Cooper, Ph.D., Associate Professor
Molecular biology and genetics of pathogenic fungi; identification of novel antifungal agents

Thomas P. Diggins, Ph.D., Assistant Professor
Assessment of disturbed aquatic communities; impact of invading species on fish community structure

Diana L. Fagan, Ph.D., Associate Professor
Microbiology and Immunology; inflammation and regulation of immune responses

Carl G. Johnston, Ph.D., Assistant Professor
Fungal biotechnology; use of fungi for clean up of contaminated industrial sites and as alternatives to chemical pesticides

Johanna K. Krontiris-Litowitz, Ph.D., Professor
Central regulation of hypertension in the borderline hypertensive rat

Robert E. Leipheimer, Ph.D., Professor and Chair
Reproductive neuroendocrinology: hormone-neurotransmitter interactions, regulation of reproductive behavior

Jill M. Tall, Ph.D., Assistant Professor
Effects of pharmacological interventions on acute inflammatory and chronic neuropathic pain

John D. Usis, Ph.D., Professor
Effects of environmental degradation on macroinvertebrate community structure and biodiversity; sociobiology and evolutionary biology

Gary Walker, Ph.D., Associate Professor
Cellular growth and movement in embryonic tissue; development of cell free system for the study of molecular processes underlying cell division

Courtenay N. Willis, Ph.D., Assistant Professor
Behavioral ecology of neotropical migrant birds; factors influencing reproductive success

Mark Womble, Ph.D., Associate Professor
Cellular and molecular mechanisms of neurotransmitter actions; control of neuron activity

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, applicants must have completed at least 20 semester hours of undergraduate biology courses (or equivalents which could include Biochemistry) with at least a 2.7 grade point average, plus one year of organic chemistry, one year of introductory physics, and one semester of statistics. Students with deficiencies in these areas should contact the Biology Graduate Director prior to applying for admission. The Graduate Record Examination (general test) is also required and students must obtain an acceptable score. Admission to the Biology Education degree option requires a current teaching certificate or license.

Degree Requirements

Students may pursue the M.S. degree in Biological Sciences in one of three options. The Thesis Option is a research-intensive program designed to provide students a strong foundation in fundamental biological principles and theories through coursework and the completion of a faculty-guided research project (thesis). The Non-thesis Option allows students to gain an in-depth understanding of biology through coursework and the writing of a graduate research paper. The Biology Education Option is designed for teachers, providing them with fundamental principles of biology and the application of this information through coursework and a graduate research project.

Thesis Option

Under this option, students work on a faculty-guided, original research project and gain practical experience in research techniques and data collection. It is designed for students who wish to pursue careers in academic or industrial laboratories or continue toward the Ph.D. degree.

A minimum of 36 semester hours of credit is required for the M.S. degree with Thesis option.

Students must submit an acceptable thesis proposal, pass an oral review of the proposal, submit an acceptable thesis reporting the results of a faculty-supervised research project, and pass an oral defense of the thesis. Students may repeat *Master's Thesis Research* (Biology 6990) to a maximum of 6 semester hours and must take one of the *Research Methods* courses (Biology 6991, 6992, or 6993) to a maximum of 6 semester hours. All students must take 2 semester hours of *Seminar in Biological Sciences* (Biology 6988) and one semester hour of *Topics* (Biology 6996-7000). An additional 21 semester hours of course work is required, with no more than 8 semester hours at the 5000 level. A minimum grade-point average of 3.0 is required for graduation.

Non-thesis Option

This option provides students with a strong understanding of biological theories and principles, but does not require an original research project. It is designed for students whose future goal is a non-research oriented career such as professional school or pharmaceutical sales.

A minimum of 38 semester hours of credit is required for the M.S. degree with a Non-thesis option. Students must take *Research Methods in Biology* (Biology 6994, 2 semester hours), which requires the submission of an acceptable graduate research paper and the oral review of this paper before their Graduate Committee. Students must also take 2 semester hours of *Seminar in Biological Sciences* (Biology 6988) and one semester hour of *Topics* (Biology 6996-7000). An additional 33 semester hours of coursework must also be completed, with no more than 12 semester hours being at the 5000 level. Students must also pass a comprehensive exam administered by their Graduate Committee and achieve a minimum grade-point average of 3.0 for graduation.

Biology Education Option

This option is designed to provide a broad foundation in fundamental biological principles for certified or licensed public school teachers. The required research project may be oriented toward either original laboratory research or pedagogical classroom applications.

A minimum of 38 semester hours of credit is required for the M.S. degree with Biology Education option. Students must take 4 semester hours of *Research in Biological Education* (Biology 6995), which requires the submission of an acceptable graduate research project and an oral defense of this project before their Graduate Committee. Students must also take one semester hour of *Topics* (Biology 6996-7000) and an additional 33 semester hours of coursework, of which no more than 12 semester hours may be at the 5000 level. Students must pass a comprehensive exam administered by their Graduate Committee and achieve a minimum grade-point average of 3.0 for graduation.

Advisement

Each student's course of study will be devised in consultation with the student's major advisor and will be approved by the student's Graduate Committee. The course of study will be based on the student's area of specialization, background, and career interests. Students must have their course schedules approved by their major advisor or the Graduate Director every semester.

Master of Science — Chemistry

Program Director: Steven M. Schildcrout
5022 Ward Beecher Hall
(330) 941-7114
smschild@cc.ysu.edu

Program Description

The Department of Chemistry offers a program of study leading to the M.S. degree with concentrations available in analytical, biochemical, inorganic, organic, and physical chemistry and in chemistry education. The program prepares the student for practice as a professional chemist by teaching academic fundamentals, creative and independent thinking through independent study and research, and leadership skills through interaction with undergraduate students as graduate teaching assistants. The program is also excellent preparation for further advanced study at other institutions, leading to the Ph.D. degree in chemistry or professional degrees in chemistry-related fields. The department has state-of-the-art instrumentation facilities and has readily available a wide range of instruments for student and faculty research including 400 MHz NMR, FTIR, ICP-AES, AA, GC-MS, LC-MS, high resolution MS, several HPLCs, a powder and three single-crystal X-ray diffractometers, X-ray fluorescence, thermogravimetric analyzer, differential scanning calorimeter, gel permeation chromatograph, diode array spectrophotometers, and electrochemical systems.

Faculty Research Interests

Stacey Lowery Bretz, Ph.D., Professor
Chemistry education; metacognition, reflection, learning theories, assessment, qualitative research methods program evaluation; teaching and learning chemistry at the secondary and university levels; professional development of chemistry teachers

Larry S. Curtin, Ph.D., Associate Professor
Electroanalytical chemistry; synthetic inorganic chemistry; self-assembled monolayers; buckminsterfullerene; conducting polymers and charge transfer salts

Allen D. Hunter, Ph.D., Professor
Synthesis of novel nanoscale materials, organometallics, host/guest complexes, and polymers; structural methods including X-ray crystallography

John A. Jackson, Ph.D., Associate Professor
Synthetic organic chemistry; organophosphorus chemistry; synthetic methodology; biologically active compounds; asymmetric synthesis

Thomas D. Kim, Ph.D., Associate Professor
Active site and regulatory site studies of the nitric oxide generating enzyme, nitric oxide synthase

Friedrich W. Koknat, Ph.D., Professor
Transition metal cluster compounds

Sherri R. Lovelace-Cameron, Ph.D., Associate Professor
Synthesis and electrochemical studies of transition metal organometallic complexes; modification of silicate surfaces with phosphonates; using service learning or cultural information in science courses to enhance student learning

Howard D. Mettee, Ph.D., Professor
Thermodynamic, kinetic, spectroscopic properties of gaseous reactive complexes; chemical treatment of hazardous wastes; corrosion prevention; artificial photosynthesis; biomass conversion technologies

James H. Mike, Ph.D., Professor
Chromatography of environmentally and biologically important molecules; development and characterization of novel chromatographic stationary phases based on calix [n]arenes.

Daryl W. Mincey, Ph.D., Professor and Chair
Analysis of environmental materials

Steven M. Schildcrout, Ph.D., Professor
Mass spectrometry; gaseous ion chemistry

Michael A. Serra, Ph.D., Associate Professor
Effects of free radicals on proteins

Jeffrey A. Smiley, Ph.D., Professor
Investigation of the enzymatic mechanism of iso-orotate decarboxylase; evaluation of mechanistic aspects of OMP decarboxylase

Timothy R. Wagner, Ph.D., Professor
Synthesis of inorganic oxide and nitride-fluorides; structure characterizations using single crystal and powder X-ray diffraction, and TEM

Admission Requirements

In addition to the minimum admission requirements of the School of Graduate Studies and Research, an applicant for admission to the M.S. degree program in the Department of Chemistry must present an undergraduate major in chemistry or the equivalent. Ordinarily, this entails the completion of at least a year's study in both organic and physical chemistry. In those cases where the undergraduate preparation is slightly deficient, the applicant may be admitted with provisional status with the approval of the Chair of the department and the Graduate Dean.

Degree Requirements

A minimum of 35 semester hours of credit is required for the M.S. degree. Chemistry 6980, 6981, and 6982 are required of all students, with Chemistry 6980 taken in the first year of study. Additionally, from 9 to 15 semester hours of content courses in chemistry are required, depending on performance in placement exams. A minimum of six semester hours of Chemistry 6990 is also required for the degree. Teaching assistants must take Chemistry 6975 in the first year and also register each semester for Chemistry 6976, 6977, 6978 or 6979 (in addition to the 35 s.h. minimum) as assigned by the Department Chairperson. For graduation, the student must achieve a grade point average of 3.0 or higher in chemistry and must complete an acceptable research proposal, written thesis, and oral defense of the thesis.

Advisement

Entering students are advised by the Program Director. Within the first semester of full time graduate studies, the student should select a thesis advisor, who will assist the student in planning the remainder of the program. Within the first year of full time graduate studies, the student should select a thesis advisory committee in consultation with the thesis advisor. The committee, including the advisor, will meet periodically with the student to evaluate the progress of the research and to provide guidance.

Master of Science – Criminal Justice

Program Director: John M. Hazy
2087 Cushwa Hall
(330) 941-1789 (Department)
(330) 941-7206 (Fax)
jmhazy@ysu.edu

Program Description

The Master of Science in Criminal Justice at YSU provides professional education for criminal justice students in correctional treatment and administration, police management, and criminal justice studies and research. The curriculum allows each student to choose one of these tracks along with a core of course work in order to complete the degree.

Criminal Justice faculty members are currently involved in research in police management theory, applied police management, correctional organization and treatment, crime statistics, and criminological theory. Students are encouraged to participate in this ongoing research.

Students considering a career in the field of criminal justice should be aware that many employers and agencies may require applicants to meet certain pre-employment qualifications. These may include, but are not limited to: lack of a criminal record, satisfactory background checks, physical standards and conditions, and emotional stability.

Faculty Research Interests

James A. Conser, Ph. D., Professor
Police administration; personnel management; security; loss prevention; law enforcement; training; futuristics

Gordon Frissora, Ph.D., Assistant Professor
Social structure; stratification; administration of justice; research methods and statistics; police administration; personnel management; American studies

Elaine B. Greaves, Esq., L.L.B., L.L.M., Assistant Professor
Criminal law; criminal procedure; the law of evidence; legal research; constitutional issues; juvenile justice issues; criminal courts structure

John M. Hazy, Ph.D., Assistant Professor
Violence prevention; community health; methodology

Tammy A. King, Ph.D., Associate Professor, Chair, and Academy Supervisor
Corrections; criminology; juvenile justice and delinquency; domestic violence; crisis intervention; women's studies

Christian Onwudiwe, Ph.D., Assistant Professor
Comparative criminal justice; international crime; international laws and governments; human relations; corrections

C. Allen Pierce, Ph.D., Professor
Homicide studies; crime statistics (longitudinal studies) criminal justice education; police human resource allocation; police use of force and violence studies

Eric S. See, Ph.D., Assistant Professor
Juvenile delinquency; violence and exploitation of women and children; school violence; jury consultants; criminology

Admission Requirements

While an undergraduate degree in this discipline is not required for admission, a substantial background in the social sciences is preferred. Students lacking such preparation will, at the discretion of the department, be required to make up deficiencies. Each student must have completed the equivalent of an Introduction to Criminal Justice, a course in criminology and/or crime and delinquency, an introductory course in statistics and a research methodology course. A student admitted with deficiencies in any of these requirements must remove them by completion of the second semester of graduate course work.

All students entering the Master of Science in Criminal Justice program will be required to take the Graduate Record Examination, Miller Analogies Test, or Law School Admission Test, and obtain a satisfactory score for admission into the program.

Regular Admission

To obtain regular admission, students must have an unrecalculated cumulative grade-point average in undergraduate work of 3.0 or higher on a 4.0 scale and a satisfactory standardized test score. If a student meets these criteria, but has undergraduate coursework deficiencies, they may be granted provisional admission.

Provisional Admission

To obtain provisional admission, students must meet two of the following three criteria: an unrecalculated cumulative grade-point average in undergraduate work of 2.75 or higher on a 4.0 scale, an unrecalculated cumulative grade-point average in undergraduate work of 3.2 or higher on a 4.0 scale in the last 40 hours of coursework, and/or a satisfactory standardized test score.

Upon admission to the Criminal Justice graduate program and selection of emphasis area, each student is guided by a committee of three faculty members. The student selects a graduate advisor in the area of concentration from the faculty of the Department of Criminal Justice. This advisor serves as the chair of the student's graduate committee. The student and advisor select the other two members of the committee, both of whom must be members of the graduate faculty and one of whom may come from a department other than Criminal Justice. This committee will assist the student as appropriate with the planning of the program, preparation and oral defense of the thesis, or the graduate paper and its defense in the case of the nonthesis option.

Degree Requirements

The graduate program in Criminal Justice adheres to the position that the administration of criminal justice is a continuous integrated process from prevention of crime through completion of all legal intervention. The program is designed to provide society with individuals who have both a substantial awareness of the overall system and the essential competencies required to perform professional roles within it. To achieve this objective, the program broadens the student's knowledge of the total criminal justice process and provides professional education so that its graduates may assume positions of leadership within the criminal justice system. The program also prepares

students for doctoral studies in criminal justice or criminology.

Students seeking the M.S. degree in criminal justice may elect either a thesis or nonthesis option. The Criminal Justice department will accept courses from other departments offering 5000 or 6000 level courses. Students should see their graduate advisor or graduate coordinator when selecting these courses.

Thesis Option

A minimum of 30 semester hours credit is required in this option, of which up to six hours may be thesis. No more than nine semester hours may be below the 6900 level.

Nonthesis Option

A minimum of 35 semester hours credit is required, of which no more than 12 semester hours may be below the 6900 level. The nonthesis option will require a major graduate research paper worth two credits and an oral exam (defense) upon its completion.

The graduate curriculum consists of two major components:

1) Study in the general substantive areas of criminal justice, met by completing the graduate core of 6910, 6920, 6925, and 6942. Any departure from this requires prior approval of the student's committee and graduate coordinator.

2) Concentrated study in one of three emphasis areas, which prepares students for professional positions within the American system of criminal justice or prepares students for doctoral studies in criminal justice or criminology. Each student is required to choose emphasis area A, B, or C during the first semester of enrollment in the graduate program. All electives are selected by the student in consultation with the advisor, subject to the approval of the graduate coordinator.

Emphasis Area A: Criminal Justice Studies/Research

This emphasis area provides skills in criminal justice research and scholarship in criminal justice studies. The requirements are 6945, and either 6915 or 6990 plus two additional courses as part of their program, subject to the approval of the student's committee.

Emphasis Area B: Police Management

This area is designed to provide individuals with the necessary academic and professional competencies for middle management and executive positions in police organizations. The required courses are 6970 and 6971 plus two additional courses, subject to the approval of the student's committee.

Emphasis Area C: Correctional Administration and Treatment

This area is designed to develop academic and professional competency in the area of corrections. The required courses are 6980 and 6981 plus two additional courses as part of their program, subject to the approval of the student's committee.

Academy Training and Life Experience

Opportunities are available through the Criminal Justice department for students who do not have life experience or police academy training.

Master of Science – Environmental Studies

Program Director: Alan M. Jacobs
Department of Geological & Environmental Sciences
2080 Moser Hall
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Program Description

The Environmental Studies Program offers a multidisciplinary, interdepartmental Graduate Program leading to a Master of Science degree. The program office is housed in Moser Hall and is administered by the Department of Geological & Environmental Sciences (GES). The program draws its faculty and resources from the College of Arts and Sciences, the William Rayen College of Engineering and Technology, the Bitonte College of Health and Human Services, and the Warren P. Williamson, Jr. College of Business Administration. This program is intended for individuals having undergraduate degrees in environmental studies/science, other natural or social sciences, engineering, or health professions. It is designed to meet the needs of students and working professionals preparing for supervisory roles in environmental science (research and management), with emphasis on a risk-based approach to the solving of environmental problems. The curriculum requires students to broaden their knowledge with core courses in environmental studies, to deepen their expertise with elective courses in one of four disciplines, and to demonstrate their abilities to prepare a scholarly thesis. This degree will benefit students who are planning careers with regulatory agencies, industries seeking regulatory compliance or focusing on environmental management systems, research facilities, and consulting firms providing state-of-the-art assessment, management, and remediation.

Faculty Research Interests

Alan M. Jacobs, Ph.D., Professor, Geological & Environmental Sciences
Site characterization; health risk assessment; project management; groundwater contamination

Carl G. Johnston, Ph.D., Assistant Professor, Biological Sciences
Microbial ecology; bioremediation using fungi and other microorganisms; environmental and food microbiology

Ram R. Kasuganti, D.B.A., Professor, Management
Project and functional management; quality assurance/control; total quality management

Scott C. Martin, Ph.D., Professor, Civil and Environmental Engineering
Constructed wetlands; water quality modeling; Mahoning River assessment and remediation

Daryl W. Mincey, Ph.D., Professor, Chemistry
Soil and sediment analysis; laboratory instrumental techniques

John D. Usis, Ph.D., Professor, Biological Sciences
Changes in biological community structure due to human perturbations; wetland ecology

Admission Requirements

Graduates of regionally accredited baccalaureate programs in environmental studies, civil and environmental engineering, and physical and biological sciences may proceed with the Master of Science degree without deficiencies, in most cases. Graduates in social sciences and other programs may be required to complete coursework deficiencies in science and math. Students must also demonstrate that their undergraduate program comprised study equivalent to that currently required for a Bachelor of Science degree in Environmental Studies at YSU (as stated in the Undergraduate catalog in the year of admission), especially with regard to mathematics and statistics, environmental chemistry, field and laboratory techniques, and environmental regulations. In those cases where the undergraduate preparation is deficient in three or fewer courses, students may be admitted with provisional status and must remove the deficiencies by satisfactorily completing appropriate undergraduate courses with a grade of B or better. Students with an undergraduate course deficiency greater than three courses will be asked to remove the deficiency as a post-baccalaureate undergraduate student.

An unrecalculated cumulative undergraduate minimum grade-point average of 2.7 (on a 4.0 scale) is required for admission without the Graduate Record Examination (general test). Students with grade-point averages below 2.7 are required to complete the Graduate Record Examination prior to admission. The Dean of the School of Graduate Studies and Research may consider provisional admission of a student with less than a 2.7 grade-point average if a satisfactory Graduate Record Examination score is achieved.

Degree Requirements

Each student admitted to the program will meet with the Director to choose members of the student's Advisory/Thesis Committee. The committee will consist of three to five faculty members in appropriate fields of expertise and one non-faculty professional. The non-faculty member must qualify for appointment as an Adjunct Graduate Faculty member at YSU.

Upon admission to the program, the student's course of study will be devised through consultation with the student's Advisory/Thesis committee. The course of study will be based on the student's area of specialization, background, and career interests. The core courses are science intensive whereas the choices of electives emphasize one or more of the following disciplines:

(1) Chemistry and Chemical Engineering;
(2) Biology and Health;
(3) Environmental Engineering; and
(4) Business Management.

All students in the Environmental Studies graduate program must have their course schedules approved by graduate advisors every semester.

The thesis shall advance knowledge in environmental science and be applicable to the solving of environmental problems. The thesis will include a formal document and a draft article in journal format suitable for publication submittal. Five prescribed core courses (15 s.h.), discipline-based electives (12 s.h.), and a thesis (6 s.h.) are required for the Master of Science degree. Upon completion of course work with a cumulative graduate grade-point average of 3.0 or higher, students must earn a passing grade of 75 percent on a comprehensive written examination, which may cover both completed course material and general environmental issues.

Six semester hours of thesis work must progress according to the following prescribed milestones:

Prior to beginning thesis work, students will be asked to:

choose a topic after 6 s.h. (of non-thesis coursework) have been completed;
submit an outline after 12 s.h.; and
submit a formal proposal after 15 s.h.

Each proposal must be reviewed and approved by all members of the Advisory/Thesis committee.

As thesis work progresses, students must submit:
progress reports after 2, 4, and 6 s.h. (of thesis coursework) have been completed;
a draft thesis document after 5 s.h.; and
a final draft and draft journal article after 6 s.h.

Each document must be reviewed and approved by all members of the Advisory/Thesis committee.

After the final draft and draft journal article are deemed acceptable, students are required to defend the results of the research in an oral presentation before the Advisory/Thesis committee for final approval.

Core Courses (15 semester hours required) These courses are designed to provide breadth in environmental science and understanding of environmental issues and regulations.

ENST 6900	Advanced Environmental Studies	3 s.h.
ENST 6901	Sources of Contamination	3 s.h.
ENST 6920	Environmental Compliance	3 s.h.
ENST 6921	Industry/Institutional Management for the Environmental Professional	3 s.h.
ENST 6931	Ecological Risk Assessment	3 s.h.

Thesis (6 semester hours required)

ENST 6990	Thesis (May be repeated to a maximum of 6 s.h.)	1–6 s.h.

Electives (12 semester hours required) These courses are designed to provide depth in disciplines appropriate for student's backgrounds and career goals and may be chosen from one or more of the following categories:

(1) Chemistry and Chemical Engineering

CEEGR 6920	Wetlands Engineering	3 s.h.
CEEGR 6972	Advanced Topics in Environmental Engineering	3 s.h.
CHEGR 5820	Industrial Pollution Control	3 s.h.
CHEM 5804	Chemical Instrumentation	4 s.h.
CHEM 5821	Intermediate Organic Chemistry	3 s.h.
CHEM 6921	Advanced Biochemistry I	3 s.h.
CHEM 6922	Advanced Biochemistry II	3 s.h.
CHEM 6941	Advanced Organic Chemistry I	3 s.h.
CHEM 6942	Advanced Organic Chemistry II	3 s.h.
CHEM 6951	Advanced Physical Chemistry I	3 s.h.
CHEM 6952	Advanced Physical Chemistry II	3 s.h.
GEOL 5817	Environmental Geochemistry	3 s.h.

(2) Biology and Health

AHLTH 5807	Epidemiology	3 s.h.

BIOL 5804	Aquatic Biology	3 s.h.
BIOL 5806	Field Ecology	4 s.h.
BIOL 5853	Biometry	3 s.h.
BIOL 6950	Comparative Animal Physiology	4 s.h.
BIOL 6952	Experimental Design	3 s.h.
BIOL 6954	Advanced Ecology	3 s.h.
BIOL 6996	Topics in Environmental and Biological Interaction	1 s.h.
ENST 5830	Risk Assessment	3 s.h.

(3) Environmental Engineering

CEEGR 6920	Wetlands Engineering	3 s.h.
CEEGR 6967	Biological Treatment Processes	3 s.h.
CEEGR 6972	Advanced Topics in Environmental Engineering	3 s.h.
CEEGR 6975	Physical and Chemical Treatment Processes	3 s.h.
ENGR 6925	Applied Environmental Management	3 s.h.
GEOL 5815	Geology and the Environment 2	3 s.h.

(4) Business Management

ENST 6910	Environmental Management Systems Standards (ISO14001)	1 s.h.
ENST 6930	Risk Management	3 s.h.
MGT 6900	The Foundation of Management	2 s.h.
MGT 6925	Quality Management	3 s.h.

No more than nine semester hours may be from the 5800 level (swing) courses. Additional background courses (undergraduate or graduate) may be required as prerequisites for some of the graduate courses. Credits earned for the Graduate Certificate in Environmental Studies may be applied to the Master of Science degree to the extent allowed by the School of Graduate Studies and Research (normally nine semester hours). Students in the certificate program who intend to pursue the Master's degree must apply to the Master's program before completion of nine semester hours of graduate coursework.

The following undergraduate courses will not qualify for the Master's degree, but are suggested for career preparation:

AHLTH 4831	Industrial Hygiene	3 s.h.
BIOL 4805	Ichthyology	3 s.h.
CEEGR 4837	Environmental Engineering Design	3 s.h.
CHEM 3739	Physical Chemistry 1	4 s.h.
CHEM 3740	Physical Chemistry 2	4 s.h.
CHEM 3764	Chemical Toxicology	2 s.h.
ENST 4800	Environmental Impact Assessment	3 s.h.

Master of Science — Mathematics

Program Director: Stephen E. Rodabaugh
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Program Description

The Department of Mathematics and Statistics offers the M.S. degree in mathematics. Options for this degree include predoctoral studies, applied mathematics, computer science, secondary mathematics, and statistics. Graduate faculty members have a broad range of research interests in both pure and applied areas. The curriculum stresses theoretical as well as computational mathematics and is flexible enough to key a student's program to individual interests and abilities. Receiving a well-rounded education in mathematics, graduates can pursue a Ph.D., secure a position in government or industry, or further a teaching career. The department has extensive computing facilities that include microcomputers, workstations, mainframe, and access to supercomputers.

Ph.D. in Pure or Applied Mathematics, Rhodes University (Grahamstown, South Africa) and University of Cape Town (Cape Town, South Africa)

The Department of Mathematics and Statistics, in informal collaboration with Rhodes University, and University of Cape Town, both of South Africa, facilitates a Ph.D. program in pure or applied mathematics for students wishing to pursue a doctorate in selected research areas represented by the combined graduate mathematics faculties of Rhodes University, University of Cape Town, and Youngstown State University. Upon successful completion of all doctoral work, the Ph.D. is granted by Rhodes University or University of Cape Town. For admission and degree requirements, contact the graduate program director in the Department of Mathematics and Statistics.

Faculty Research Interests

Annette M. Burden, Ph.D., Assistant Professor
Educational multi-media technology; nonlinear systems in numerical analysis

Richard L. Burden, Ph.D., Professor
Numerical analysis and scientific computing

Anita C. Burris, Ph.D., Associate Professor
Graph theory; combinatorics; early childhood mathematics education

Guang-Hwa (Andy) Chang, Ph.D., Professor
Statistics; computer vision

Jacek Fabrykowski, Ph.D., Associate Professor
Analytic number theory

J. Douglas Faires, Ph.D., Professor
Analysis; numerical analysis; mathematics history

Steven L. Kent, Ph.D., Professor
Mathematical physics; Yang-Mills theory

G. Jay Kerns, Ph.D., Assistant Professor
Signed measures; infinite divisibility; exchangeability in probability and statistics; applications of stochastic processes

Roy A. Mimna, Ph.D., Assistant Professor
Topological dynamics; strange attractors; rings of continuous functions

Zbigniew Piotrowski, Ph.D., Professor
General topology; real analysis; descriptive set theory; topological algebra

Nathan P. Ritchey, Ph.D., Professor and Chair
Operations research; applied mathematics; medical decision making; stochastic modeling

Stephen E. Rodabaugh, Ph.D., Professor
Foundations of topology and fuzzy logic: point-set, lattice-theoretic, and categorical methods

Thomas D. Smotzer, Ph.D., Professor
Real analysis; complex analysis; operator theory

Angela Spalsbury, Ph.D., Assistant Professor
Functional analysis; operator theory

Jamal K. Tartir, Ph.D., Assistant Professor
Set-theoretic topology

Eric J. Wingler, Ph.D., Professor
Real analysis; complex analysis; operator theory

George T. Yates, Ph.D., Assistant Professor
Applied mathematics; mathematical modeling

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, students must also have:

1) An unrecalculated undergraduate cumulative grade-point average of at least 3.0 (on a 4.0 scale) in all undergraduate mathematics, statistics, and computer science courses.

2) A completed sequence in standard calculus comparable to 1571, 1572, 2673, including multivariable calculus.

3) Previous courses in discrete structures and linear algebra comparable to MATH 3715 and MATH 3720.

4) Evidence of success in abstract, mathematical reasoning.

Students not satisfying all of the above may be admitted with provisional status subject to the approval of the graduate program director and the graduate dean.

Degree Requirements

1) A minimum of 33 semester hours of credit.

2) A cumulative grade-point average of at least 3.0.

3) Students entering without a prior course in abstract algebra must include 5821 in their program, to be taken in the earliest available semester; and students entering without a prior course in theoretical analysis must include 5851 in their program, to be taken in the earliest available semester. These courses are not included in the 33 semester hour minimum requirement.

4) The student's combined undergraduate and graduate programs must include a mathematics core comprising the following courses or their equivalent:

a) MATH 5825 (advanced linear algebra);
b) MATH 5852 (theoretical multivariable analysis);
c) MATH 6915 or MATH 6980/6984 (foundations/topology);
d) MATH 6920 (advanced abstract algebra);
e) graduate level course in applied mathematical science; and
f) MATH 6996 or 6999 (project or thesis)

5) Satisfactory performance on written and oral examinations. The subject matter for these examinations should in part reflect both the core curriculum of (4) above and the option selected (see Description of Options below) and must be approved by the Graduate Executive Committee. Additionally, the following distribution requirements apply:

a) written exams on three courses;
b) oral exam on thesis, or oral exam on a project and two courses; and
c) at least half of the hours of the courses examined must be at the 6900 level; and
d) at least one course from 5825, 5852, 6915, or 6920 must be examined.

6) Before completing 12 semester hours, the student should submit, through an advisor, the entire degree program for approval by the Graduate Executive Committee in the Department of Mathematics and Statistics. Subsequent revisions to this program must be approved by the Graduate Executive Committee. An abstract of the proposed thesis for six semester hours, or project for three semester hours, must be submitted for approval prior to registering for these hours.

7) At least half the hours of the student's approved program must be at the 6900 level.

Description of Options

There are several options, beyond the core, that a graduate student may choose. In the description of these options, *depth* means at least two courses in a sequence at the 5800/6900-level. In each option Math 6995 may be used where appropriate, up to a total of 12 semester hours.

Option I, Predoctoral Studies in Mathematics

Course work beyond the core should include MATH 6980, 6975, and 6965. The student should select at least one area of depth in consultation with an advisor so as to best prepare for future education. For a student in pure mathematics, examples of depth might include, but are not

limited to, the sequences MATH 6980/6981, 6975/6976, 6984/6985, 5822/6920, 6965/6966. For a student in applied mathematics, examples of depth include, but are not limited to, MATH 5855/6955, 5861/6925, 6975/6976, 6943/6944, 6943/6945.

Option II, Statistics (including Actuarial Science)

Students choosing this option should plan their graduate program, in consultation with statistics faculty, to include at least 15 semester hours of statistics course work. Course work beyond the mathematics core should include a statistics core comprising STAT 6943/6944, STAT 6940, and STAT 6948. Depth includes these courses: STAT 6945, 6946, 6949. Additional recommended courses include STAT 5840, 5846, 5847, 5848, 5849, and MATH 6965.

Students interested in actuarial science should have taken the statistics core (defined in the preceding paragraph) along with MATH 5860, STAT 6945, ECON 6912, ECON 6922, and FIN 6900. Additional recommended courses include MATH 5845, MATH 6942, ECON 6939, and ECON 6940.

Option III, Applied Mathematics

As a traditional applied option, course work beyond the mathematics core should include the first course in each of the following sequences: Math 5843/6942, 5855/6955, and 5861/6925, as well as a second course for depth from at least one of these sequences. Courses in statistics and complex variables, including STAT 6943/6944, STAT 6945, and MATH 6975/6976 are also highly recommended for students taking this option.

A student choosing this option may select graduate courses outside the Department of Mathematics and Statistics to complement a specific interest, subject to approval by the Graduate Executive Committee. Additionally, students choosing this option should have course work in computer science either as part of their graduate program or prior to beginning the graduate program.

Option IV, Secondary/Community College Mathematics

Course work beyond the core should include Math 5828 or 5835, MATH 5830 or 6930 and STAT 6940 or 6943, as well as one additional course for depth chosen from MATH 6928, 6933, 6937, 6938, 6920 or 6944, or some other course approved by the Graduate Executive Committee. Those students seeking certification should consult an advisor in the School of Education.

Option V, Computer Science

Students in this option should plan their graduate program in consultation with advisors in both the Department of Mathematics and Statistics and the Department of Computer Science and Information Sciences. Course work beyond the core should include MATH 5835 and 5861. Selections from MATH 6984/6985, 6925, 6937 or 6938 are also advised. At least 12 semester hours should be in computer science and include CSCI 6905, 6910, and 6915, unless the student had this material previously, in which case the depth requirement can be satisfied by including other 6900-level computer science courses. Students in this option may elect to do their project or thesis in Computer Science.

Option VI, Individualized Program of Study

Students with a career goal not addressed by the options above will select course work beyond the core appropriate to this goal, including depth, in consultation with an advisor and subject to the approval of the Graduate Executive Committee.

Master of Science in Education – Counseling

Program Director: Kenneth Miller
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Program Description

The Counseling program prepares individuals to serve as professional counselors for school, college, and community mental health settings. In addition, the department sponsors an option in Higher Education Student Services. Graduates of the Higher Education program are trained to assume positions in community colleges, four-year colleges, and universities in such areas as residential life, student activities, advising and orientation, admissions, and other applicable areas in student services. The required core courses are those considered to represent basic knowledge and skills essential for professional counselors in all environments. The common core includes courses in professional orientation, counseling theory, counseling skills, career counseling, group counseling, assessment, research methods and consultation. In addition to the core courses, specialty studies must be completed before beginning an internship in the student's area of specialization.

The Community Counseling and School Counseling options are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). School Counseling is also accredited by the National Council for Accreditation of Teacher Education (NCATE) and approved by the Ohio Department of Education. The Community Counseling option meets the basic coursework requirements for Ohio Counselor licensure, and also meets the requirements for certification as a Licensed Independent Chemical Dependency Counselor (LICDC) by the Ohio Credentialing Board.

In conjunction with the Department of Psychology, students interested in community counseling may specialize in the therapeutic treatment of children and adolescents. The Child & Adolescent Program (CHAP) is approved for licensure by the Ohio Counselor, Social Worker and Marriage and Therapist Board. The program in Classroom Guidance@ is designed for teachers who desire better communication skills as well as an increased understanding of student issues in the complex school environment.

The emphasis in the Higher Education Student Services option is practitioner based and employs higher education administrators to teach coursework. Most full-time students in this option receive graduate assistantships in order to gain experience while completing coursework.

The department also sponsors a community clinic that provides free counseling services to uninsured and under-insured members of the Youngstown area. All students in the clinical and school counseling options are assigned one semester of work in the clinic during their first practicum experience.

Competitive scholarships and graduate assistantships are available for both part-time and full-time study in all options. Applications are available through the department office and the School of Graduate Studies and Research.

Option A: School Counseling

The 51-hour school counseling option meets the education requirements for school counselor licensure in the state of Ohio. Students seeking Ohio school counselor licensure must have completed an approved school counseling program with a one-year induction process. Students must also pass the school counseling specialty portion of the Praxis Exam administered by Educational Testing Service for the State of Ohio or any other state required standardized testing. Students seeking school counselor licensure/certification in other states, such as Pennsylvania, have the responsibility to ensure that they meet the requirements of that particular state. Internships must be completed in approved educational settings.

Option B: Community Counseling

Community counselors are employed in a variety of settings, such as mental health facilities, community human services centers, crisis intervention agencies, clinical forensic settings, chemical dependency treatment programs and hospitals. An internship in an appropriate community setting is required. Students interested in community counseling complete a 61-semester hour curriculum which meets the basic coursework requirements for Ohio counselor licensure as a Professional Clinical Counselor.

Option C: Child and Adolescent Program (CHAP)/Community Counseling

This program is designed for students who wish to specialize in the treatment of children and adolescents. Diagnosis of childhood disorders, appropriate therapeutic techniques, psychopharmacological treatment and direct counseling experience with children and adolescents are integral components of the program. The CHAP curriculum meets requirements of Ohio counselor licensure as a Professional Clinical Counselor and is a 64-semester hour curriculum.

Option D: Higher Education Student Services

Many colleges and universities employ persons with a master's degree in higher education for student personnel programs. This field of employment is diverse and requires a wide range of professional counseling skills. Internships must be completed in approved higher education setting. This option is a 36-semester hour curriculum.

Option E: Classroom Guidance Program

Basic communication and counseling skills are a core component of this 33-semester hour program for teachers who are seeking an approved master-s program by the Ohio Department of Education. Particular emphasis is placed on helping at-risk children and families by developing an understanding of multicultural populations and interactions with social service agencies. Individuals who wish to pursue school counselor licensure are able to apply all courses in this option toward the 51-semester hour School Counselor Program.

Faculty Research Interests

Jan Gill-Wigal, Ph.D., Professor
Consultation; behavioral medicine; ethical issues in counseling

Jennifer Jordan, Ph.D., Associate Professor
Play therapy; supervision; child and adolescent counseling

Victoria Kress, Ph.D., Assistant Professor
Sexual trauma survivors; post-traumatic stress disorder; gender issues; supervision

Don Martin, Ph.D., Associate Professor
Group Counseling; child and adolescent therapy; clinical supervision

Kenneth Miller, Ph.D., Assistant Professor, Chair
Web-based instruction design; cultural attitudes and behaviors measurement; HIV/AIDS education; gender equity issues

Sherry Gallagher Warden, Ph.D., Professor
Marriage and family; groups; school counseling; ethical issues in counseling

Admission Requirements

No specific undergraduate major is required for admission to the graduate program in Counseling. Although there are no specific course prerequisites for entry, faculty may recommend specific coursework for students without preparation in the social sciences. Undergraduate and/or graduate grade point average, standardized test scores, a letter of intent, letters of recommendation, and a required interview are important factors in determining the admissibility of an applicant to the counseling degree program. Every applicant will be interviewed by members of the Counseling Admissions committee and must meet the standards prescribed in the Department of Counseling's admission policies. Since the counseling admissions standards exceed the minimum standards set by the School of Graduate Studies and Research, all applicants must obtain a copy of the admissions policies from the Department of Counseling before formally applying for admission.

Individuals who have a master's degree in Counseling and are interested in taking coursework toward clinical endorsement and/or continuing education should contact the Department of Counseling. Applicants admitted on a provisional basis must maintain a 3.0 GPA during the first nine credit hours of coursework in order to be considered for regular admission. Students enrolled in Department of Counseling programs must maintain a 3.0 grade point average throughout their program of study.

Degree Requirements

Students are required to complete appropriate coursework for their program option including satisfactory completion of the counseling comprehensive examination. Coursework related to specialized cognate (e.g., electives and/or thesis) serve to enhance each program option.

Eight semester hours of internship are required in the community, school and CHAP program and six semester hours in the Higher Education Student Services program. Since this requirement entails 20 hours per week for two consecutive semesters at the internship site, students who are employed full time may need to arrange for leaves of absence with their employers to fulfill this requirement.

Option A: School Counseling Program Curriculum—51 Semester Hours

COUNS 5821G	Life Span Development and Counseling	or	3 s.h.
PSYCH 6905	Human Growth and Development		3 s.h.
COUNS 5898	Orientation and Ethical Issues in Professional Counseling		3 s.h.
COUNS 6900	Counseling Methods and Practice		3 s.h.
COUNS 6961	Introduction to School Counseling		2 s.h.
COUNS 6962	Counseling Theory		3 s.h.
COUNS 6964	Appraisal Techniques in Counseling		3 s.h.
COUNS 6968	Research in Counseling		3 s.h.

COUNS 6972	Career Counseling	3 s.h.
COUNS 6973	Group Counseling: Theory and Practice	2 s.h.
COUNS 6973L	Group Counseling Lab	1 s.h.
COUNS 6976	Social and Cultural Issues in Counseling	3 s.h.
COUNS 6991	Family Systems	3 s.h.
COUNS 7001	Counseling Practicum I	3 s.h.
COUNS 7002	Counseling Practicum II*	2 s.h.
COUNS 7009	School Counseling Internship	4–8 s.h.
COUNS 7013A	Diagnosis and Treatment of Children and Adolescents	3 s.h.
COUNS 7014D	SChool Counseling Program Development	2 s.h.

* Comp. Prerequisites: 5821G or Psych 6905, 5898, 6900,6961, 6962, 6964, 6968, 6972, 6973, 6973L, 6976, 7013A.

Electives (2 semester hours)

EDADM 7018	School Discipline and Student Support Services	2 s.h.

Also see note after Option C.

Option B: Community Counseling Program Curriculum–61 Semester Hours

1) Core (30 semester hours)

COUNS 5821G	Life Span Development and Counseling	or	3 s.h.
PSYCH 6905	Human Growth and Development		3 s.h.
COUNS 5898	Orientation and Ethical Issues in Professional Counseling		3 s.h.
COUNS 6900	Counseling Methods and Practice		3 s.h.
COUNS 6962	Counseling Theory		3 s.h.
COUNS 6964	Appraisal Techniques in Counseling		3 s.h.
COUNS 6968	Research in Counseling		3 s.h.
COUNS 6972	Career Counseling		3 s.h.
COUNS 6973	Group Counseling Theory and Practice		2 s.h.
COUNS 6973L	Group Counseling Lab		1 s.h.
COUNS 6976	Social and Cultural Issues in Counseling		3 s.h.
COUNS 6980	Diagnosis of Mental Disorders		3 s.h.
COUNS 6991	Family Systems		3 s.h.
COUNS 7001	Counseling Practicum I		3 s.h.
COUNS 7002	Counseling Practicum II*		3 s.h.
COUNS 7010	Community Counseling Internship		4–8 s.h.
COUNS 7031	Clinical Psychopathology and Treatment		3 s.h.
COUNS 7032	Clinical Intellectual Testing		3 s.h.
COUNS 7037	Psychopharmacological Treatment of Mental and Emotional Disorders		3 s.h.
COUNS 7040	Supervision Practicum		3 s.h.

* Comp. prerequisites: 5821G or PSYCH 6905, 5898, 6900, 6962, 6964, 6968, 6972, 6973, 6973L, 6976, 6980.

2) Electives (2 semester hours)

COUNS 5967 Summer Groth Workshop	2-3 s.h.

Also see note after Option C.

Option C: Child and Adolescent Program (CHAP)–64 Semester Hours

1) Core

COUNS 5821G	Life Span Development and Counseling or	
PSYCH 6905	Human Growth and Development	3 s.h.
COUNS 5898	Orientation and Ethical Issues in Professional Counseling	3 s.h.
COUNS 6900	Counseling Methods and Practice	3 s.h.
COUNS 6962	Counseling Theory	3 s.h.
COUNS 6964	Appraisal Techniques in Counseling	3 s.h.
COUNS 6968	Research in Counseling	3 s.h.
COUNS 6972	Career Counseling	3 s.h.
COUNS 6973	Group Counseling Theory and Practice	2 s.h.
COUNS 6973L	Group Counseling Lab	1 s.h.
COUNS 6976	Social and Cultural Issues in Counseling	3 s.h.
COUNS 6991	Family Systems	3 s.h.
COUNS 7001	Counseling Practicum I	3 s.h.
COUNS 7002	Counseling Practicum II*	3 s.h.
COUNS 7010	Community Counseling Internship	4–8 s.h.
COUNS 7013A	Diagnosis and Treatment of Children and Adolescents	3 s.h.
COUNS 7031	Clinical Psychopathology and Treatment	3 s.h.
COUNS 7032	Clinical Intellectual Testing	3 s.h.
COUNS 7037	Psychopharmacological Treatment of Mental and Emotional Disorders	3 s.h.
COUNS 7040	Supervision Practicum	3 s.h.

*Comp. Prerequisites: 5821G or PSYCH 6905, 5898, 6900, 6962, 6964, 6969, 6972, 6973, 6973L, 6976, 6980

Electives (2 semester hours)

PSYCH 6930	Child and Adolescent Health Psychology	2 s.h.
COUNS 5967	Summer of Growth Workshop	1-3 s.h.

NOTE: Internship placement involves a minimum of 600 clock hours completed over 2 semesters. 7002 is to be completed the semester immediately prior to beginning internship. Students are to apply for their field placement (note: application forms are in the central office and should be turned in to the internship coordinator) for the fall or summer semesters no later than the 4th week of the spring semester. If a student would like to begin his or her field placement in the spring semester the student should apply no later than the 4th week of the fall semester. Students who fail to turn in their field placement application form by the deadline will not be allowed to complete their field placement during the specified semester. For further information refer to the appropriate Fieldwork Handbook.

Option D: Higher Education Student Services Program Curriculum–36 Semester Hours

1) Core (36 semester hours)

COUNS 6900	Counseling Methods and Practice	3 s.h.
COUNS 6962	Counseling Theory	3 s.h.
COUNS 6968	Research in Counseling	3 s.h.
COUNS 6972	Career Counseling	3 s.h.
COUNS 6973	Group Counseling Theory and Practice	2 s.h.
COUNS 6973L	Group Counseling Lab	1 s.h.

COUNS 6976	Social and Cultural Issues in Counseling	3 s.h.
COUNS 7004	Higher Education Practicum	3 s.h.
COUNS 7005	Internship in College Student Personnel Work*	3–6 s.h.
COUNS 7023	Introduction to Student Personnel Theory	3 s.h.
COUNS 7026	Introduction to Higher Education and Student Services Administration	3 s.h.

* Following successful completion of required coursework and a comprehensive examination that covers basic counseling theory and practice.

2) Electives: To be approved by the student's advisor.

Internship placement involves a minimum of 600 clock hours completed over 2 semesters. Application must be made and a Training Agreement must be signed one semester prior to placement. COUNS 7004 must also be completed prior to beginning the internship. Comprehensive examinations are taken the second semester of the internship. For further information on the internship, refer to the Higher Education Student Services Fieldwork Handbook.

Option E: Classroom Guidance–33 Semester Hours

1) Core

COUNS 5821G	Life Span Development and Counseling		3 s.h.
COUNS 5822D	Drug Education for Teachers		2 s.h.
COUNS 5825	Group Processes in the School	or	2 s.h.
SPED 5802	Education of Exceptional Children		3 s.h.
COUNS 6900	Counseling Methods and Practice		3 s.h.
COUNS 6961	Introduction to School Counseling		2 s.h.
COUNS 6964	Appraisal Techniques in Counseling		3 s.h.
COUNS 6972	Career Counseling		3 s.h.
COUNS 6973	Group Counseling Theory and Practice		2 s.h.
COUNS 6973L	Group Counseling Lab		1 s.h.
COUNS 6976	Social and Cultural Issues in Counseling		3 s.h.
COUNS 6991	Family Systems		3 s.h.
COUNS 7013A	Diagnosis and Treatment of Children and Adolescents		3 s.h.

2) Electives (2 semester hours)

COUNS 5967	Summer of Growth Workshop	2-3 s.h.

Basic communication and counseling skills are a core component of this 33-semster hour program option for teachers who are seeking an approved master's program by the Ohio Department of Education. Particular emphasis is placed on helping at-risk children and families by developing an understanding of multicultural populations and interactions with social service agencies. Individuals who wish to pursue school counselor licensure are able to apply a majority of the above courses in this option toward the 51-semester hour school counselor program.

Master of Science in Education
Educational Administration

PROGRAM DIRECTOR: Robert J. Beebe
Beeghly College of Education
4101 Beeghly Hall
(330) 941-1437

Program Description

The Department of Educational Administration, Research and Foundations prepares reflective administrative practitioners who are capable of providing effective management and instructional leadership in public and nonpublic school settings (also see the Ed.D. in Educational Leadership section of this catalog). Post-Master's programs are also provided, which lead to Ohio administrative licensure as elementary principal for ages 3–12, middle school principal for ages 8–14, secondary principal for ages 10–21, administrative specialist in curriculum, instruction, and professional development, administrative specialist in pupil services administration, and superintendent. In addition, the department offers programs for Pennsylvania administrative certification as principal for grades K-12 and the letter of eligibility for superintendent. A variety of professional training and service activities are also available.

Faculty Research Interests

Robert J. Beebe, Ed.D., Professor and Chair
Administrative theory; human resources administration; leadership development

Gunapala Edirisooriya, Ph.D., Associate Professor
Information systems; research design; statistics

Charles Vergon, J.D., Professor
Education law; policy development; educational change

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, the department of Educational Administration, Research and Foundations requires that Master's applicants have:

1) Qualification for a teaching certificate or license (Ohio provisional or equivalent) if enrolled in a program leading to additional certification, licensure, validation, or endorsement. Students without a teaching certificate or license may be admitted on an individual basis to graduate programs leading to certification or licensure in certain areas which are graduate level only.

2) A satisfactory score on the aptitude portion of the Graduate Record Examination or on the Miller Analogies Test if the student's unrecalculated undergraduate grade-point average is below 2.70.

3) Three professional recommendations.

4) Professional resume

5) Personal interview

Degree Requirements

A minimum of 33 semester hours is required for the degree. In addition to the following Educational Administration and Foundations courses, students must successfully complete a comprehensive examination covering the selected Educational Administration courses listed under Special Notes.

Masters Degree (33 semester hours)

Introduction to School Leadership and Educational Organizations (15 semester hours)

This program module introduces students to the realities of school leadership, providing them a broader vision and deeper understanding of educational policy and organizations and the role of leadership in promoting effective instruction. It begins to transform their perspectives from that of a classroom teacher to one of an administrator with broader perspectives and responsibilities.

EDADM 6915	Learning, Teaching and Instructional Leadership		3 s.h.
EDADM 6931	Leadership in Educational Organizations		3 s.h.
EDADM 6933	Educational Policy, Politics and Change		3 s.h.
FOUND 6901	Philosophical Analysis of Education	or	3 s.h.
FOUND 6902	Sociological Bases of Education	or	3 s.h.
FOUND 6905	Educational Challenges in Historical Perspective		3 s.h.
FOUND 6904	Introduction to Educational Research		3 s.h

Leadership and Management Issues at the School Site (18 semester hours)

This program module continues the development of leadership knowledge and skills specific to building level operations, focusing on the role of the principal in relation to staff and the community and how legal and fiscal considerations shape and influence administrative decision making and the exercise of leadership.

EDADM 6947	School Building Leadership: Models and Processes	3 s.h.
EDADM 6949	Legal and Ethical Issues in Public Administration	3 s.h.
EDADM 6952	School Finance, Resource Planning and Management	3 s.h.
EDADM 6954	Marketing and Community Relations	3 s.h.
EDADM 6955	Professional Development and Human Resources	3 s.h.
EDADM 6975	Introduction to Administration Clinical Experience	3 s.h.

Special Notes

Before granting the degree, candidates must successfully complete a comprehensive examination covering the following 15 semester hours of Educational Administration courses: EDADM 6931, 6949, 6952, 6954, and 6955.

This program provides no license in administrative areas. Upon completion of the basic M.S. in Education in Educational Administration degree or the equivalent thereof as evaluated by the Department of Educational Administration, Research and Foundations, enrollment in specific licensure and certification fields* may be permitted.

*Completion of the minimum number of semester hours indicated for each program and of any other Ohio State Department of Education requirements must be achieved before recommendation for any license. Those seeking initial administrative licensure in the State of Ohio must score at least 610 on the National Teachers Examination Specialty Area Test in Educational Leadership.

Administration and Supervision. Those seeking initial administrative licensure in Pennsylvania must score at least 159 on the School Leaders Licensure Assessment

All transfer students, including those seeking a master's degree and those who hold a master's degree, will be evaluated using the criteria listed previously. Students who have been evaluated through direct contact with the Ohio State Department of Education should be aware that they must meet the criteria established by the Department of Educational Administration, Research and Foundations at YSU before the M.S. in Ed. in Educational Administration will be granted.

Post-Master's Licensure Requirements

Candidates for any administrative license must have completed the 33 semester hours for the M.S. in Education degree in Educational Administration as required by YSU, or its equivalent, as evaluated by the Department of Educational Administration, Research and Foundations.

Principal License

This program module emphasizes the leader's role in promoting collaboration and continuous school improvement across several major components of the school program from curriculum and instruction to student support services and the role technology can play in program assessment, development, implementation, and evaluation.

Elementary Principal License Ages 3–12 (16 semester hours)

EDADM 7014	Systematic Use of Information for Continuous School Improvement	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
EDADM 7022E	Clinical Experience: Elementary Principalship	3 s.h.
EMCE 6921	Issues, Problems, Developments and Curriculum in Elementary Education	3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

Middles School Principal License Ages 8–14 (16 semester hours)

EDADM 7014	Systematic Use of Information for Continuous School Improvement	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
EDADM 7022M	Clinical Experience: Middle School Principalship	3 s.h.
TEMC 6941	Pedagogy Appropriate for Early Adolescent Learners	3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

Secondary Principal License Ages 10–21 (16 semester hours)

EDADM 7014	Systematic Use of Information for Continuous School Improvement	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
EDADM 7022S	Clinical Experience: Secondary Principalship	3 s.h.
SEDUC 6931	The Secondary School Curriculum	3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

Administrative Specialist License in Curriculum, Instruction, and Professional Development

Master's Degree in Curriculum at YSU plus course work as follows:

One of
FOUND 6901 Philosophical Analysis of Education
FOUND 6902 Sociological Bases of Education
FOUND 6905 Educational Challenges in Historical Perspective 3 s.h.

FOUND 6904	Introduction to Educational Research	3 s.h.
SEDUC 7020	Field Experience in Supervision	2 s.h.
EDADM 6915	Learning, Teaching and Instructional Leadership	3 s.h.
EDADM 6931	Leadership in Educational Organizations	3 s.h.
EDADM 6933	Educational Policy, Politics and Change	3 s.h.
EDADM 6947	School Building Leadership: Models and Processes	3 s.h.
EDADM 6949	Legal and Ethical Issues in Public Administration	3 s.h.
EDADM 6952	School Finance, Resource Planning, and Management	3 s.h.
EDADM 6954	Marketing and Community Relations	3 s.h.
EDADM 6955	Professional Development and Human Resources	3 s.h.
EDADM 6975	Introduction to Administration Clinical Experience	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

or

Master's Degree in Educational Administration plus course work as follows:

TECED 6922	Principles of Instruction	3 s.h.
TECED 6934	Assessment in Education	3 s.h.
EDADM 7040	Clinical Practice for the Administrative Specialist	2 s.h.
TECED 6936	Fundamentals of Curriculum Development	3 s.h.
TECED 6946	Supervision of Instruction	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

Administrative Specialist License in Pupil Services Administration

Master's Degree in Special Education at YSU plus course work as follows:

One of
FOUND 6901 Philosophical Analysis of Education
FOUND 6902 Sociological Bases of Education
FOUND 6905 Educational Challenges in Historical Perspective 3 s.h.

FOUND 6904	Introduction to Educational Research	3 s.h.
EDADM 7040	Clinical Practice for the Administrative Specialist	2 s.h.
EDADM 6915	Learning, Teaching and Instructional Leadership	3 s.h.
EDADM 6931	Leadership in Educational Organizations	3 s.h.
EDADM 6933	Educational Policy, Politics and Change	3 s.h.
EDADM 6947	School Building Leadership: Models and Processes	3 s.h.

EDADM 6949	Legal and Ethical Issues in Public Administration	3 s.h.
EDADM 6952	School Finance, Resource Planning, and Management	3 s.h.
EDADM 6954	Marketing and Community Relations	3 s.h.
EDADM 6955	Professional Development and Human Resources	3 s.h.
EDADM 6975	Introduction to Administration Clinical Experience	3 s.h.
EDADM 7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

or

Master's Degree in Educational Administration plus course work as follows:

SPED 5858	Intervention Concepts and Strategies in Early Childhood Special Education	2 s.h.
SPED 5871	Characteristics and Needs of Gifted Children	3 s.h.
SPED 6981	Seminar: Current Issues in Special Education	4 s.h.
SPED 6982	Educational Assessment in Gifted and Special Education	3 s.h.
SPED 6984	Major Concepts and Program Design for Students in Special Education	4 s.h.
SPED 6985	Alternative Delivery Services for Children in Special Education	3 s.h.
SPED 6986	Severe Behavior Disabilities	3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.
EDADM 7040	Clinical Practice for the Administrative Specialist	2 s.h.

Superintendent License (15 semester hours)

Candidates must hold an administrative certificate or license issued upon the recommendation of YSU or the equivalent thereof as evaluated by the Department of Educational Administration, Research and Foundations at YSU, complete the following course sequence, and meet any other Ohio State Department of Education requirements.

This model shifts the leadership focus from the micro (school site) to the macro (school systems) level and familiarizes prospective superintendents with systems knowledge and perspective on leadership in areas from educational governance to human resource administration to technology and facilities.

EDADM 7024	Collective Bargaining and System Issues in Human Resources Administration	3 s.h.
EDADM 7025	Educational Governance: Advanced Law and Policy Seminar	3 s.h.
EDADM 7026	Technology and Facilities Issues for Learning Organizations	3 s.h.
EDADM 7035	The Superintendency and Evolving Ways of Looking at Leadership	3 s.h.
EDADM 7050	Clinical Experience: Superintendency	3 s.h.

Master of Science in Education
Department of Teacher Education

Program Director: Marianne K. Dove, Chair of the Department
2406 Beeghly Hall
(330) 941-3251
mdove@ysu.edu

Teacher Education Programs Admission Requirements

To be admitted to the Master of Science in Education degree program in the Department of Teacher Education, the applicant must have earned a bachelor's degree from an accredited college or university.

In addition, the applicant must also have:

1. Qualified for a teaching certificate/license (Ohio provisional or equivalent) if enrolled in a program leading to additional certification, licensure, validation, or endorsement. However, those individuals who have earned baccalaureate degrees but do not possess certificates/licenses will be admitted on a case-by-case basis after review of their credentials and needs relative to specific career paths requiring expertise in curriculum and instruction in nonschool settings.

2. An unrecalculated undergraduate cumulative grade-point average of at least 2.70 on a 4.0 scale, or an unrecalculated graduate cumulative grade-point average of 3.0.

3. Adequate preparation for the graduate program in which the student wishes to enroll, as evidenced by three professional recommendations.

For Provisional Admission, the applicant must have:

1. Qualified for a teaching certificate/license (Ohio provisional or equivalent) if enrolled in a program leading to additional certification, licensure, validation, or endorsement.

2. An unrecalculated undergraduate cumulative grade-point average of at least 2.7 on a 4.0 scale, or an unrecalculated graduate cumulative grade-point average of 3.0.

(a.) If the applicant has an undergraduate GPA of less than 2.7, or a graduate GPA of less than 3.0, then an MAT score of 39 is required.

If the undergraduate GPA is below 2.7 and the MAT score is below the cutoff score, admission is refused. If the graduate GPA is below 3.0 and the MAT score is below the cutoff score, admission is refused.

3. Adequate preparation for the graduate program in which the student wishes to enroll, as evidenced by three professional recommendations.

Once admitted provisionally, and after nine semester hours of graduate level work has been completed, the department automatically reviews the student's record. If a GPA of at least 3.0 has been maintained, student is converted from provisional to regular status. If a GPA of 3.0 has not been maintained, termination from the program is recommended.

For Nondegree Admission:

1. Qualified for a teaching certificate/license (Ohio provisional or equivalent) if enrolled in a program leading to additional certification, licensure, validation, or endorsement. Student must

provide a written statement verifying that they have a degree and a 2.5 GPA. An official transcript must be provided by the end of the semester in which the student is first enrolled for verification.

2. An unrecalculated undergraduate cumulative grade-point average of at least 2.5 on a 4.0 scale, or an unrecalculated graduate cumulative grade-point average of 3.0.

(a.) If the applicant has an undergraduate GPA of less than 2.5, or a graduate GPA of less than 3.0, then an MAT score of 39 is required.

If the undergraduate GPA is below 2.5 and the MAT score is below the cutoff score, admission is refused. If the graduate GPA is below 3.0 and the MAT score is below the cutoff score, admission is refused.

3. Nondegree status students may be blocked from enrollment in selected courses.

4. Nondegree students who later wish to earn a degree must make formal application for admission to the degree program and meet all requirements of the regular admission process. Nondegree status performance may inform, but in no way assures admission into the degree program.

Once admitted as a nondegree student, a maximum of nine semester hours of graduate level work may be applied toward a degree. A GPA of 3.0 must be maintained in order to convert from nondegree to regular status.

Master Teacher Elementary Program

Program Description

The Master Teacher Elementary program provides advanced professional preparation for teachers, administrators, and school guidance counselors in the northeastern Ohio and western Pennsylvania areas served by the University. The Department of Teacher Education houses four Elementary program options for post-baccalaureate study toward the M.S. in Ed.: curriculum, reading specialist, early childhood specialist, and middle grades.

The program focuses on the development of professionally committed practitioners so that they can reflect on and apply the current state of knowledge and best practice in their area of specialization. The program options provide the skills, knowledge, and competencies necessary for these individuals to function effectively. Central to the development of such professionals are the refinement and conveyance of competencies in the areas of scholarship, instruction, leadership, management, and interpersonal relations.

The Master Teacher Elementary program is administered by the Department of Teacher Education in the College of Education.

Faculty Research Interests

Dora L. Bailey, Ph.D., Professor
Learning to read and reading to learn; mentorship; nontraditional students

Lauren Cummins, Ed.D., Assistant Professor
NAEYC Standards; literacy development; mentorship; drug-exposed young children

Mary Lou T. DiPillo, Ph.D., Associate Professor
Children's literature; writing in mathematics; incorporating nonfiction trade books in content areas; emergent literacy

Joyce A. Feist-Willis, Ph.D., Associate Professor
Literacy Specialist Endorsement Standards; assessment-based literacy instruction; professional development; coaching; early literacy development; reading fluency; content area reading.

Hong Yong (Hy) Kim, Ed.D., Professor
NCTM standards; cooperative learning; hands-on math teaching

Janet B. Williams, Ph.D., Professor
National Science Teachers Association guidelines; process-inquiry skills in learning; verbal communication; environmental/outdoor education; integrated curriculum; alternative assessment; middle childhood education

Degree Requirements

A minimum of 32 semester hours is required for the degree. In general, the Master Teacher Elementary program requires a core of foundation courses, required courses in the major discipline, elective courses in the program being undertaken, and additional coursework outside the College of Education. Additionally, students must pass a comprehensive examination.

Option A: Curriculum

1) Required courses for specialization (15 semester hours)

TERG 6917	Survey of Reading and Language Arts Program	3 s.h.
EMCE 6918	Elementary School Mathematics Programs	3 s.h.
EMCE 6919	Social Studies Programs in Elementary Schools	3 s.h.
EMCE 6920	Elementary School Science Programs	3 s.h.
EMCE 6921	Issues, Problems, Developments, and Curriculum in Elementary Education	3 s.h.

2) Foundations of Education (10 semester hours)
Following courses required:

FOUND 6904	Introduction to Educational Research	3 s.h.
FOUND 6990	Advanced Seminar in Foundations of Education	1-3 s.h.
PSYCH 6903	Psychology of Learning	2 s.h.

Choose any one below:

FOUND 6901	Philosophical Analysis of Education	3 s.h.
FOUND 6902	Sociological Bases of Education	3 s.h.
FOUND 6905	Educational Challenges in Historical Perspective	3 s.h.

3) Electives (7 semester hours)
One course must be taken outside of the College of Education. Other courses must be inside the College of Education.

4) All master teacher curriculum students must take a comprehensive examination in their major area of study.

Total hours required for degree: 32 s.h.

Option B: Reading Specialist (Pre K-12)

1) Required courses for specialization (21 semester hours)
The following courses should be taken in sequence:

TERG 6917	Survey of Reading and Language Arts Programs		3 s.h.
TERG 6923	Reading and Language Arts: Early Years		3 s.h
TERG 6924	Reading and Language Learning in Middle and Adolescent Years		3 s.h.
TERG 6926	Reading and Language Arts Assessment I		3 s.h.
TERG 6927	Reading and Language Arts Assessment II		3 s.h.
TERG 6928	Practicum: Case Study in Reading and Language Arts		3 s.h.
TERG 6929	The Reading and Language Arts Professional		3 s.h.

2) Cognate area (5 semester hours)

ENGL 6918	Studies in Children's Literature		3 s.h.
PSYCH 6903	Psychology of Learning		2 s.h.
PSYCH 6906	Child and Adolescent Psychology	or	2 s.h.
PSYCH 6907	Psychology of Adjustment		2 s.h.

3) Foundations of Education (6 semester hours)

FOUND 6904	Introduction to Educational Research		3 s.h.
FOUND 6990	Advanced Seminar in Foundations of Education	or	1–3 s.h.
FOUND 6901	Philosophical Foundations of Education	or	3 s.h.
FOUND 6902	Socio-Cultural Aspects of Contemporary Education	or	3 s.h.
FOUND 6905	History of American Education		3 s.h.

Total hours required for degree: 32 s.h.

4) All master teacher reading students must take a comprehensive examination in the area of specialization.

Option C: Early Childhood Education

1) Required courses for specialization (16 semester hours)

ECE 6911	Early Childhood Pedagogy	4 s.h.
ECE 6912	Curriculum, Theories and Methods in Early Childhood Education Pre-K - Grade 3	3 s.h.
ECE 6920	Seminar in Early Childhood Education	3 s.h.
TERG 6923	Reading and Language Arts: Early Years	3 s.h.
ECE 6921	Special Project in Early Childhood Education	3 s.h.

2) Cognate Area (6 semester hours)

PSYCH 6906	Child and Adolescent Psychology	2 s.h.
SPED 5864	Service Coordination, Collaboration, and Consultation for Students with Special Needs	4 s.h.

3) Foundations of Education (8 semester hours)
Following courses required:

FOUND 6904	Introduction to Educational Research	3 s.h.
FOUND 6990	Advanced Seminar in Foundations of Education	1–3 s.h.

Choose any one below:

FOUND 6901	Philosophical Analysis of Education	3 s.h.
FOUND 6902	Sociological Bases of Education	3 s.h.
FOUND 6905	Educational Challenges in Historical Perspective	3 s.h.

4) Electives (2 semester hours)

5) All master teacher early childhood students will be required to take a comprehensive examination over required courses for specialization.

Option D: Middle Grades

1) Courses required for specialization (16 semester hours)

TEMC 6938	Early Adolescent Characteristics and Educational Program Needs	3 s.h.
TEMC 6939	Organizational Components of Middle Level Schools	3 s.h.
TEMC 6940	Inquiry into Current Issues in Middle Level Education	1–3 s.h.
TEMC 6941	Pedagogy Appropriate for Early Adolescent Learners	3 s.h.
TEMC 6942	Action Research: Pedagogy Appropriate for Early Adolescent Learners	3 s.h.
TEMC 6943	Field Experience: Service Learning and School-Community Collaboration	3 s.h.

2) Cognate area (5 semester hours)
To be determined in consultation with advisor(s) in order to fulfill one-half of the "Areas of Concentration" requirement.

3) Foundations of Education (6 semester hours)

FOUND 6904	Educational Research	3 s.h.
FOUND 6935	Theoretical Systems Which Inform Middle Grade Education	3 s.h.

4) Electives (5 semester hours)
To be determined in consultation with advisor(s) in order to fulfill one-half of the "Areas of Concentration" requirement.

Total hours required for degree: 32–34 s.h.

Master Teacher Secondary Program

Program Description

The Department of Teacher Education houses three Master of Science in Education degree options in Secondary Education: Option A with a concentration in subject area study; Option B, which focuses on curriculum and instruction; and Option C, which focuses on educational technology. The subject-area concentration offers teachers an opportunity to engage in 17 semester hours of elective study within their teaching field with additional hours of study in curriculum, instruction, and foundations of education. The curriculum and instruction concentration is built around 18 semester hours of core courses ranging from foundations and research, through curriculum development and instruction, to school law for classroom teachers and interpersonal communication for educators. This latter program is a flexible vehicle for professional development as well as sound preparation for doctoral work and work outside schooling. The educational technology concentration provides 14 semester hours of coursework in educational computing, Internet use, site design, and instructional design. The department also offers a variety of professional development courses, workshops, and inservice programs.

The Department of Teacher Education's mission is to empower teachers for professional practice. The mission commits the faculty to a theme of critical reflectivity where students are engaged in the pedagogies of radical critique in comparison and contrast to traditional practices of teaching and schooling. Faculty members are committed to educating students in values and ideas

that motivate educators for the transformation of students and educational institutions.

Faculty Research Interests

Marianne K. Dove, Ph.D., Associate Professor
Literacy methodology, Jungian and Gestalt theory as it relates to the fields of teacher development and organizational development

Renee M. Eggers, Ph.D., Assistant Professor and Chair
Integration of technology into instructional settings; distance learning

Patricia M. Hauschildt, Ph.D., Associate Professor
Collaborative research and analysis; culturally relevant pedagogical practices; narrative methodologies in teacher preparation

Randy L. Hoover, Ph.D., Professor
Critical reflectivity; postmodern/poststructural analysis of teaching and schooling; democratic schooling

Donna J. McNierney, Ed.D., Associate Professor
Gender issues in classroom instruction; instructional technology; attitudes/perceptions of female engineers as related to experiences in math and science classes

Howard Pullman, Ph.D., Professor
Teaching methods in middle school mathematics; use of technology in mathematics teaching and learning; assessment and NCATE Standards.

Admission Requirements

See Teacher Education Programs, Admission Requirements. For Option D, see additional requirements on page 126.

Degree Requirements

A minimum of 32 semester hours is required for the degree. In general, the Master Teacher Secondary program requires a core of foundation courses, a curriculum and instruction sequence, and elective courses in the program being undertaken. Additionally, students must pass a comprehensive examination, except for Option C.

Option A: Subject Area Concentration

1) Foundations of Education (6 semester hours required)

FOUND 6901	Philosophical Analysis of Education*	3 s.h.
FOUND 6904	Introduction to Educational Research*	3 s.h.

2) Curriculum and Instruction (9 semester hours required)

EDTC 5899	Integration of Instructional Computing	3 s.h.
PSYCH 6903	Psychology of Learning	3 s.h.
SEDUC 6922	Principles of Instruction*	3 s.h.
SEDUC 6931	Secondary School Curriculum	3 s.h.
SEDUC 6934	Alternative Assessment	3 s.h.
SEDUC 6946	Supervision of Instruction	3 s.h.
SEDUC 6951	Interpersonal Communications for Educators	3 s.h.

SEDUC 6959	Law, Ethics, and Discipline for the Classroom Teacher	3 s.h.
SEDUC 7032	Theories of Supervision	3 s.h.
SEDUC 7036	Curriculum Development*	3 s.h.

3) Electives in Appropriate Teaching Area or Process Areas (17 semester hours required)

4) SEDUC 6999 Thesis (6–12 semester hours) or Comprehensive Examination covering FOUND 6901, FOUND 6904, SEDUC 6922, and SEDUC 7036. Students who choose to take the comprehensive examination are encouraged to complete it early in the program. All seminars and workshops must be approved in advance by the program advisor.

Total hours required for degree: 32 s.h.

* required course

Option B: Curriculum and Improvement of Instruction

1) Foundations of Education (6 semester hours required)

FOUND 6901	Philosophical Analysis of Education*	3 s.h.
FOUND 6904	Introduction to Educational Research*	3 s.h.

2) Curriculum and Instruction Related Courses (18 semester hours required)

SPED 5802	Education of Exceptional Children	3 s.h.
COUNS 5825	Group Processes in the School	2 s.h.
EDTC 5899	Integration of Instructional Computing	3 s.h.
SPED 6981	Seminar in Special Education	4 s.h.
PSYCH 6903	Psychology of Learning	3 s.h.
SEDUC 6922	Principles of Instruction*	3 s.h.
SEDUC 6931	Secondary School Curriculum	3 s.h.
SEDUC 6934	Alternative Assessment	3 s.h.
SEDUC 6946	Supervision of Instruction	3 s.h.
SEDUC 6951	Interpersonal Communications for Educators	3 s.h.
SEDUC 6959	Law, Ethics, and Discipline for the Classroom Teacher	3 s.h.
COUNS 7006	Guidance in the Classroom	2 s.h.
SEDUC 7032	Theories of Supervision	3 s.h.
SEDUC 7036	Curriculum Development*	3 s.h.

3) Electives in Teaching Area, Foundations, Process or Thesis (6 to 9 semester hours required)

4) SEDUC 6999 Thesis (3-6 semester hours) or Comprehensive examination covering FOUND 6901, FOUND 6904, SEDUC 6922, and SEDUC 7036. Students who choose to take the comprehensive examination are encouraged to complete it early in the program. All seminars and workshops must be approved in advance by the program advisor.

Total hours required for degree: 32 s.h.

* required course

Option C: Educational Technology

The Educational Technology option recognizes that (1) the educational use of computers needs to become an integral part of the total process of teaching and learning rather than operating in isolation, (2) teachers need professional preparation in educational computing and technology in

order to teach computer/technology applications and integrate technology to support teaching and learning, and (3) all students graduating from the P-12 schools require computer/technology instruction in order to gain equal access to information.

I. Prerequisites:

In order to enter the Educational Technology option, you must:

A. Have completed the prerequisite course (or equivalent) listed below:

EDTC 3771	Technologies for Teaching	3 s.h.

B. Have basic computer competence on either Macintosh or Windows computer systems in the following areas: operating systems, word processing, a general theoretical understanding of how computers work, and electronic mail. Competency in use of word processing, database management, and spreadsheets is prerequisite to entrance to the Educational Technology option. Use of all appropriate application programs is incorporated in production of class projects throughout the computing and technology core of courses.

C. Possess a valid teaching certificate/license.

II. Courses for degree (for information concerning the technology endorsement, see the Technology Endorsement section).

1) Foundations of Education (6 semester hours required)

FOUND 6901	Philosophical Education*	3 s.h.
FOUND 6904	Educational Research*	3 s.h.

2) Curriculum, Instruction, and Related Areas**

COUNS 6900	Counseling Methods and Practice	3 s.h.
EDADM 6954	School Community Relations	3 s.h.
PSYCH 6903	Psychology of Learning	2 s.h.
SEDUC 6922	Principles of Instruction*	3 s.h.
SEDUC 6931	Secondary School Curriculum	3 s.h.
SEDUC 6936	Fundamentals of Curriculum Development*	3 s.h.
SEDUC 6946	Supervision of Instruction	3 s.h.
SEDUC 6951	Interpersonal Communications for Educators	3 s.h.
SEDUC 6959	Law and Ethics for the Classroom Teacher	3 s.h.
SEDUC 7032	Theories of Supervision	3 s.h.
SPED 6984	Major Concepts and Program Design for Students in Special Education	4 s.h.

3) Computing and Technology Core (14 semester hours required)

EDTC 6970	Educational Computing and Technology	4 s.h.
EDTC 6971	Educational Internet Use and Site Design	4 s.h.
EDTC 6972	Design Principles for Technology in Instruction	4 s.h.
EDTC 6973	Directed Field Experience in Educational Technology	2 s.h.

4) Electives will be drawn from the courses in Section 2 (Curriculum, Instruction, and Related Areas) or areas approved by the advisor.**

There is no comprehensive examination for Option C.

Total hours required for degree: 32 s.h.

* required course

** combined hours in the two areas must equal 12 semester hours

Option D: Alternative Adolescent Licensure

This option is designed to meet the needs of individuals in four professional contexts: (1) baccalaureate degreed individuals seeking a subject-area form of adolescent licensure for grades nine through twelve outside the State designations noted below; (2) baccalaureate degreed individuals who are seeking a one-year conditional teaching permit for teaching in grades seven to twelve Ohio licensure for grades seven through twelve teaching as provided for under 3319.31 of the *Ohio Revised Code*; (3) baccalaureate degreed individuals who hold a one-year conditional teaching permit and are seeking a two-year alternative license in grades seven to twelve as provided for under 3319.31 of the *Ohio Revised Code*; (4) baccalaureate degreed individuals holding a nonrenewable two-year alternative permit who are seeking a provisional license valid for teaching the subject area named in such license in grades seven through twelve as provided for under 3319.31 of the *Ohio Revised Code*.

Admission Requirements

Students choosing this option must meet all regular requirements for admission to the Master Teacher Secondary program, and additionally:

1) Hold an earned baccalaureate or advanced degree in the field of licensure being sought or in a closely related field.

2) Have a minimum of 15 semester hours of subject-area coursework directly within the licensure area

3) Have an unrecalculated cumulative grade-point average of at least 2.5 on a 4.0 scale in the 15 semester hours or more of subject-area coursework

4) Have passed a Praxis II content area examination

Courses for degree

1) Curriculum and Instruction (28 semester hours required)

PSYCH 6903	Psychology of Learning		2 s.h.
SEDUC 5800	Special Methods		4 s.h.
	Social Studies 5800S		
	Science 5800C		
	Math 5800M		
	English 5800E		
TECED 6922	Principles of Instruction	or	3 s.h.
TECED 6936	Fundamentals of Curriculum Development		3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education		3 s.h.
TERG 6924	Reading and Language Learning in the Middle & Adolescent Years	or	3 s.h.
FOUND 6902	Sociological Bases of Education		3 s.h.
TECED 6951	Interpersonal Communications for Educators	or	3 s.h.
TECED 6959	Law and Ethics for the Classroom Teacher		3 s.h.
TECED 6934	Assessment in Education		3 s.h.
EDTC 6905	Technology in Instructional Settings		3 s.h.

2) Program options

A. Candidates seeking subject-area licenses outside the Ohio conditional or Ohio alternative permit are required to take the following after passing the Praxis II PLT examination:

1) SEDUC 5842 Student Teaching Internship	5 s.h.
2) SEDUC 5842A Student Teaching Internship Seminar	1-2 s.h.

Total hours required for degree: 34-35 s.h.

B. Candidates seeking subject-area licenses who hold the Ohio conditional or Ohio alternative teaching permit are required to take the following after passing the Praxis II PLT examination:

1) SEDUC 5842A Student Teaching Internship Seminar 1-2 s.h.

2) Two additional courses from above *or* one course from above and a licensure appropriate course or graduate workshop approved by the student's advisor or the department chair such that the total hours earned is at least the 32 s.h. required for the master's degree.

Total hours required for degree: 32 s.h.

Technology Endorsement

For individuals working toward the degree, application for the technology endorsement may be made once the required courses under the Computer and Technology Core have been successfully completed, even though not all of the degree requirements have been met. Individuals seeking the technology endorsement rather than the full degree need to complete only the 14 semester hours specified under the Computer and Technology Core; however, admission to the program and satisfaction of the prerequisites are also required.

This endorsement component serves school personnel who hold a teaching certificate/license. The endorsement is applicable only to the grades specified on that teaching/certificate license. Courses included in the endorsement component were designed in keeping with the International Society for Technology in Education (ISTE) Standards for Basic Endorsement in Educational Computing and Technology Literacy.

Special Education Program

Program Description

The master's degree program in Special Education provides advanced cognitive and educational skills for those who are presently working, or expect to work, as clinical/developmental personnel serving individuals with exceptionalities, or as supervisors of special education programs.

Faculty Research Interests

Bernadette J. Angle, Ph.D., Professor
Inclusion of students with disabilities in the general education classroom; Ohio's service delivery models for serving disabled children; reading education with students with learning disabilities; strategies for assisting children with specific learning disabilities in the general education classrooms

Margaret L. Briley, Ed.D., Assistant Professor
Vision assessment for deaf children; early communicative interactions and language development for children who are deafblind; implications of both topics to increase communication and language skills in the classroom for students with multiple disabilities

Admission Requirements

See Teacher Education Programs, Admission Requirements.

Degree Requirements

General Option

A total of 36 semester hours of coursework, as indicated next, is required for the Master of Science in Education degree in Special Education. Candidates will be expected to pass a comprehensive examination on the special education core curriculum. Consult faculty advisor for details.

1) Foundations of Education: A minimum of three semester hours, including:

FOUND 6904	Introduction to Educational Research	3 s.h.
One additional graduate course in foundations of education, if approved by advisor.		3 s.h.

2) Core courses in Special Education (24 semester hours)

SPED 5858	Intervention Concepts and Strategies in Early Childhood Special Education or	2 s.h.
SPED 5871	Characteristics and Needs of Gifted Children	3 s.h.
SPED 6981	Seminar in Special Education	3 s.h.
SPED 6982	Educational Assessment in Special Education and Gifted Education	4 s.h.
SPED 6984	Major Concepts and Program Design for Students in Special Education	4 s.h.
SPED 6985	Alternative Delivery Services for Children in Special Education	3 s.h.
SPED 6986	Severe Behavioral Disabilities	3 s.h.
SPED 7077	Leadership in Special Education and Gifted Education	3 s.h.

3) Cognate Areas: Selected by student and advisor. 6–8 s.h.

4) Electives: A minimum of three semester hours approved by the student's advisor; may constitute an extension of the first, or the selection of a second, cognate area.

Gifted and Talented Education Specialist Option

The Gifted/Talented option prepares students to teach gifted and talented children as well as to develop advanced cognitive and leadership skills appropriate to the specialization area. Candidates must meet the general education requirements for graduate programs in the College of Education. Those completing the program will be eligible for an Ohio licensure in Gifted Education.

Successful completion of a comprehensive examination in the area of specialization is required before graduation.

1) Core Curriculum (22 semester hours)

SPED 5802	Education of Exceptional Children and Youth	3 s.h.
SPED 5871	Characteristics and Needs of Gifted Children	3 s.h.
SPED 5878	Teaching Gifted/Talented Students	4 s.h.
COUNS 5879	Consultation with Gifted/Talented Students and Their Families	3 s.h.
SPED 6982	Educational Assessment in Gifted and Special Education	3 s.h.
SPED 7040	Field Experience in Gifted and Talented Education 3 s.h.	
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.

2) Foundations (6 semester hours)

FOUND 6901	Philosophical Analysis of Education	3 s.h.
FOUND 6902	Sociology of Education	3 s.h.
FOUND 6904	Introduction to Educational Research (required)	3 s.h.
FOUND 6905	Educational Challenges in Historical Perspective	3 s.h.

3) Cognate Area (minimum of 6 semester hours).

Course work may be selected with advisor's approval. Please note that a cognate area is not intended to qualify a person for licensure. In some instances, however, students may be able to expand work in a cognate area to meet the requirements for licensure (or validation of an existing

licensure) in that area.

4) Electives (3 semester hours) with advisor's approval.

Total hours required for degree: 37 semester hours

Early Childhood Special Education (ECSE) Option

The ECSE option prepares students to teach young children with special needs (disabilities and gifted) as well as to develop cognitive and leadership skills appropriate to the specialization area. In addition to the general admission requirements for graduate programs in the College of Education, candidates must complete special admission requirements as follows:

1) A standard Pre-Kindergarten teaching certificate, an Elementary Education certificate with pre-K validation, or a Home Economics certificate with pre-K validation, plus PSYCH 3755 and SPED 5802 (or SPED 2631); or an early childhood license.

2) A Special Teaching Certificate for Education of the Handicapped plus PSYCH 3755 and an advisor-approved course in the Early Childhood Education curriculum; or an intervention specialist license.

Students with minor deficiencies may be admitted as provisional graduate students and should request a transfer to regular status as soon as the deficiencies are met.

The ECSE option requires 36 semester hours of specified graduate study. At the time of entry into the program, students are required to demonstrate/supply evidence of experience with typically developing preschool children. When the student does not have such experience, an additional six semester hours of field experience will be required. All field hours are in addition to the required coursework, including core, foundations, cognate, and elective hours. Those completing the program will be eligible for an Ohio licensure as an Early Intervention Specialist. Successful completion of a comprehensive examination in the area of specialization is required before graduation.

1) Core Curriculum (18 semester hours)

SPED 5858	Intervention Concepts and Strategies in Early Childhood Special Education	2 s.h.
SPED 5864	Service Coordination, Collaboration and Consultation Skills for the Intervention Specialist	4 s.h.
SPED 6991	Referral and Assessment in Early Childhood Special Education	3 s.h.
SPED 6992	Teaching Methods in Early Childhood Special Education	3 s.h.
SPED 6993	Health and Related Issues in Early Childhood	2 s.h.
SPED 6994	Field Experiences in Early Childhood Special Education	4–8 s.h.

2) Foundations (6 semester hours)

FOUND 6901	Philosophical Analysis of Education	3 s.h.
FOUND 6902	Sociology of Education	3 s.h.
FOUND 6904	Introduction to Educational Research (required)	3 s.h.
FOUND 6905	Educational Challenges in Historical Perspective	3 s.h.
PSYCH 6903	Psychology of Learning	2 s.h.
PYSCH 6906	Advanced Child Development	2 s.h.

3) Cognate Areas (minimum of 6 semester hours).

Course work may be selected with advisor's approval. Please note that a cognate area is not intended to qualify a person for licensure. In some instances, however, students may be able to

expand the work in a cognate area to meet the requirements for licensure (or validation of an existing licensure) in that area.

4) Electives (6 semester hours) selected with advisor's approval.

Total hours required for degree: 36 s.h.

Autism and related Disabilities Option

The Moderate/Intense Autism and Related Disabilities option prepares candidates to teach students with autism and related disabilities as well as to develop advanced systematic instruction in life skills areas of learning and leadership skills appropriate to the area of specialization. Teachers who are currently licensed in special education, mild/moderate, or general education will receive Ohio licensure in the area of Moderate/Intense Intervention Specialist with the completion of core and additional option requirements (32 s.h.), as well as successfully passing a comprehensive examination.

During a summer internship, students seeking a master's degree are required to demonstrate appropriate data-based assessment, teaching and learning standards of knowledge, skills and dispositions, as specified by the National Council for Accreditation of Teacher Education and the Council for Exceptional Children

1) Core Requirements (13 semester hours)

FOUND 6904	Introduction to Educational Research	3 s.h.
SPED 6984	Major Concepts and Program Design for Students in Special Education	4 s.h.
SPED 6985	Alternative Delivery Services for Children in Special Education	3 s.h.
SPED 7077	Leadership in Special Education and Gifted Education	3 s.h.

2) Additional Option Requirements (19 semester hours)

SPED 5810	Introduction to Sign Language	3 s.h.
SPED 6996	Teaching Strategies/Autism	4 s.h.
SPED 6998	AAC Strategies	3 s.h.
SPED 6999	Field Experiences Autism/Related Disorders	6 s.h.
PSYCH 6960	Fundamentals of Applied Behavior Analysis o r	3 s.h.
PSYCH 6990	Seminar in Psychology: Topics in Asperger's Syndrome	3 s.h.

Total hours required for degree: 32 s.h.

Master of Science in Engineering

The College of Engineering and Technology offers a Graduate Program leading to the Master of Science degree in Engineering. Admission to any of the five engineering options (Chemical, Civil, Electrical and Computer, Industrial, and Mechanical Engineering) is granted to qualified applicants who have been judged to have a good chance of succeeding in the program and obtaining a graduate degree. Several technical concentration areas are available in each option. Students may select a thesis, non-thesis, management, or self-directed curriculum plan. Additionally, early placement plans for the Ph.D. or Doctorate degrees in engineering are available. These opportunities serve the practicing engineer as well as the student who wants to pursue advanced graduate study and research. Courses offered on-campus are usually scheduled during the evenings. The educational opportunities within the college include traditional classroom and laboratory courses, seminars, and research projects guided by members of the graduate faculty.

Teaching or Research Assistantship positions are available to qualified applicants upon review and recommendation by the home department. In addition, the School of Graduate Studies and Research may offer scholarships or grants-in-aid to qualified students. Students desiring assistantships or scholarships must submit an application to the School of Graduate Studies and Research by the specified deadlines.

This description explains admission and degree requirements, advising, and program plans. Information concerning course scheduling and prospective course offerings can be obtained from the College Graduate Studies web site, or the engineering department. Further assistance with any graduate matter may be obtained by telephone, e-mail, letter, or personal visit to the program option coordinator in the student's area of interest.

Admission Requirements

For Degree Programs

In addition to the general requirements for admission to the School of Graduate Studies and Research, the applicant must show an unrecalculated grade point average in undergraduate study of at least 2.75 (on a 4.0 scale) in their major course work. Applicants with lesser qualifications may be granted provisional graduate student status based on evaluation of their undergraduate records, scholastic records, and professional qualifications.

For Nondegree Admission

An applicant whose academic record does not meet the required standards for admission to a Master of Science degree program may apply for nondegree admission to the School of Graduate Studies and Research. Upon admission to the graduate program under nondegree status, the student will be given an opportunity to demonstrate his/her capability to successfully complete 6–9 semester hours with a 3.0 (on a 4.0 scale) or higher. Upon successful completion, the student may apply for admission to a specific engineering degree option to continue his/her study for the Master of Science in Engineering.

Early Admission for Eligible Youngstown State University Undergraduates

Undergraduate students at YSU who have no more than six semester hours remaining to complete their bachelor's degree may apply for admission to a graduate program of their interest. If the applicant is admitted to the graduate program, he or she may register in the graduate school to begin the graduate program while simultaneously completing baccalaureate work. Additionally, this option may make the student eligible for an assistantship or for scholarship support. For more information, consult the College Graduate Program Director.

Advisement

The College of Engineering and Technology requires an advisor for each individual graduate student. An advisor is recommended by the Graduate Program Director and assigned by the School of Graduate Studies and Research upon acceptance.

Degree Requirements

The Master of Science in Engineering may be characterized as being both career oriented and self-directed and offers flexibility to accommodate the needs of every engineering graduate student. Graduate students enrolled in any of the Engineering graduate programs must complete 30 s.h. for the thesis plan, 33 s.h. for the non-thesis plan, or 36 s.h. for the management emphasis plan as follows:

Core Requirements

Every graduate student is required to complete a minimum number (depending on the plan selected) of the following engineering core courses. The core courses have been selected to provide each student with basic tools needed to function effectively in the professional work area.

ENGR 6920	Project Planning and Management	3 s.h.
ENGR 6921	Engineering Statistics	3 s.h.
ENGR 6922	Engineering Systems Analysis	3 s.h.
ENGR 6923	Information Technology Tools for Engineers	3 s.h.
ENGR 6924	Computer Based Tools for Engineers	3 s.h.
ENGR 6925	Applied Environmental Management	3 s.h.

Program Plans

Non-Thesis Plan

A total of 33 s.h. of course work is required for this plan. Graduate students who choose this option should select an area of concentration from the list below. Courses for each area are listed in the description of the home department's program option. In addition to 12 s.h. of core courses, every student enrolled in this option is required to complete 15 s.h. of area concentration courses, a 3 s.h. elective course, and a 3 s.h. special project course. The elective course may be selected to enhance the chosen technical concentration, or to allow the student to add breadth to his/her background by taking a course in another area. A graduate student enrolled in a special project course will be required to defend the results of his/her project by giving a presentation to the College of Engineering and Technology faculty and students. For further information pertaining to this plan, the graduate student may contact the Graduate Program Option Coordinator of his/her home department. Suggested concentration areas include:

General Civil & Environmental or Electrical & Computer Engineering
General Industrial/Manufacturing or Mechanical Engineering
General Chemical Engineering
Solid/Structural Mechanics
Environmental Engineering/Science
Engineering Management
Energy/Power Systems/Power Electronics
Control Systems

Thesis Plan

Graduate students choosing this option are required to complete 30 s.h. of graduate course work. This generally consists of 9 s.h. of core courses, 15 s.h. of technical concentration courses, and 6 s.h. of thesis. This plan is strongly recommended for candidates who wish to continue their graduate studies beyond the master's degree. Recent baccalaureate degree students are also encouraged to pursue the thesis plan. The thesis provides first-hand experience with experimental design, literature searches, research methodology and technical report writing and can lead to a higher level of expertise in the chosen area of specialization.

Management Plan

Students who have been in the work arena and are moving into an engineering management role may wish to choose this plan. A total of 36 s.h. of course work is required for this plan. In addition to 12 s.h. of core courses, a series of engineering and business courses totaling 21 s.h. are recommended in the description of the home department's graduate program option. The student must also complete a 3 s.h. special project course. For more information pertaining to this plan, contact the Graduate Program Option Coordinator of the home department.

Self-Directed Plan

Although a series of technical concentration areas has been suggested, a student may wish to develop his/her own plan of study. A series of courses may be selected to meet a specific professional goal/objective. The student must meet with an advisor to develop a self-directed curriculum plan. A total of 33 s.h. of course work is required for a non-thesis, and 30 s.h. for a thesis plan. Students pursuing the non-thesis plan must complete a 3 s.h. special project course. For more information pertaining to this option, refer to the home department's graduate program description or contact the home department Graduate Program Option Coordinator.

Early Placement Program for the Ph.D. in Engineering

Early placement programs for the Ph.D. degree in Engineering at the University of Akron and the Doctorate degree in Engineering at the Cleveland State University are also available. Students accepted in either program are required to complete a minimum of 60 s.h. beyond the M.S. degree. Students enrolled in either program can complete up to 12 s.h. of course work and 12 s.h. of dissertation work at Youngstown State University. In addition, students may select their co-advisor from the engineering faculty at Youngstown State University. Students interested in any of these options should select the thesis plan for their MS program. For further assistance regarding these options and to initiate a letter of interest, contact the College of Engineering and Technology Graduate Program option coordinator in the student's area of interest.

Civil/Environmental & Chemical Engineering

Option Coordinator: Scott C. Martin
2445 Moser Hall
(330) 941-3026
scmartin@ysu.edu

Option Description

Civil and chemical engineers apply scientific and engineering knowledge to protect and improve the public health and welfare through the intelligent shaping of our environment. Engineers in these disciplines face exciting global opportunities to participate in the development and management of safe, cost-effective infrastructure and industries. Graduate study in Civil and Chemical Engineering provides students with the scientific and professional knowledge necessary for their field of interest and develops student abilities to formulate solutions to new and complex problems in the context of current environmental, social, and economic considerations. These objectives are accomplished by flexible plans of study designed to meet the needs of the program's graduate students. Graduates find fulfilling careers in private industry, private consulting practice, and governmental service and are prepared for doctoral-level work leading to research/teaching careers. The program includes thesis, non-thesis, and engineering management options and offers opportunities for advanced study in two main areas—environmental engineering or structural/transportation. Students with a chemical engineering background may pursue the environmental engineering option or develop a self-directed plan with a chemical engineering emphasis. Cooperative Ph.D. programs with The University of Akron and Cleveland State University are also available, allowing students to begin doctoral study at YSU.

Facilities for advanced study and research are located in the Engineering Science Building, which houses a variety of well-equipped laboratories. These include the Structures and Materials Lab, Hydraulics/Fluid Mechanics Lab, Environmental Engineering Lab and Geotechnical Engineering Lab. In addition, the college Computer Lab provides access to numerous Pentium PCs with high-speed Internet connections.

Faculty Research Interests

Javed Alam, Ph.D., Professor
Structural mechanics, finite element analysis; fracture mechanics; computer applications in civil engineering - neural networks, expert systems, and computer visualization

Scott C. Martin, Ph.D., Professor
Water quality modeling; watershed management; pollutant-sediment interactions; aquatic chemistry

Douglas Price, Ph.D., Assistant Professor
Energy from renewable resources; catalytic fluidized bed simulation; injection molding; Dynamic distillation column modeling

Degree Requirements

At the time of initial enrollment, the student will select a program plan (thesis, non-thesis, or management) and technical concentration area (environmental engineering or structural/transportation). Alternatively, a student may choose the self-directed option, which involves tailoring a program to meet specific career goals. The requirements for each option are listed in the general description of the Master of Science in Engineering program. Lists of required courses and possible electives for each plan may be obtained form the Graduate Program Director.

In cooperation with an assigned faculty advisor, each student will establish a set of academic goals and desired outcomes, and a coursework plan to meet those objectives. Upon completion of the graduate program, all students will complete either a written or an oral assessment of the effectiveness of the program in meeting their established goals and outcomes.

Thesis students who have registered for all required thesis hours and have completed all course requirements, but have not finished the thesis, are required to maintain current student status if they expect to utilize any University service (e.g. parking, computers, library, advisors assistance, thesis defense, and so forth) This can normally be accomplished by registering for at least one hour of CEEGR 6992.

Electrical and Computer Engineering

Option Coordinator: Jalal Jalali
2055 Moser Hall
(330) 941-3012

Option Description

The Department of Electrical and Computer Engineering provides opportunities for post-baccalaureate study toward the Master of Science in Engineering. These opportunities serve the practicing engineer as well as the student who wants to pursue advanced graduate study and research. Thesis, non-thesis, and management plans are available.

Areas of study include control systems, digital systems, computer engineering, communications, computer-aided design, device and circuit modeling, solid-state devices, sensors, power systems, power electronics, electromagnetic fields, electromechanical systems, and system analysis and design. The student is encouraged to interact with the faculty and explore these opportunities.

Faculty Research Interests

Robert H. Foulkes, Jr., Ph.D., Professor
Linear systems theory; control systems analysis and design; digital control systems

Jalal Jalali, Ph.D., Professor and Chair
Power systems; power electronics; electromagnetic fields

Faramarz Mossayebi, Ph.D., Assistant Professor
Control systems; digital signal processing; digital circuits; nonlinear systems

Advisement

The Department of Electrical and Computer Engineering requires an advisor for each graduate student. An advisor is assigned initially by the Graduate School upon acceptance. It is the responsibility of the student to initiate contact with his/her advisor, and this should be done as soon as possible before registering for the first time and at the time of course registration each semester. Every graduate student is responsible to complete an option plan form signed by the student, academic advisor, and the Graduate Option Coordinator. This form must be completed within the first semester of the student's program. Courses taken without the advisor's permission may not fulfill the degree requirements. The student may seek another advisor in case of

interest changes. Likewise the student-advisor relationship may be terminated at the advisor's discretion. The Option Coordinator is available to discuss these and other issues as appropriate.

Degree Requirements

The basic degree requirements are described under the program description for the Master of Science in Engineering. The Department's three plans of study leading to a Master of Science in Engineering degree are designed to accommodate the needs of every graduate student.

A graduate student who transfers from another accredited institution has the opportunity to transfer up to nine semester hours of his/her graduate course work to the graduate program. The transferred courses must be approved by the academic advisor before or during the first semester in which the graduate student begins the graduate program. Graduate students are not allowed to count more than two 5800-level (swing) courses in their program of study. Any 5800-level course must be approved by the academic advisor.

Additional information regarding the program, may be requested from the School of Graduate Studies and Research or the Program Option Coordinator.

Industrial and Systems Engineering

Option Coordinator: Hojjat Mehri
2500 Moser Hall
(330) 941-3023
hmehri@cc.ysu.edu

Option Description

The Industrial Engineering program option provides opportunities for interdisciplinary graduate studies toward the Master of Science in Engineering with specialization in Engineering Management or Industrial/Manufacturing Systems Engineering. Students can also pursue a self-directed plan of study focused on specialized areas of Industrial and Systems Engineering, such as Operations Research.

All study plans are interdisciplinary and include some course work from outside the department. They are designed to serve practicing engineers, as well as those students who want to pursue advanced graduate studies and research beyond the Master of Science in Engineering.

Faculty Research Interests

Martin Cala, Ph.D., Professor
Human factors; quality and productivity

Wade C. Driscoll, Ph.D., Professor
Operations research; simulation; distance learning

Hojjat Mehri, Ph.D., Professor
Facilities design; manufacturing systems; engineering management

Special Admission Requirements

A minimum unrecalculated undergraduate grade point average of 3.0 (on a 4.0 scale) is required for all applicants with a non-technical undergraduate degree. If accepted, these students are expected to satisfactorily complete a number of undergraduate deficiency courses before they are eligible to take certain graduate courses. The number and types of deficiency courses will be determined based on the student's previous academic programs/record. Students who are required to complete more than three deficiency courses at the undergraduate level will have admission deferred until deficiencies are complete. Costs for undergraduate deficiency courses are the student's responsibility.

Degree Requirements

The basic requirements are those already stated under the general program description for the Master of Science in Engineering. At the time of initial enrollment, the student will select a plan (thesis or non-thesis) and a concentration area (Engineering Management, Industrial and Systems Engineering, or Manufacturing Engineering.) Alternatively, a student may choose the self-directed plan, which involves tailoring a program to meet specific career goals. In cooperation with an assigned faculty advisor, a special program of study will be developed for the student. The objective is to ensure meeting the student's academic goals and desired outcomes.

Thesis students who have registered for all required thesis hours and have completed all course requirements but have not finished the thesis are required to maintain current student status if they expect to receive/utilize University services (i.e., parking, computer, library, advisor assistance, thesis defense, committee action, and so forth). This can normally be accomplished by registering for at least one hour of ISEGR 6990.

Advising

For each graduate student an advisor is recommended by the Program Director and assigned by the School of Graduate Studies and Research upon acceptance. It is the responsibility of the student to initiate contact with his/her advisor, and this should be done as soon as possible before registering for the first time and at the time of course registration each semester. ***Courses taken without the permission of the advisor may not be used to meet the degree requirements.*** Every graduate student is responsible to determine an area of specialization by signing a special form designed for this purpose. A student may change his/her area of concentration or program of study in consultation with his/her advisor.

Mechanical Engineering

Option Coordinator: H.W. Shawn Kim
2515 Moser Hall
(330) 941-3015
hwkim@ysu.edu

Option Description

The Program option in Mechanical Engineering offers the Master of Science in Engineering degree with specialization within the general mechanical engineering disciplines. Thesis, nonthesis,

or management plans are available. The department also offers students an area of concentration for interdisciplinary graduate studies with specialization in Solid/Structural Mechanics, Control Systems, and Energy/Power Systems. A student may also develop a self-directed/career-oriented program of study.

The technical concentration plan is for students who seek to deepen their theoretical knowledge and strengthen their ability to solve more advanced engineering problems, while the management plan is for those who wish to include managerial training in their program of preparation. The three specialized areas of interdisciplinary studies allow students to focus on specialized areas that require interdisciplinary cooperation among the Departments of Civil Engineering, Electrical Engineering, and Chemical Engineering.

The Department of Mechanical Engineering has excellent computer and laboratory facilities that provide for the following design and research capabilities: solid modeling; FEA in stress analysis; structural dynamics, and heat transfer; experimental stress analysis; vibrations and noise control; computational and experimental heat transfer and fluid dynamics; and advanced machine design.

Faculty Research Interests

Hyun W. Kim, Ph.D., P.E., Professor and Chair
Heat transfer; alternative energy; fluid power

Ganesh Kudav, Ph.D., P.E., Professor
Fluid dynamics; energy conversion and analysis; hydraulics

Robert A. McCoy, D.Engr., Professor
Failure analysis of materials

Hazel M. Pierson, M.S., Instructors
Control; fluid thermal sciences; CAD; modeling

Elvin B. Shields, Ph.D., P.E., Associate Professor
Flow-induced vibration; advanced fracture mechanics

Daniel H. Suchora, Ph.D., P.E., Professor
Kinematics and dynamics of machines; finite element analysis

Degree Requirements

The Department of Mechanical and Industrial Engineering provides opportunities for post-baccalaureate study toward the Master of Science in Engineering. Students exercising the thesis option are required to complete 24 semester hours of course work, and at least six semester hours of thesis. Students choosing the nonthesis option will be required to complete 30 semester hours of course work and complete MECH 6992-Graduate Project. A topic for the graduate project may be selected that is mutually of interest to the student, faculty of engineering school, and/or engineering industry. The course work must include nine semester hours of engineering core courses for the thesis option or 12 semester hours for non-thesis option. The basic degree requirements are described under the general program description for the Master of Science in Engineering. However, for the technical concentration with management emphasis 12 semester hours of core courses, 12 semester hours of mechanical engineering courses, nine semester hours of business courses, and three semester hours of special topics are required. The student, at the time of initial enrollment, will be assigned an academic advisor and, with the help of his/her

advisor, shall develop a study plan that includes goals and desired outcomes, and course work plan. The plan may be revised, if necessary, as the study progresses.

Master of Science in Nursing

Clinical Options:

Clinical Nurse Specialist - Chronic Illness Care
Clinical Nurse Specialist - School Nurse
Nurse Anesthetist

Program Director: Sharon P. Shipton
2148 Cushwa Hall
(330) 941-1792
spshipton@ysu.edu

Option Coordinator
Clinical Nurse Specialist-
School Nurse: Nancy W. Mosca
3062 Cushwa Hall
(330) 941-1793
nwmosca@ysu.edu

Option Coordinator
Nurse Anesthetist: Patricia Hoyson
3087 Cushwa Hall
(330) 941-3087
plhoyson@ysu.edu

Program Description

The Master of Science in Nursing Program is designed for baccalaureate prepared nurses who have strong undergraduate foundation in critical thinking, decision-making, and nursing practice. The program consists of three options, with specialization in clinical nursing for chronic illness care, nurse anesthesia, and school nursing. The graduate core of the curriculum centers on professional nursing issues, role development, nursing science, and research methods for building nursing knowledge. The advanced practice core focuses on the delivery of comprehensive care to individuals and groups experiencing chronic illness. The nurse anesthetist core focuses on the administration of anesthesia to individuals requiring surgical and non-surgical diagnostic procedures. The school nurse core focuses on delivery of comprehensive care to individuals in the school environment. *It is anticipated that the school nurse option will admit its first students Spring Semester 2005.*

Accreditation

The Master of Science in Nursing – Chronic Illness Care option is fully accredited by the National League for Nursing Accrediting Commission (NLNAC).

The Master of Science in Nursing – Nurse Anesthetist option is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA).

All graduates of the program are prepared to:

Synthesize research findings for practice utilization; utilize appropriate theories to provide high quality nursing care; comprehend the Health Care Delivery System through utilization of appropriate theories; and provide cost-effective, ethical, and quality management of health care resources in diverse settings.

Graduates of the Clinical Nurse Specialist - Chronic Illness Care option are prepared to:

Utilize advanced practice nursing roles within the Health Care Delivery System; incorporate a variety of theories from nursing and related fields into nursing practice and management roles; and analyze social issues related to the Health Care Delivery System and Advanced Nursing Practice. Upon successful completion of the degree program, graduates are eligible to sit for several national certification exams. Once certified, CNSs must apply for a Certificate of Authority to practice as an Advanced Practice Nurse in the State of Ohio or abide by the laws of the state in which they intend to practice.

Graduates of the Clinical Nurse Specialist - School Nurse option are prepared to:

Work in the clinical practice specialty of school health utilizing advance practice nursing roles. Employment of an advanced practice nurse enables a school district to offer a broader range of health services and school health programming beyond core requirements.

Graduates of the Nurse Anesthetist option are prepared to:

Administer anesthesia in a variety of practice settings to all patients needing anesthesia care and utilize advanced practice nursing roles within the Health Care Delivery System.

The Master of Science in Nursing in Nurse Anesthesia is a cooperative program between Youngstown State University and St. Elizabeth Health Center School for Nurse Anesthetists, Inc. All courses are taught by YSU Graduate Faculty. Humility of Mary Health Partners supports the program by providing clinical and other resources at St. Elizabeth Health Center. Students gain experience in the use of many anesthetic agents and techniques and are supervised by Certified Registered Nurse Anesthetists (CRNAs) and Staff Anesthesiologists from Bel-Park Anesthesia Associates, Inc. Upon successful completion of the degree program, graduates are eligible to sit for the National Certification Exam by the Council on Certification of Nurse Anesthetists. Once certified, CRNAs must apply for a Certificate of Authority to practice as an Advanced Practice Nurse in the State of Ohio or abide by the laws of the state in which they intend to practice.

Acceptance into the YSU Master of Science in Nursing Program is contingent upon acceptance into the St. Elizabeth Health Center School for Nurse Anesthetists, Inc. For further information, please contact:

Beverly A. Rodgers, CRNA, M.Ed.
Program Director
St. Elizabeth Health Center School for Nurse Anesthetists, Inc.
(330) 480-3444
brodgers@belpark.net

Faculty Research Interests

Louise A. Aurilio, Ph.D., R.N., Assistant Professor
Women's health; physical activity; chronic illness risk; quality of life; diabetes pregnancy

Dorcas C. Fitzgerald, D.N.Sc., R.N., C.N.S., Professor and R.N. Track Coordinator
Gerontology; dementia; health benefits and risks

Patricia Hoyson, Ph.D., R.N., C.N.S., C.D.E., Associate Professor, Chair, and MSN - Nurse Anesthetist Option Coordinator
Diabetes; critical thinking; patient education; nursing education

Patricia A. McCarthy, Ph.D., R.N., C.N.S., Professor
Program planning and evaluation; critical thinking; clinical nursing education

Nancy Mosca, Ph.D., R.N., Professor
School nursing; school health; child obesity; autism

Sharon L. Phillips, Ph.D., R.N., Associate Professor

Pamela M. Schuster, Ph.D., R.N., Professor
Clinical nursing research; research in nursing education

Sharon P. Shipton, Ph.D., R.N., C.N.S., Professor and MSN Program Director
Stress and coping; nursing education; qualitative research methodologies; pharmacology

Admission Requirements

In addition to the minimum School of Graduate Studies and Research admission requirements, all applicants must meet the following requirements:

a) Satisfactory completion of undergraduate courses in health assessment, statistics, and research methods;

b) Hold a BSN degree from an accredited program;

c) Eligibility of Ohio licensure as a registered nurse;

d) Verification of current CPR certification, current immunizations, or malpractice insurance (all to be maintained while in the program);

e) An official report of Graduate Record Examination (General Test) scores completed within the past five years is required only of Clinical Nurse Specialist applicants with an unrecalculated cumulative grade-point average of less than 3.0 on a 4.0 scale and all Nurse Anesthetist applicants;

f) Official transcripts for each college or institution of higher learning attended (other than YSU);

g) Three letters of reference, one each from a faculty member, an employer, and a colleague; and

h) A 300-word essay (Letter of Intent) stating one's professional goals and how graduate education in nursing will help fulfill said goals.

For additional admission requirements specific to the Nurse Anesthetist option, please contact Beverly A. Rodgers at (330) 480-3444 or brodgers@belpark.net.

Regular admission requires an unrecalculated cumulative undergraduate grade-point average of at least 3.0 (on a 4.0 scale). Submission of an official report of the Graduate Record Examination scores completed within the past five years is required only of Clinical Nurse Specialist applicants with an unrecalculated cumulative grade-point average of less than 3.0 on a 4.0 scale and all Nurse Anesthetist applicants. Students seeking provisional admission must follow the requirements listed in the *Graduate Bulletin* under **Provisional Admission.**

Degree Requirements

The areas of course work in the MSN Program include Core Courses (15 s.h.), the Clinical Nurse Specialist -Chronic Illness Care option (27 s.h.), the Clinical Nurse Specialist -School Nurse option (30 s.h.), and the Nurse Anesthetist option (34 s.h.).

The breakdown of these course requirements is as follows:

Core Courses (15 semester hours)

NURSG 6900	Professional Issues in Nursing	3 s.h.
NURSG 6901	Nursing Science and Research I	3 s.h.
NURSG 6902	Advanced Pathophysiology	3 s.h.
NURSG 6906	Advanced Statistics	2 s.h.
NURSG 7002	Nursing Science and Research II	2 s.h.
NURSG 7005	Research Practicum	2 s.h.

Clinical Nurse Specialist -Chronic Illness Care Option (27 semester hours)

NURSG 6903	Advanced Pharmacology	3 s.h.
NURSG 6904	Advanced Health Assessment	3 s.h.
NURSG 6905	Health Assessment Practicum	5 s.h.
NURSG 7000	Chronic Illness Care	3 s.h.
NURSG 7001	Chronic Illness Care Practicum	5 s.h.
NURSG 7003	Role Development	3 s.h.
NURSG 7004	Role Development Practicum	5 s.h.

Clinical Nurse Specialist-School Nurse Option (30 semester hours)

FOUND 6902	Sociological Bases of Education	3 s.h.
SPED 5802	Education of Exceptional Children	3 s.h.
NURSG 6907	Health Assessment of School Children	3 s.h.
NURSG 6908	Health Assessment of School Children Practicum	5 s.h.
NURSG 7014	Health Management in Schools	3 s.h.
NURSG 7015	Health Management in Schools Practicum	5 s.h.
NURSG 7016	School Nurse Role	3 s.h.
NURSG 7017	School Nurse Role Practicum	5 s.h.

Nurse Anesthetist Option (34 semester hours)

NURSG 6910	Professional Aspects of Nurse Anesthesia	3 s.h.
NURSG 6911	Pharmacology 1	3 s.h.
NURSG 6912	Pharmacology 2	3 s.h.
NURSG 6913	Chemistry and Medical Physics in Anesthesia Practice	3 s.h.
NURSG 6914	Human Anatomy, Physiology, and Pathophysiology 1	3 s.h.
NURSG 6916	Anesthesia Principles 1	2 s.h.
NURSG 7010	Human Anatomy, Physiology, and Pathophysiology 2	3 s.h.
NURSG 7011	Anesthesia Principles 2	6 s.h.
NURSG 7012	Anesthesia Principles 3	8 s.h.

The total semester hours required for the Nurse Anesthetist option are greater than the usual hour requirements for other Masters Programs at YSU. The increased number of hours is necessary in order to meet the COA requirements for a nurse anesthesia program.

Master of Social Work

Program Director: Dennis Morawski
3033 Cushwa Hall
(330) 941-1690
dpmorawski@ysu.edu

Program Description

The Master of Social Work program will prepare graduates for advanced social work practice with disenfranchised clients. The organizing framework for the M.S.W. program's curriculum is the strengths-based empowerment approach. Major components of this approach emphasize helping individuals, families, and communities to recognize and utilize their capacities; gain awareness of available options; understand the barriers and obstacles they may face; reinforce their hopes and aspirations; and integrate internal and external resources to improve the quality of their lives. Concentration areas for the M.S.W. program will focus on 1) advanced direct practice with individuals, families, and groups; and 2) social work administration directed at macro-level practice. Substantive areas for both concentrations will be child and family, mental health, and aging.

A critical purpose of the M.S.W. program is to develop competent, ethical, and effective professionals who will be able to utilize advanced knowledge, skills and values to promote social justice and provide leadership in the expansion of service delivery systems in a diverse society. The M.S.W. program will enable students to integrate knowledge, values and skills of the social work profession by the program's curriculum design, including both academic coursework and the field placement experience.

Faculty Research Interests

Shirley Keller, Ph.D., Associate Professor
Evaluation outcome measurements; program evaluation; health care issues

Dennis Morawski, Ph.D., Associate Professor
Community mental health; welfare reform; groupwork; volunteerism

Joseph L. Mosca, Ph.D., Professor and Chair
Curriculum development; diversity and student learning; welfare reform

Thelma Silver, Ph.D. Assistant Professor
Community mental health; mental health recovery; crisis intervention; groupwork

Lee R. Slivinske, Ph.D., Professor
Issues of aging; service utilization by the elderly; functional disabilities

Admission Requirements

All applicants to the M.S.W. program are encouraged to carefully review the admission criteria listed below, as they exceed the minimum standards established by the School of Graduate Studies and Research. Admission to the program is a competitive process. Meeting minimum

criteria does not guarantee admission. Every applicant will be evaluated by the Social Work Department's Graduate Admissions Committee to assure that they have met standards consistent with the M.S.W. program's admission policies. In addition to completing the admission application for the School of Graduate Studies and Research, prospective students are also expected to complete an application form and personal statement specific to the M.S.W. program. Application forms and criteria for admission can be obtained by contacting the Department of Social Work or the School of Graduate Studies and Research.

Admission to the M.S.W. program is cohort-based. Students may enter only during the fall semester.

Admission to the M.S.W. program is based on the following criteria that allow evaluation of the student's potential to succeed in graduate-level social work education, as well as an assessment of their ability to engage in ethical and competent social work practice in a diverse society. Applicants to the M.S.W. program must have completed a baccalaureate degree from an accredited college or university. Preference will be given to individuals holding a B.S.W. degree or a B.A. in Social Work from an undergraduate social work program that is accredited by the Council on Social Work Education. Strong consideration will be given to persons holding a bachelor's degree with at least 30 semester hours (45 quarter hours) of social science content broadly distributed beyond the introductory level in sociology, psychology, political science, economics, anthropology or human development and at least one course in human biology, or equivalent content that provides an understanding of the biological processes that influence human functioning.

In addition, the following requirements must be met:

- An unrecalculated cumulative grade point average of 3.0 or above (on a 4.0 scale) in undergraduate coursework;
- Work or volunteer experience related to preparation for professional social work practice;
- The Miller Analogies Test (MAT) or Graduate Record Examination (GRE) with a preferred score at the fiftieth percentile or above;
- Basic computer skills necessary to succeed in graduate education;
- Three letters of recommendation completed on official forms. Recommendations should include: one academic source, one professional source, and one additional reference from either of the above;
- A personal statement reflecting how completion of the M.S.W. will impact upon the student's professional goals and objectives; and
- A personal interview and/or additional information as requested by the program's admission committee.

Admission is based on evidence of a combination of personal qualities and values that are necessary for the professional practice of social work, including strong analytical and communication skills, a personal commitment to social justice and empowerment of individuals, and service to vulnerable and disenfranchised groups as evidenced through work experience, the personal statement, professional recommendations, and the admissions interview, if conducted.

Individuals holding the M.S.W. degree who wish to take coursework for the purpose of continuing education and/or expansion of professional competencies should contact the Department of Social Work. The Social Work Department Chairperson or his/her designee must approve

any graduate social work course taken by a student who is not formally admitted to the M.S.W. program.

Degree Requirements

A minimum of 60 hours is required for completion of the Master of Social Work degree. This includes completion of coursework in both foundation and concentration content areas. Foundation content is comprised of eight courses and a field practicum with an emphasis on the following areas: social work values and ethics; diversity, populations at risk, and social and economic justice; human behavior in the social environment; social welfare policy and services; social work practice; research; and business skills for social workers.

Students must also complete one of two concentration areas consisting of six courses and the field practicum with an emphasis on knowledge, skills, and values for either advanced direct or administrative practice. Substantive content is infused into each of the above concentrations allowing students to choose from the following areas of social work practice: children and families, mental health, or aging.

The first year field practicum is designed to provide the student with learning experiences that promote the achievement of foundation curriculum objectives and an advanced generalist form of practice. The second year field practicum provides assignments essential for fulfilling learning objectives of advanced direct practice or social work administration. Second year field assignments will also place greater emphasis on learning objectives consistent with the student's substantive focus which may include child and family, mental health or aging.

The foundation field placement is taken in two consecutive semesters for a total of six credit hours per year. Students engage in fieldwork activities for two days a week over two semesters of 30 weeks (480 hours). Advanced-level students' field placement activities occur in three days for two semester periods totaling 30 weeks (720 hours).

Course Outline

First Year – First Semester

SCWK 6900	Human Behavior and the Social Environment I	3 s.h.
SCWK 6901	Oppressed Populations	3 s.h.
SCWK 6902	Social Welfare Policy and Program Analysis	3 s.h.
SCWK 6903	Social Work Foundation Practice I	3 s.h.
SCWK 6904	Field Education I	3 s.h.

First Year – Second Semester

SCWK 6905	Human Behavior and the Social Environment II	3 s.h.
SCWK 6906	Business Skills for Social Workers	3 s.h.
SCWK 6907	Social Work Foundation Practice II	3 s.h.
SCWK 6908	Research	3 s.h.
SCWK 6909	Field Education II	3 s.h.

During the second year students will begin to take coursework in one of two concentration areas: advanced direct practice (P) or social work administration (A).

Second Year – First Semester

SCWK 7000	Advanced Direct Practice I	3 s.h. (P)
SCWK 7001	Management Practice	3 s.h. (A)
SCWK 7002	Adversities and Resiliencies	3 s.h.
SCWK 7004	Practice Evaluation	3 s.h. (P)

SCWK 7005	Program Evaluation	3 s.h. (A)
SCWK 7009	Field Education III	3 s.h.

One of the following courses depending on the student's substantive focus:

SCWK 7006	Social Work in Aging	3 s.h.
SCWK 7007	Social Work in Child and Family Settings	3 s.h.
SCWK 7008	Social Work in Mental Health	3 s.h.

Second Year – Second Semester

SCWK 7010	Advanced Direct Practice II	3 s.h. (P)
SCWK 7011	Organizational Management and Community Change	3 s.h. (A)
SCWK 7003	Theory and Practice of Supervision	3 s.h.
SCWK 7012	Field Education IV	3 s.h.
SCWK 7013	Capstone	3 s.h.
	Approved elective	3 s.h.

Graduate Certificates

Autism Spectrum and Related Disabilities
Department of Teacher Education

Margaret L. Briley, Ed.D.
Beeghly College of Education
2401 Beeghly College of Education
(330) 941-3266
mlbriley@ysu.edu

Certificate Description

This five-course certificate (19 s.h.) is designed to meet the needs of students in educationally related fields such as psychology, nursing, school counseling, and speech and language therapy. Students in related fields such as speech and language pathology, psychology, etc., will receive this certificate upon the completion of the certificate requirements. During a summer internship, students seeking this graduate certificate are required to demonstrate appropriate data-based assessment, teaching and learning standards of knowledge, skills and dispositions, as specified by the National Council for Accreditation of Teacher Education and the Council for Exceptional Children. Frequency of course offerings allows most students to earn the certificate within two semesters and two summer sessions.

Certificate Requirements

Students must complete the following four courses:

SPED 5810	Introduction to Sign Language	3 s.h.
SPED 6996	Teaching Strategies/Autism	4 s.h.
SPED 6998	Alternative and Augmentative Communication (AAC) Strategies	3 s.h.
SPED 6999	Field Experiences Autism/Related Disorders	6 s.h.

Students must complete one course from the following:

PSYCH 6960	Fundamentals of Applied Behavior Analysis	3 s.h.
PSYCH 6990	Seminar in Psychology: Topics in Asperger's Syndrome	3 s.h.

Bioethics

Department of Philosophy and Religious Studies

Brendan Minogue, Certificate Co-director
Bruce Waller, Certificate Co-director
411 Debartolo Hall
(330) 941-1627
bpminogue@ysu.edu
bnwaller@aol.com

Certificate Description

This two-course sequence (8 s.h.) is designed to meet the needs of working professionals in health care and related fields and others who wish to pursue postgraduate study in bioethics. The sequence will be of particular value to those serving or preparing to serve on institutional ethics committees in hospitals, home health care services, nursing homes, and elsewhere, as well as others (people in local government, insurance, and the media, for example) who wish to explore major questions and recent developments in bioethics.

Certificate Requirements

To receive a certificate in bioethics, students must complete eight semester hours of courses, typically PHIL 6900, Ethics in Medicine and the Health Care Professions, and PHIL 6901, Bioethics and Public Policy, with a grade-point average in those courses of 3.0 or above.

For admission to the Graduate Sequence in Bioethics, students must meet the requirements for admission to the School of Graduate Studies and Research at YSU and have other preparation or experience judged satisfactory by the Department of Philosophy and Religious Studies. Preparation or experience that may qualify as satisfactory includes, but is not limited to, training or experience in the health care professions.

Environmental Studies
Department of Geological & Environmental Sciences

Alan M. Jacobs, Certificate Director
2080 Moser Hall
(330) 941-2933
amjacobs@ysu.edu

Certificate Description

This sequence of 15 semester hours is designed to meet the needs of students and working professionals preparing for leadership roles in environmental science or management. The graduate certificate is focused in two tracks, with specialization in risk management and industrial/institutional management. This program is especially useful for careers with regulatory agencies, industries seeking compliance with environmental regulations or focusing on environmental management systems, research facilities, and consulting firms providing state-of-the-art assessment, management, and remediation. The program will also prepare the student to continue graduate studies leading to higher degrees.

Certificate Requirements

To receive a certificate in environmental studies, all students must complete 15 semester hours of credit from course work listed below. A grade-point average of 3.0 or above must be achieved for all fifteen semester hours of credit.

Core Courses will be taken by Certificate candidates in both tracks (6 s.h.):

ENST 6900	Advanced Environmental Studies	3 s.h.
ENST 6901	Sources of Contamination	3 s.h.

Students may choose the Risk Management or the Industrial/Institutional Management Track:

Risk Management Track (9 s.h.)

Both:		
ENST 6930	Risk Management	3 s.h.
ENST 6931	Ecological Risk Assessment	3 s.h.
Choose:		
ALHTH 5807	Epidemiology	3 s.h.
BIOL 5803	Population and Community Ecology	3 s.h.
BIOL 5804	Aquatic Biology	3 s.h.
BIOL 5803	Aquatic Biology Laboratory	1 s.h.
BIOL 5806	Field Ecology	3 s.h.
BIOL 6996	Environmental Biology Topics	1–3 s.h.
CHEM 5801	Elements of Physical Chemistry	3 s.h.
CHEM 6941	Adv. Organic Chem. I	2 s.h.
CHEM 6944	Natural Products	2 s.h.
ENST 5830	Risk Assessment	3 s.h.

Industrial/Institutional Management Track (9 s.h.)

Both:

ENST 6920	Environmental Compliance	3 s.h.
ENST 6921	Industry/Institutional Management for the Environmental Professional	3 s.h.

Choose:

CEEGR 6968	Industrial Waste Treatment (prereq CEEGR 4837 or equiv.)	3 s.h.
ENGR 6925	Applied Environmental Management	3 s.h.
ENST 5830	Risk Assessment	3 s.h.
ENST 6910	Environmental Management Systems Standards (ISO 14001)	1 s.h.
ENST 6930	Risk Management	3 s.h.
MGT 6900	The Foundation of Management	2 s.h.
MGT 6925	Quality Management	3 s.h.

Undergraduate courses that will not qualify for the Certificate, but which may be suggested for preparation for courses above are:

ENST 4800	Environmental Impact Assessment	3 s.h.
CHEM 3764	Chemical Toxicology	2 s.h.
AHLTH 4831	Intro. Industrial Hygiene	3 s.h.
CEEGR 4837	Environmental Engineering 2 (prereq. CEEGR 3736)	3 s.h.

Health Care Management
Health and Human Services

Carol Mikanowicz, Program Director
Bitonte College of Health and Human Services
1086 Cushwa Hall
(330) 941-3658
ckmikanowicz@ysu.edu

Certificate Description

The Health Care Management Graduate Certificate is a collaborative program between the Bitonte College of Health and Human Services and the Warren P. Williamson, Jr. College of Business Administration. The sequence of 18 semester hours is designed to meet the needs of students and working professionals preparing for leadership roles in health care management. The certificate consists of six semester hours in business tool courses and 12 semester hours in healthcare management courses.

Certificate Requirements

Applicants interested in the Healthcare Management Certificate must apply to and be accepted into the Master of Health and Human Services degree program. Students in the Healthcare Management Certificate track are not obligated to complete the MHHS degree.

Students must complete six semester hours from the following:

ECON 6900	Statistical Problems	3 s.h.
ECON 6901	Basic Economic Analysis	3 s.h.
FIN 6900	Financial Accounting and Finance for Decision Making	4 s.h.
MGT 6900	Foundations of Management	2 s.h.
MGT 6917	Information Systems for Management	2 s.h.
MKTG 6900	Foundations of Marketing	2 s.h.

Students must compete twelve semester hours from the following:

MGT 6961	Organizational Behavior	3 s.h.
CHHS 6918	Program Planning and Evaluation	2 s.h.
CHHS 6922	Planning and Fiscal Management	4 s.h.
CHHS 6949	Community Health Practice	3 s.h.
CHHS 6959	Foundation and Planning	3 s.h.
CHHS 6960	Implementation and Evaluation	3 s.h.

Literature for Children and Young Adults
Department of English

Rebecca Barnhouse, Interim Certificate Director, 2004-2005
College of Arts and Sciences
240 DeBartolo Hall
(330) 941-3420
rbarnhouse@ysu.edu

Betty T. Greenway, Certificate Director
College of Arts and Sciences
243 DeBartolo Hall
(330) 941-1648
blgreenway@ysu.edu

Certificate Description

This four-course certificate (12 s.h. total) is designed to increase students' knowledge of children's and young adult literature while helping them achieve certain career goals. For students who intend to pursue doctoral work, concentrated study in children's and young adult literature will help to prepare them to specialize in these fields at the doctoral level. For those who teach at the elementary, middle school, and high school levels, such study will enhance their teaching careers by increasing their knowledge of literature for young people and helping satisfy certain professional development requirements of local school districts. For prospective or practicing librarians, the certificate will provide further expertise in establishing and maintaining library collections for young readers. Depending upon course rotation, students may finish the certificate within one year.

Certificate Requirements

Students must complete the following three courses:

ENGL 6918	Studies in Children's Literature	3 s.h.
ENGL 6919	Studies in Young Adult Literature	3 s.h.
ENGL 6927	Historical Survey of Literature for Young People	3 s.h.

Students must complete one course from the following, if topic relates to children's or young adult literature, with permission of the certificate director:

ENGL 6906	Teaching of Literature	3 s.h.
ENGL 6918*	Studies in Children's Literature	3 s.h.
ENGL 6919*	Studies in Young Adult Literature	3 s.h.
ENGL 6975	English Education Seminar	3 s.h.
ENGL 6976	Studies in English Education	3 s.h.
ENGL 6990	Special Topics	3 s.h.

* ENGL 6918 or ENGL 6919 may be repeated with a different topic.

Or students may elect to take one course in a related discipline (e.g. Psychology, History, Education, Art) when content is appropriate, with permission of the certificate director.

To be eligible for the Graduate Certificate in Literature for Children and Young Adults, students need not have an undergraduate degree in English, but they must have a B.A. or B.S. degree and meet the requirements for admission to the School of Graduate Studies and Research at YSU. Certificate courses must be completed with a GPA of at least 3.0.

Professional Writing and Editing
Department of English

Julia M. Gergits, Certificate Director
College of Arts and Sciences
237 DeBartolo Hall
(330) 941-3419
jmgergits@ysu.edu

Certificate Description

This four-course certificate (12 s.h.) is designed to meet the needs of students preparing for careers as technical writers and editors; company news and information directors; or grant and proposal writers for schools, hospitals, nonprofit organizations, and fine and performing arts groups. Frequency of course offerings allows most students to finish the certificate within four semesters.

Certificate Requirements

Students must complete the following four courses:

ENGL 6943	Technical Communication	3 s.h.
ENGL 6944	Document Design and Production	3 s.h.
ENGL 6953	Publications Issues and Management	3 s.h.
ENGL 6992	Professional Communication	3 s.h.

Although ENGL 6998 Professional Writing Internship does not count toward the 12 s.h. requirement for the certificate, students are strongly urged to take this course or seek equivalent professional experience. To be eligible for the PWE Graduate Certificate, students need not have an undergraduate degree in English, but they must have a B.A. or B.S. degree and meet the requirements for admission to the School of Graduate Studies and Research at YSU.

Teaching English to Speakers of Other Languages (TESOL)

Department of English

Steven Brown, Certificate Director
College of Arts and Sciences
229 DeBartolo Hall
(330) 941-1654
srbrown.02@ysu.edu

Certificate Description

This four-course sequence (12 s.h.) is valuable for anyone who wishes to gain more knowledge of second/foreign language learning. It is also useful as a springboard to further graduate work in the field. It is designed to meet the needs of K-12 language arts instructors who want more information but not necessarily state validation; writing instructors at two-year colleges; and students who would like to enter doctorate programs in Applied Linguistics, English as a Second Language, or Second Language Acquisition. Students gain an understanding of issues of language acquisition and language pedagogy.

Certificate Requirements

Students who have not taken an introductory linguistics course at the undergraduate level will be expected to do extra readings to get an understanding of basic terms. The department's Advanced Linguistics course (English 6955) may also serve to provide background. Students should see an advisor for the TESOL certificate program.

Students must complete the following four courses:

ENGL 6956	TESOL Methods	3 s.h.
ENGL 6950	Sociolinguistics	3 s.h.
ENGL 6951	Language Acquisition	3 s.h.
ENGL 6958	English Grammar	3 s.h.

To be eligible for the Graduate Certificate in the Teaching of English to Speakers of Other Languages, students need not have an undergraduate degree in English or Linguistics but must have a B.A. or B.S. and meet requirements for admission to the School of Graduate Studies and Research at YSU.

Teaching of Writing
Department of English

Kevin Ball, Certificate Director
College of Arts and Sciences
244 DeBartolo Hall
(330) 941-3417
keball@ysu.edu

Certificate Description

This four-course certificate (12 s.h.) is valuable as an enhancement for employment as a writing instructor and also as a springboard to further graduate work in the field. It is designed to meet the needs of K-12 language art teachers; writing instructors at two-year colleges; and YSU graduate students who would like to enter doctorate programs in rhetoric and composition. Students gain understanding of issues in the field of rhetoric and composition such as current writing pedagogy, assessment of writing, language theory, language varieties, multicultural literacies, electronic literacies, and teaching strategies incorporating electronic media. Frequency of course offerings allows most students to finish the certificate in two to three semesters.

Certificate Requirements

Students must complete four courses chosen from the following three groups:

I.	Required:		
	ENGL 6907	Teaching of Writing	3 s.h.
	ENGL 6993	Discourse Theory	3 s.h.
II.	One from among:		
	ENGL 6921	Advising Student Publications	3 s.h.
	ENGL 6901	Methods of Composition Research	3 s.h.
	ENGL 6976	Studies in English Education (if topic applies to rhetoric and composition)	3 s.h.
	ENGL 6990	Special Topics (if topic applies to rhetoric and composition)	3 s.h.
III.	One from among:		
	ENGL 6950	Sociolinguistics	3 s.h.
	ENGL 6958	English Grammar	3 s.h.
	ENGL 6960	Studies in Linguistics (if topic applies to rhetoric and composition)	3 s.h.

To be eligible for the Graduate Certificate in Teaching of Writing, students need not have an undergraduate degree in English but must have a B.A. or B.S. degree and meet requirements for admission to the School of Graduate Studies and Research at YSU.

Working-Class Studies
Center for Working-Class Studies

Sherry Linkon, Certificate Co-director
John Russo, Certificate Co-director
Smith Hall, First floor
(330) 941-2977
sllinkon@ysu.edu

The Center for Working-Class Studies (CWCS) at YSU, the first center of its kind in United States, is a multidisciplinary research, teaching, and outreach center focused on working-class culture and history. The CWCS has faculty affiliates from nine departments in the College of Arts and Sciences, the College of Fine and Performing Arts, and the Warren P. Williamson, Jr. School of Business.

Certificate Description

This four-course certificate (12 s.h.) is designed to provide students with an interdisciplinary overview of the history and political and cultural meanings of working-class life. Program emphasis is on concepts of class, work, and identity as well as strategies from multiple disciplines for gaining insight into working-class culture. For graduate students and working professionals, this program will provide an in-depth look at local history, local working-class culture, and the lives and experiences of local working people. For educators at middle and high school levels, this program will enhance their teaching careers by increasing their knowledge about working-class culture, issues, and pedagogy while satisfying certain professional development requirements of local school districts. Frequency of course offerings allows most students to finish the certificate within one year.

Certificate Requirements

Students must complete four courses, selected from the following:

AMER 5850	Class and Culture	3 s.h.
AMER 6970	Teaching Working-Class Studies	3 s.h.
ENGL 6923	Working-Class Literature	3 s.h.
HIST 6939	Labor History	3 s.h.
HIST 6945	Preservation and Interpretation of the Industrial Built Environment	3 s.h.
MGT 5845	Work in America	3 s.h.

Students may also petition to have one relevant topics course in English, History, or Management count toward the certificate. Students may complete the certificate as a stand-alone program or in conjunction with a Masters degree in American Studies, Business, English, Historic Preservation, or History. Students taking the certificate as part of a Masters program may count two of the four certificate courses toward the Masters degree. To complete the certificate, the remaining two courses must be taken as additional credits.

Cooperative Programs

Early Placement Program for the Ph.D. in Engineering

Early placement programs for the Ph.D. degree in Engineering at the University of Akron and the Doctorate degree in Engineering at the Cleveland State University are available, allowing students to begin doctoral study at YSU. Students accepted in either program are required to complete a minimum of 60 s.h. beyond the M.S. degree. Students enrolled in either program can complete up to 12 s.h. of course work and 12 s.h. of dissertation work at Youngstown State University. In addition, students may select their co-advisor from the engineering faculty at Youngstown State University. Students interested in either of these options should select the thesis plan for their MS program. For further assistance regarding these options and to initiate a letter of interest, contact the School of Gradiate Studies and Research.

Master of Public Administration (MPA), Maxine Goodman Levin College of Urban Affairs, Cleveland State University

Youngstown State University, in collaboration with Cleveland State University (CSU), facilitates the delivery of the CSU master's degree program in public administration (MPA). Courses in the MPA program are taught by faculty from both universities; some are offered through CSU at YSU by distance learning, with others taught traditionally at YSU. The purpose of this interdisciplinary program is to prepare its graduates for administrative positions in government, nonprofit, and public service organizations and to provide further educational opportunities for incumbent public administrators. The program provides a broad educational base as well as specific administrative techniques as preparation for positions carrying additional administrative responsibility. Students interested in this program should contact the Office of Graduate Admissions, Cleveland State University, at (216) 687-5599. On the YSU campus, information about this program is available from Dr. Tammy King, Chair of the Department of Criminal Justice, at (330) 941-3279.

COURSES

ACCOUNTING AND FINANCE

Pete Woodlock, Chair of the Department
607 Williamson Hall
(330) 941-1873

ACCOUNTING

6902.* *Management Accounting Systems.* A study of the managerial aspects of accounting with an emphasis upon the preparation and interpretation of accounting reports of an organization for its internal users, such as its president and managers. Uses of relevant and timely accounting information in decision making, planning and control, capital budgeting, product costing and pricing, and transfer pricing are discussed in detail. Applications of quantitative techniques and behavioral aspects of accounting are also reviewed. (Not available for credit to M.B.A. students in the accounting concentration.) Prereq.: FIN 6900 or ISEGR 3745. 3 s.h.

6905. *Business Tax Planning and Research I.* A study of the tax planning process and how it relates to employee and employer matters including, but not limited to, the alternative minimum tax, personal holding companies, unreasonable accumulations of earnings, depreciation recapture, retirement structuring, tax credits, taxation of international persons, and estate tax issues including both lifetime and testamentary transfers. Paper and electronic research media will be utilized along with various formats for presentation of results. Prereq.: ACCT 4814 or equivalent. 3 s.h.

6906. *Estate Planning.* A study of the tax implications involving estates. Emphasis on the importance of estate planning, the devices available for use in such planning, effective uses of lifetime gifts, trusts, life insurance, pension plans, profit sharing, and other fringe benefit plans. The effects of state inheritance tax and property laws upon estate planning will be emphasized. Prereq.: ACCT 4813 or equivalent. 2 s.h.

6908. *Auditing Theory and Practice.* A study of auditing standards and procedures, use of statistical and other quantitative techniques, and auditing electronic data processing installations. Other topics include practice before the Securities and Exchange Commission, special reporting problems, current developments in auditing, professional ethics and responsibilities, and extensions of the attest function. Prereq.: ACCT 4808 or equivalent. 3 s.h.

6909.* *Management Information and Control Systems.* A study of the formalized set of interrelated methods, procedures, and equipment utilized in developing, processing, storing, and reporting business financial and statistical information. The major emphasis is on computerized systems, although some attention is also given to manual operations and/or subsystems. Prereq.: MGMT 6900 and FIN 6900 or equivalent. 3 s.h.

6910. *Business Internship.* Provides graduate students the opportunity to relate theory to practice through on-the-job work experience with a participating organization. The internship will serve as an elective MBA course. Prereq.: Completion of Level I MBA coursework and 6 s. h. of Level II MBA coursework. 1-3 s.h.

6912.* *Advanced Management and Cost Accounting.* An examination of the managerial uses of accounting information for planning and control and an investigation of cost accounting theory and practice. Prereq.: ACCT 3711 or equivalent. 3 s.h.

* additional fee required

6930.* *Accounting Theory.* A survey of the history and development of accounting conventions, concepts, and principles leading to an intensive study of contemporary thought relative to income determination and asset valuation. Prereq.: ACCT 3702 or equivalent. 3 s.h.

6960. *Seminar in Accounting.* Specific topics selected by the staff from timely and controversial work published in the field. Prereq.: All core courses, plus at least six hours (6900-level) in accounting or permission of instructor. 2 s.h.

6968. *Special Topics in Accounting.* Topics may vary from semester to semester and will be announced with prerequisites and hours. May be repeated. 1-3 s.h.

6975. *Business Tax Planning II.* This course continues the study of income tax laws concerning corporations generally, including Subchapter S corporations, corporate reorganizations, partnership taxation, and tax administration and practice. Prereq.: ACCT 6905. 2 s.h.

6980. *Governmental and Nonprofit Accounting.* A study of accounting systems for federal, state, and local governmental agencies and other not-for-profit organizations. (Not available for credit to students who have had Acct. 4820.) Prereq.: FIN 6900 or equivalent. 2 s.h.

6996. *Research Problems.* Special research project under the supervision of a graduate faculty member. Credit will be determined in each case in light of the nature and extent of the project. Prereq.: 15 hours of Level II MBA course work or permission of MBA Director. 1-3 s.h.

FINANCE

6900.* *Financial Accounting and Finance for Decision Making.* A survey of the fundamental concepts of financial accounting employed by general managers. Additionally, a survey of the concepts, principles, and practices of financial management used by general managers and the links between the two types of information. 4 s.h.

6910. *Business Internship.* Provides graduate students the opportunity to relate theory to practice through on-the-job work experience with a participating organization. The internship will serve as an elective MBA course. Prereq.: Completion of Level I MBA coursework and 6 s. h. of Level II MBA coursework. 1-3 s.h.

6920. *Global Business Environments and Operations.* The environments and operating issues affecting firms doing business in the global arena. Economic, cultural, political, legal, and competitive environments are covered, along with the global management of functional areas including finance, marketing, operations, and human resources. Cross-listed as MKTG 6920 and MGMT 6920. Prereq.: Level I MBA courses. 3 s.h.

6921.* *Financial Management.* A study of business finance through the use of case study analysis, including relevant articles and text material. Major topics deal with working capital management, net present value — Internal Rate of Return, lease vs. buy, and the cost of capital. Case analysis is used to integrate financial theory into an applied managerial decision-making context. Prereq.: ACCTG/FIN 6900 or equivalent. 3 s.h.

6922. *Capital Management.* Managerial economics of capital budgeting, sourcing, rationing, and control for large enterprises; forecasting demand and internal generation of capital; intangible capital investments; administration of capital appropriations; public policy implications. Prereq.: FIN 6921, MGMT 6916, or permission of instructor. 3 s.h.

6924. *Securities Analysis.* The major emphasis will be an in-depth fundamental analysis of the investment merits of the common stock of a firm. This study will be accomplished by applying the appropriate analytical principles and valuation techniques to the firm's financial statements. A research paper will be required. Prereq.: FIN 6921. 3 s.h.

* additional fee required

6936. *Financial Markets and Institutions.* An in-depth study of functions of financial markets, role of financial institutions, and the impact of government regulation with emphasis on nature and functions of global aspects of financial markets; management of financial intermediaries; innovative financial services and products, and impact of public policies and regulations. Prereq.: FIN 6921. 3 s.h.

6939. *Multinational Accounting and Finance.* A cross-functional examination of selected topics in international accounting and finance with emphasis on developing research and problem-solving skills. Cases will be presented that teach the strategy and tactics of multinational corporate reporting and financial management. Prereq.: FIN 6921. 3 s.h.

6953. *Advanced Financial Analysis.* Applications of financial analysis to business consulting. Includes case studies and practical implementation strategies. Prereq.: FIN 4853. 3 s.h.

6968. *Special Topics in Finance.* Topics may vary from semester to semester and will be announced with prerequisites and hours. May be repeated. 1–3 s.h.

6970. *Seminar in Finance.* Specific topics selected by the staff from timely and controversial work published in the field. Prereq.: All core courses, plus at least six hours (6900-level) in the finance concentration, or permission of instructor. 3 s.h.

6996. *Research Problems.* Special research project under the supervision of a graduate faculty member. Credit will be determined in each case in light of the nature and extent of the project. Prereq.: 15 hours of Level II MBA course work or permission of MBA Director. 1–3 s.h.

American Studies

Sherry Linkon, Coordinator
Smith Hall, First Floor
(330) 941-2977

5845. *Work in America (3 s.h.)*
5850. *Class and Culture (3 s.h.)*

6900. *Approaches to American Studies.* Introduction to American Studies with emphasis on history of the field, interdisciplinary approaches, and cultural diversity. 3 s.h.

6910. *Introduction to Working-Class Studies.* Introduction to developments, approaches, and issues in new Working Class Studies, including intersections of class with other categories of identity, disciplinary and interdisciplinary perspectives, representations of the working-class in the arts and media, and political and economic constructions of class. 3 s.h.

6930. *Humanities in the Community.* Opportunities, challenges, and strategies for developing, promoting, and implementing public humanities projects in various settings, including community development and organizing, community-based adult education, and programs in museums and other public humanities organizations. Prereq: AMER 6900. 3 s.h.

6970. *Teaching Working-Class Studies.* Interdisciplinary teaching strategies focused on incorporating attention to work, class, diversity, local history and culture into K-12 and college courses. 3 s.h.

6975. *Interdisciplinary Teaching.* Introduction to interdisciplinarity and its application in the classroom, with emphasis on integration of humanities and social sciences. 3 s.h.

6980. *Public Humanities Internship.* Supervised work-and-learning experience in American Studies under the direction of an American Studies core faculty member and an employee of a participating organization. 3 s.h.

6990. *Independent Project.* Completion of individual project in a community or school setting. Prereq. Proposal and review meeting with committee. May be repeated for a maximum of 3 s.h. 1-3 s.h.

ART

Greg Moring, Chair of the Department
4001 Bliss Hall
(330) 941-3627

Students who wish to take the 6900-level courses in painting, ceramics, sculpture, or photography must first submit a series of slides and a statement of purpose to the studio faculty for review and approval.

5881. *Twentieth-Century Art to 1960* (3 s.h.)
5882. *Twentieth-Century Art from 1960* (3 s.h.)

6910.* *Studio Problems in Sculpture.* Individual research of plastic form through various media including plastics, wood, stone, metals, and related materials. May be repeated for a maximum of 6 semester hours credit. Prereq.: Permission of instructor and documentation of previous work. 3 s.h.

6911.* *Studio Problems in Sculpture.* Continuation of 6910. May be repeated for a maximum of 6 semester hours credit. Prereq.: Art 6910. 3 s.h.

6912.* *Studio Problems in Sculpture.* Continuation of 6911. May be repeated for a maximum of 6 semester hours credit. Prereq.: Art 6911. 1-3 s.h.

6930.* *Studio Problems in Ceramics.* Individual research in Spatial Arts imagery. Concentration on individual study in ceramic construction, firing process and calculation, formulation and firing of clay bodies, low-fire and high-fire glaze systems. May be repeated for a maximum of 6 semester hours of credit. Prereq.: Permission of instructor and evidence of previous work. 3 s.h.

6931. *Studio Problems in Ceramics.* Continuation of 6930. May be repeated for a maximum of 6 semester hours of credit. Prereq.: Art 6930. 3 s.h.

6932. *Studio Problems in Ceramics.* Continuation of 6931. May be repeated for a maximum of 6 semester hours of credit. Prereq.: Art 6931. 1-3 s.h.

6950.* *Studio Problems in Painting.* Individual research of two-dimensional form through various media including oil, acrylic, water color, collage, etc. May be repeated for a maximum of 6 semester hours credit. Prereq.: Permission of instructor and evidence of previous work. 3 s.h.

6951.* *Studio Problems in Painting.* Continuation of 6950. May be repeated for a maximum of 6 semester hours credit. Prereq.: Art 6950. 3 s.h.

6952.* *Studio Problems in Painting.* Continuation of 6951. May be repeated for a maximum of 6 semester hours credit. Prereq.: Art 6951. 1-3 s.h.

* additional fee required

Biological Sciences

Robert E. Leipheimer, Chair of the Department
4037 Ward Beecher Hall
(330) 941-3601

5804. *Aquatic Biology* (3 s.h.)
5806. *Field Ecology* (4 s.h.)
5809.* *Concepts of Developmental Biology* (3 s.h.)
5811. *Ornithology.* (4 s.h.)
5823. *Advanced Eukaryotic Genetics* (3 s.h.)
5827.* *Gene Manipulation* (2 s.h.)
5829. *Functional Neuroanatomy (4 s.h.)*
5832. *Principles of Neurobiology* (4 s.h.)
5833. *Mammalian Endocrinology* (3 s.h.)
5834. *Advanced Systems Physiology I* (4 s.h.)
5835. *Advanced Systems Physiology II* (4 s.h.)
5836. *Cell Biology: Molecular Mechanisms* (4 s.h.)
5840. *Advanced Microbiology* (3 s.h.)
5844. *Physiology of Reproduction* (3 s.h.)
5853.* *Biometry* (3 s.h.)
5861. *Animal Behavior* (3 s.h.)
5868.* *Gross Anatomy I* (4 s.h.)
5869.* *Gross Anatomy II* (4 s.h.)
5888. *Environmental Biotechnology* (4 s.h.)
5980. *Workshop on Experimental Biology in the Classroom* (2–3 s.h.)

6950.* *Comparative Animal Physiology.* The study of physiological mechanisms and adaptations of animals to environmental stresses of their habitats. Three hours lecture and three hours laboratory per week. Prereq.: BIOL 2630 or equivalent. 4 s.h.

6951. *Developmental and Comparative Neurobiology.* The study of processes critical to the development, maintenance and function of the nervous system. Topics will be presented from an experimental perspective using the scientific literature as a resource. Prereq.: BIOL 2630 or equivalent. 3 s.h.

6952.* *Experimental Design.* Controlling variables, experimental design, and treatment of data from biological experiments. Prereq.: BIOL 5853 or permission of instructor. 3 s.h.

6954. *Advanced Ecology.* Interrelationships of species within the community and their influence upon the ecosystem. Prereq.: Permission of instructor. 3 s.h.

6957. *Advanced Immunology.* Fundamentals of immunological systems, including both humoral and cellular immunological responses. Immune response to infections, transplantation rejection, autoimmune diseases, allergy and autoimmunity. Three hours of lecture a week. Prereq.: BIOL 3702 or equivalent. 3 s.h.

6957L. *Advanced Immunology Laboratory.* Immunologic laboratory techniques. Four hours of laboratory a week. Should be taken concurrently with BIOL 6957. 2 s.h.

6959.* *Analytical Cell Biology.* Analytical concepts are applied to the study cells and cellular processes. The use of microscopic techniques including by microtechniques, fluorescent microscopic analysis and immunocytochemistry are presented. Qualitative and quantitative analysis of macromolecular

composition is used in answering contemporary questions in cell biology. Prereq.: graduate standing. 4 s.h.

6962.* *Systematic Zoology.* Principles, significance, and procedure of zoological taxonomy. Prereq.: BIOL 2641. 2 s.h.

6963.* *Virology.* Viral structure, replication, infection, and pathogesis. The molecular biology of viruses and their interactions with host cells, and the use of viruses as tools for gene therapy and genetic engineering. Current research and viruses important in world health, such as HIV, the AIDS virus, will be emphasized. Prereq.: graduate standing or permission of instructor. 3 s.h.

6964. *Advanced Molecular Genetics.* An examination of the mechanisms of transcription, translation, DNA replication, RNA processing and transposition in both prokaryotes and eukaryotes. Prereq.: BIOL 3790 or permission of instructor. 3 s.h.

6965. *Principles of Electron Microscopy.* Theories and application of both transmission and scanning of electron microscopy are presented. Students develop proficiency in the use of the scanning electron microscope, including standard preparative techniques, and their use in research. Prereq.: graduate standing or permission of instructor. 2 s.h.

6971. *The Teaching and Learning of Biology.* An introduction to the current literature and research problems in the teaching and learning of biology. Topics include theories of teaching, learning styles, assessment, problem solving, misconceptions, and the role of laboratories, recitations and demonstrations in learning biology. Also includes examination of these issues as related to teaching chemistry. Cross-listed with Chemistry 6971. 3 s.h.

6972. *Methods of Biology Education Research.* Principles of biology education research. Issues of problem design, data collection, and data analysis are considered from both quantitative and qualitative frameworks. Methodologies include surveys and questionnaires, think-aloud protocols, interviews, observations, and action research. Also includes examination of these issues as related to chemistry. Cross-listed with Chemistry 6972. 3 s.h.

6973. *Biology and National Science Education Standards.* Implications of national standards for modifying high school biology instruction in a variety of classroom situations. Topics include inquiry learning, science and technology literacy, the history and nature of science, pre-service science teacher education, assessment, and the impact of standards on advanced placement biology. Also includes examination of these issues as related to teaching high school chemistry. Cross-listed with Chemistry 6973. 3 s.h.

6974. *Neuroendocrinology.* Current concepts of neuroendocrine processes will be discussed. Prereq.: BIOL 5833 or equivalent or permission of instructor. 3 s.h.

6975. *Neuropharmacology.* An examination of how drugs interact with the nervous system, including the locus of action for neuroactive substances and the mechanisms by which these substances cause change in physiology and behavior. Prereq: Graduate standing or permission of instructor. 3 s.h.

6976. *Cellular Neurophysiology.* Detailed study of ionic currents, regulation of neuronal firing patterns, synaptic transmission, and synaptic plasticity. Prereq.: BIOL 5832 or permission of instructor. 3 s.h.

6978. *Teaching Practicum I: Principles of Biology.* A course dealing with principles of pedagogy for both classroom and laboratory settings. This is a broad-based course which will address basic principles and concepts of modern biology. Emphasis is on relationships between instruction and learning

* additional fee required

outcomes. Required of all Graduate Teaching Assistants in the Biological Sciences. Students will be assigned a grade of S/U. May be repeated. 1 s.h.

6979. *Teaching Practicum II: Anatomy and Physiology.* A course dealing with the principles of pedagogy for both classroom and laboratory settings. This course will address a spectrum of topics in human anatomy and physiology. Emphasis is on the relationships between instruction and learning outcomes. Required of Graduate Teaching Assistants providing instructional support for courses in Anatomy and/or Physiology. Students will be assigned a grade of S/U. May be repeated. 1 s.h.

6980. *Workshop on Experimental Biology in the Classroom.* Problems, issues, and practice of experimental biology in the K-12 classroom. Students will learn to identify teaching strategies appropriate to curricular objectives, develop effective science activities, and organize and manage lab activities in the classroom. May be repeated. 2-3 s.h.

6988. *Seminar in Biological Sciences.* May be repeated up to 2 s.h. 1 s.h.

6990. *Master's Thesis Research.* Research selected and supervised by departmental advisor and approved by graduate faculty of Biology Department and Graduate Dean. Prereq.: Acceptance by departmental committee. May be repeated for a maximum of 6 s.h. 1-6 s.h.

6991. *Research Methods in Ecology.* Discussion and demonstration of current methods and concepts related to field or laboratory research for beginning graduate students in the field of ecology. Not applicable for students enrolled in the Non-thesis or Biology Education options. May be repeated once. Prereq.: Permission of instructor. 3 s.h.

6992. *Research Methods in Anatomy and Physiology.* Discussion and demonstrations of current methods and concepts related to laboratory research for beginning graduate students in the fields of anatomy and physiology. Not applicable for students enrolled in the Non-thesis or Biology Education options. May be repeated once. Prereq.: Permission of instructor. 3 s.h.

6993. *Research Methods in Molecular Biology.* Discussion and demonstrations of current methods and concepts related to laboratory research for beginning graduate students in the fields of molecular biology, cellular biology, or microbiology. Not applicable for students enrolled in the Non-thesis or Biology Education options. May be repeated once. Prereq.: Permission of instructor. 3 s.h.

6994. *Research Methods in Biology.* A course focused on reviewing current biological concepts as reported in the scientific literature. Not applicable for students enrolled in the Thesis or Biology Education options. Prereq.: Permission of instructor. 2 s.h.

6995. *Research in Biological Education.* Current methods, concepts, and applications of biological principles related to the field of biological education will be discussed. Not applicable for students enrolled in the Thesis or Non-thesis options. May be repeated once. Prereq.: Permission of instructor. 2 s.h.

A maximum of two semester hours of Topics may be taken:

6996. *Topics in Environmental and Biological Interactions.* An arranged course in terrestrial and aquatic ecology. Prereq.: Permission of instructor. 1 s.h.

6997. *Topics in Molecular and Cellular Biology.* An arranged course in subjects at the molecular level of life. Prereq.: Permission of instructor. 1 s.h.

6998. *Topics in Physiology.* An arranged course for advanced topics in vertebrate physiology. Prereq.: permission of instructor. 1 s.h.

7000. *Topics in Clinical & Environmental Microbiology.* An arranged course on subjects of microbiology. Prereq.: Permission of instructor. 1 s.h.

7010.* *Techniques in Animal Tissue Culture.* Procedures for in vitro culture of cells, including preparation of culture media and maintenance of primary and secondary cultures. Preparation of and cloning of hybridomas. Purification of monoclonal antibodies. One hour of lecture a week and four hours of laboratory. Prereq.: BIOL 3702 or equivalent. 3 s.h.

Chemical Engineering

Douglas M. Price, Option Coordinator
2068 Moser Hall
(330) 941-3019
dmprice@ysu.edu

5800. *Special Topics* (1–4 s.h.)
5805. *Principles of Biomedical Engineering* (3 s.h.)
5810. *The Business of Engineering* (3 s.h.)
5811. *Advanced Transport Phenomena* (3 s.h.)
5820. *Industrial Pollution Control* (3 s.h.)
5821. *Fundamentals of Polymer Science* (3 s.h.)
5830. *Nuclear Reactors* (3 s.h.)
5835. *Introduction to Nuclear Fusion* (3 s.h.)
5850. *Industrial Processes* (3 s.h.)
5883.* *Mathematical Methods in Chemical Engineering* (3 s.h.)
5886. *Nuclear Reactor Design* (3 s.h.)

6983. *Modern Power Sources.* Analytical and descriptive study of modern power plants. Combustion and environmental problems with fossil fueled power plants. Electromagnetic circuits and devices with emphasis on the principles of electromechanical energy conversions. 3 s.h.

6984. *Nuclear Fission and Fusion Power Sources.* Energy available from fission and fusion nuclear reactions, on setting and maintaining chain reaction. Mechanical and electromagnetic confinement techniques. Reactor design, heat removal, and safety problems. 3 s.h.

6985. *Electromechanical Motion Devices.* Thermodynamics of batteries, and electric and fuel cells. Power from nuclear isotopes. Features common to rotating electromagnetic fields. Analysis and design of electromechanical power components. 3 s.h.

Chemistry

Daryl W. Mincey, Chair of the Department
5053 Ward Beecher Hall
(330) 941-3663

5804.* *Chemical Instrumentation* (4 s.h.)
5821. *Intermediate Organic Chemistry* (3 s.h.)
5822.* *Advanced Organic Laboratory* (4 s.h.)
5830. *Intermediate Inorganic Chemistry* (2 s.h.)
5831.* *Inorganic Chemistry Laboratory* (2 s.h.)

* additional fee required

5832. **Solid-State Structural Methods* (3 s.h.)
5836. *Quantum Chemistry* (3 s.h.)
5861. **Polymer Science I: Polymer Chemistry and Plastics* (4 s.h.)
5862. **Polymer Science II: Polymer Rheology, Processing, and Composites* (3 s.h.)
5876. **Enzyme Analysis* (2 s.h.)

6911. *Advanced Analytical Chemistry I.* Theory and applications of spectroscopy and theory of chemical separation methods. Prereq.: CHEM 3739. 3 s.h.

6912. *Advanced Analytical Chemistry II.* Applications of chemical separation methods and theory and applications of electrochemistry and electrochemical techniques. Prereq.: CHEM 3739. 3 s.h.

6921. *Advanced Biochemistry I.* Protein structure and intermediary metabolism. Prereq.: CHEM 3720. Prereq. or concurrent: Chem. 3737 or 3739. 3 s.h.

6922. *Advanced Biochemistry II.* A study of metabolic pathways and other biochemical systems at the molecular level. Prereq.: CHEM 6921. 3 s.h.

6931. *Advanced Inorganic Chemistry I.* Current theories and types of bonding. Modern structural principles with applications in main-group molecular compounds, coordination compounds, and inorganic solids. Prereq.: CHEM 3729. 3 s.h.

6932. *Advanced Inorganic Chemistry II.* Transtition metal organometallic chemistry emphasizing: molecular structure, bonding methods, characterization, and functional group reactivity. The properties, chemical reactivity, and trends of the elements. Prereq.: CHEM 5830 or CHEM 6931 or consent of instructor. 3 s.h.

6933. *Physical Methods in Structure Determination.* The determination of molecular-level structures of biological, organic, and inorganic compounds in the gas phase, solution, and solid state by diffractionand spectroscopic methods, especially X-ray crystallography and NMR spectroscopy. Three hours lecture. Prereq.: CHEM 5822 or 5832, or consent of instructor. 3 s.h.

6941. *Advanced Organic Chemistry I.* Principles of chemical bonding and structure in organic molecules, physical organic chemistry, structure of reactive intermediates, stereochemistry, detailed descriptions of reaction mechanisms. Prereq.: CHEM 3721 and 3740. 3 s.h.

6942. *Advanced Organic Chemistry II.* Detailed study of functional group transformations in organic synthesis as applied to the preparation of complex molecules. Carbon-carbon bond forming reactions, organometallic reagants in organic synthesis, oxidation-reduction chemistry, and multi-step synthesis. Prereq.: CHEM 6941. 3 s.h.

6951. *Advanced Physical Chemistry I.* Principles of quantum chemistry and spectroscopy with applications. 3 s.h.

6952. *Advanced Physical Chemistry II.* Molecular basis of thermodynamics and kinetics. 3 s.h.

6963. *Advanced Polymer Science.* Advanced methods of polymer synthesis and characterization, high performance polymers, polymerization kinetics and mechanisms, polymer processing, materials optimization, and high performance applications. Three hours lecture. Prereq.: CHEM 5861 and CHEM 3740, or consent of the instructor. 3 s.h.

6969. *Laboratory Problems.* A laboratory course that stresses individual effort in solving chemical problems. Recommended for high school chemistry teachers. (Not applicable to the M.S. degree

in Chemistry.) Prereq.: An undergraduate minor in chemistry. May be repeated up to 6 s.h. 2 s.h.

6971. *The Teaching and Learning of Chemistry.* An introduction to the current literature and research problems in the teaching and learning of chemistry. Topics include theories of teaching, learning styles, assessment, problem solving, misconceptions, and the role of laboratories, recitations, and demonstrations in learning chemistry. Also includes examination of these issues as related to teaching biology. Cross-listed with Biology 6971. 3 s.h.

6972. *Methods of Chemistry Education Research.* Principles of chemistry education research. Issues of problem design, data collection, and data analysis are considered from both quantitative and qualitative frameworks. Methodologies include surveys and questionnaires, think-along protocols, interviews, observations, and action research. Also includes examination of these issues as related to biology. Cross-listed with Biology 6972. 3 s.h.

6973. *Chemistry and National Science Education Standards.* Implications of national standards for modifying high school chemistry instruction in a variety of classroom situations. Topics include inquiry learning, science and technology literacy, the history and nature of science, pre-service science teacher education, assessment, and the impact of standards on advanced placement chemistry. Also includes examination of these issues as related to teaching high school biology. Cross-listed with Biology 6973. 3 s.h.

6975. *An Introduction to Teaching Chemistry.* A course to prepare graduate students to serve as teaching assistants in both chemistry laboratories and recitations. Topics include laboratory safety (governmental regulations, ACS guidelines, hazardous materials, waste disposal) and practical matters of teaching (active learning, leading discussions, grading, cheating, etc.). Required of all graduate students serving as first-year teaching assistants. 1 s.h.

6976. *Teaching Practicum in General Chemistry.* Teaching strategies in the General Chemistry laboratory. Students will meet with General Chemistry course instructors and must demonstrate proficiency in the material to be presented in Chemistry 1515 and 1516 laboratories. Prereq. or concurrent: Chemistry 6975. Grading for Chemistry 6976 is S/U. May be repeated for a total of 6 s.h. for Chemistry 6976, 6977, 6978, and 6979. 2 s.h.

6977. *Teaching Practicum in Allied Health Chemistry.* Teaching strategies in the Allied Health Chemistry laboratory. Students will meet with Allied Health Chemistry course instructors and must demonstrate proficiency in the material to be presented in Chemistry 1505 and 1506 laboratories. Prereq. or concurrent: Chemistry 6975. Grading for Chemistry 6977 is S/U. May be repeated for a total of 6 s.h. for Chemistry 6976, 6977, 6978, and 6979. 2 s.h.

6978. *Teaching Practicum in Organic Chemistry.* Teaching strategies in the Organic Chemistry Laboratory. Students will meet with Organic Chemistry course instructors and must demonstrate proficiency in the material to be presented in Chemistry 3719 and 3720 laboratories. Prereq. or concurrent: Chemistry 6975. Grading for Chemistry 6978 is S/U. May be repeated for a total of 6 s.h. for Chemistry 6976, 6977, 6978, and 6979. 2 s.h.

6979. *Teaching Practicum for Explorations in the Sciences. (Chemistry)* Teaching strategies in the chemistry segments of Explorations in the Sciences. Students will meet with course coordinator and must demonstrate proficiency in the material to be presented in A&S 2600 Explorations in the Sciences laboratories. Prereq. or concurrent: Chemistry 6975. Grading for Chemistry 6979 is S/U. May be repeated for a total of 6 s.h. for Chemistry 6976, 6977, 6978, and 6979. 2 s.h.

6980. *Introduction to Chemical Research.* Principles of chemical research planning, design, execution and reporting. Includes research proposals, record keeping, written reports, oral presentations, the reviewing process, and professional standards. The application of the principles of chemical

* additional fee required

research to the student's M.S. research project. Required of all first-year students in the M.S. program in Chemistry. 3 s.h.

6981. *Seminar I.* Preparation of a formal written research proposal and oral presentation of the proposal. Under the guidance of a research supervisor, the student will investigate the background literature and rationale for a project. Required of all first-year students in the M.S. program in Chemistry. Hours arranged. Prereq.: CHEM 6980 and permission of the Chemistry Chairperson. 1 s.h.

6982. *Seminar II.* Oral presentation and defense of thesis. Hours arranged. Prereq.: CHEM 6981 and permission of the thesis advisor. Prereq. or concurrent: 6 s.h. of CHEM 6990. 1 s.h.

6985. *Fundamental Chemistry for Educators.* Fundamentals of general, organic, and biological chemistry including application to the teaching of science. 2 hours lecture, 3 hours lab-discussion. Not applicable to the M.S. degree in chemistry. Prereq.: Admission to the Graduate Program or consent of instructor. 3 s.h.

6989. *Special Topics in Chemistry Practicum.* Topics selected by the faculty from fields of current research (or pedagogical) interest or of special emphasis. May be repeated with different topics. S/U grading option. 1-3 s.h.

6990. *Thesis.* Hours arranged. May be repeated. 1-9 s.h.

6991. *Special Topics.* Topics selected by the faculty from fields of current research interest or of special emphasis. May be repeated with different topics. 1-3 s.h.

Civil Engineering

Scott C. Martin, Option Coordinator
2445 Moser Hall
(330) 941-3026

5820. *Pavement Material and Design (3 s.h.)*
5829. *Civil Engineering Materials, Concrete* (3 s.h.)
5837. *Environmental Engineering Design (3 s.h.)*
5855. *Reinforced Concrete Design (3 s.h.)*
5856. *Steel Design (3 s.h.)*
5877. *Systems Engineering* (3 s.h.)
5884. *Solid and Hazardous Waste Management* (3 s.h.)

6910. *Advanced Strength of Materials.* The basic methods of structural mechanics, such as conditions of equilibrium and compatibility, stress-strain relations. General treatment of energy principles including virtual work, minimum potential energy; applications to statically determinate and indeterminate systems such as rings, curved beams, plates, and other elastic systems. 3 s.h.

6920. *Wetlands Engineering.* Wetland characteristics - soils, hydrology, and vegetation; wetland functions and values; regulations; planning, theory, design and construction of created and constructed wetlands; applications in wetland mitigation, wastewater treatment, and pollution control. Prereq.: CEEGR 3736 or equivalent. 3 s.h.

6921. *Groundwater and Surface Water Modeling.* Mathematical simulation of hydrodynamic processes

and pollutant transport in subsurface and surface water environments. Prereq.: CEEGR 3716 and CEEGR 3736. 3 s.h.

6941.* *Structural Mechanics.* Study of beams under lateral load; beams with combined lateral load and thrust; buckling beams on elastic foundations; applications of Fourier series and virtual work principles to beam-type structures; stress and strain in three dimensions; applications to flexure of beams and plates and to constrained torsion; elements of engineering theory of plates. 3 s.h.

6947.* *Finite Element Analysis.* An introduction to finite element techniques as applied to problems in structural mechanics. Direct and variational methods of element formulation with application to beams, beam-columns, frames, arches, thin plates, and shells. 3 s.h.

6951.* *Construction Project Management.* An integrated approach to construction project management. Advanced topics of Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM) and its application in construction project scheduling. Resource allocation and leveling, construction cost control, computer simulation of construction operations, and expert systems construction. 3 s.h.

6952. *Foundation Engineering.* Principles of mechanics of materials applied to foundation problems; stresses and deformations in soils, consolidation theory; shallow and deep foundation design. 3 s.h.

6953. *Flow Through Porous Media.* Analysis of seepage volume and stresses due to flow of water through soils in connection with dams, slopes, excavations, subsurface drainage, and wells. 3 s.h.

6956. *Advanced Soil Mechanics.* Development of shear strength theories, Mohr-Coulomb-Hvorslev equation, critical path concept, stability of slopes, lateral earth-pressure theories, development of bearing capacity equations. Prereq.: CEEGR 4881 or equivalent. 3 s.h.

6957. *Structural Stability.* A study of the elastic stability of engineering structures, beam columns, static buckling of elastic beams, frames, plates, and shells, dynamic stability of beams and plates. 3 s.h.

6958. *Structural Dynamics.* Analysis of the response of structures to air blasts and earthquake motions; development of both the normal mode and frequency response methods in dealing with periodic and nonperiodic excitations. 3 s.h.

6959. *Advanced Steel Design.* Advanced topics in the structural design of girders, frames, and trusses. Light gauge metal structures. Use of modern alloys and hybrid systems. 3 s.h.

6961. *Advanced Concrete Design.* Consideration of advanced design techniques for reinforced concrete members and structures such as composite and prestressed concrete beams, box girders, and slabs. 3 s.h.

6965. *Special Topics.* The application, in civil engineering, of special topics selected by the faculty from fields of current research interest or special emphasis. May be repeated up to 6 s.h. 3 s.h.

6967. *Biological Treatment Processes.* Theory and design of biological processes used in the treatment of municipal and industrial wastewaters, and in the remediation of hazardous wastes. Prereq.: CEEGR 3736. 3 s.h.

6972.* *Advanced Topics in Environmental Engineering.* Advanced concepts related to the transport, reaction,

* additional fee required

phase distribution, and fate of pollutants in both the natural environment and treatment systems. Prereq.: CEEGR 3736. 3 s.h.

6975. *Physical and Chemical Treatment Processes.* Theory and design of physical and chemical processes used in the treatment of water supplies, wastewater, and hazardous wastes. Prereq.: CEEGR 3736. 3 s.h.

6976. *Design of Small Dams.* Flood routing, reservoir engineering. Hydraulic design of small gravity, earth-fill and rock-fill dams, spillways, and energy dissipaters. Prereq.: CEEGR 3717 and 6977. 3 s.h.

6977. *Hydrology.* Precipitation; hydrologic abstractions; runoff; urban and small watershed hydrology; frequency analysis; digital simulation. 3 s.h.

6978.* *Water Resources Planning.* The need and demand for water; project formulation; technical, economic, financial, social, environmental, and political considerations; data requirements; multipurpose projects. Prereq.: ISEGR 3724 or equivalent. 3 s.h.

6979.* *Water Quality Modeling.* Mathematical modeling of physical, chemical, and biological processes in natural systems; development of computer models to simulate the fate and transport of pollutants in lakes, streams, and estuaries; application of models to evaluate water resource management options. Prereq.: CEEGR 3736. 3 s.h.

6989. *Graduate Projects.* Special projects involving research, analysis, design, or other independent investigation, undertaken by the M.S. student under the direction of a graduate faculty member with the approval of the department Chair. Credit will be determined in each case based on the nature and extent of the project. 1-3 s.h.

6990, 6991, 6992. *Thesis.* 2+2+(1-2) s.h.

Communication and Theater

Daniel J. O'Neill, Chair of the Department
2000 Bliss Hall
(330) 941-3631

Communication Studies

5852. *Small Group Communication Theory and Practice* (3 s.h.)
5858. *Practicum* (3 s.h.)
5898. *Seminar in Speech Communication* (3 s.h.)

6945. *Communication for the Classroom Teacher.* The study of communication theory and practice appropriate for the prospective classroom teacher. Theories and application exercises focus on interpersonal, group communication, and classroom speaking. 3 s.h.

Theater

5864. *Advanced Directing* (3 s.h.)

* additional fee required

COMPUTER SCIENCE AND INFORMATION SYSTEMS

Karen L. Duda, Chair of the Department
339 Meshel Hall
(330) 941-3339

5801.* *Software Engineering* (3 s.h.)
5806.* *Operating Systems* (3 s.h.)
5807.* *Compiler Design* (3 s.h.)
5814.* *Computer Architecture* (3 s.h.)
5820.* *Simulation* (3 s.h.)
5822.* *Database Design and Information Retrieval* (3 s.h.)
5823.* *Communication Network Security* (3 s.h.)
5824.* Applied *Artificial Intelligence* (3 s.h.)
5828.* *Computer Network Security* (3 s.h.)
5835.* *Artificial Intelligence* (3 s.h.)
5840. *Theory of Finite Automata* (3 s.h.)
5860.* *Programming Language Structures* (3 s.h.)
5870.* *Data Structures and Algorithms* (3 s.h.)
5881.* *Microcomputer System Architecture* (3 s.h.)
5883.* *Remote Access and Multilayer Switched Networks* (4 s.h.)
5884.* *Building Scalable Networks and Advanced Internetwork Troubleshooting* (4 s.h.)
5895.* *Special Topics* (2-4 s.h.)

6901.* *Principles of Computer Programming.* Significant features of several computer programming languages to fit the needs of graduate students with no previous computer science experience. Programming techniques and problem analysis. Students will do programming projects appropriate for their needs. 3 s.h.

6905.* *Information Structures.* Basic concepts of information: modeling structures, machine level implementation, storage management, programming, language implementation, and run-time structures; sorting and searching. Prereq.: CSCI 3740 and CSCI 3710, or permission of chair. 3 s.h.

6910.* *Computer Software Systems.* Classes of software systems, system structures, systems operations. Resource management routines. Software design. Prereq.: CSIS 6905 or equivalent. 3 s.h.

6915.* *Computer Organization and Architecture.* Organization and architectural design of the subsystems and major functional units of modern digital computers and their interconnections. Prereq.: CSIS 6905 or equivalent. 3 s.h.

6920. *Theory and Practice of Information Systems.* A study of the relationship of information systems to individuals, organizations, and society. A detailed study of the principles, methodologies, and issues associated with designing, implementing, and administering information systems as a resource in a networked, data-driven organization. Prereq: CSIS 2617 or CSIS 6901, CSIS 3722, CSIS 3723. 3 s.h.

6930.* *Formal Languages and Syntactic Analysis.* Study of formal languages, especially context-free languages, and their applications to parsing and syntactic analysis. Prereq.: CSIS 6905 or CSIS 3710. 3 s.h.

6940. *Advanced Network Design and Administration.* Advanced network design, implementation, and administration. Topics include infrastructure and architecture, VLSM, logical and physical designs,

* additional fee required

security issues, voice over IP, client/server networks, and VLANs. Prereq: CSIS 3723 or CSIS 3783. 3 s.h.

6950. *Advanced Database Design and Administration.* Advanced concepts in database design, development, and administration. Database query languages, transactions, and data warehousing. Relational calculus. System analysis, concurrency, backup and recovery, and security issues, advanced models, including distributed, object-oriented, and on-line databases. Prereq: CSIS 3722 or equivalent. 3 s.h.

6951.* *Data Warehousing and Data Mining.* Basic methodology for planning, designing, building, using, and managing a data warehouse. Legacy systems, operational data stores, and data marts. Data mining techniques for visualization and deriving information from a data warehouse for strategic decision making. Prereq: CSIS 6950. 3 s. h.

6961.* *Client-Side Web Development and Programming.* Design and development of interactive, multimedia Web pages. Effective uses of forms, graphics, and animation. Client-side programming tools such as dynamic html, document object model, and JavaScript for graphics and form validation. Storyboarding techniques and user interface design principles. Prereq: CSIS 6920, and either 2617 or 6901. 3 s.h.

6962.* *Server-Side Web Development and Programming.* Configuration of web server software and the use of server-side programming. Server-side scripting in languages such as PHP and Java Server Pages. Database access and drivers. Security issues, including access control and secured transmissions. Prereq: CSIS 3722, 3723, 6920, and either 2617 or 6901. 3 s.h.

6990.* *Computer Science Project.* Report and discussion of individual topics or research projects in computer science. Prereq.: 9 s.h. of computer science courses numbered above 5000. 1-3 s.h.

6995.* *Special Topics in Computer Science.* Special topics in computer science selected by the staff. Prereq.: Permission of chair. 1-4 s.h.

6996.* *Independent Study.* Study under the supervision of a faculty member. Prereq.: Permission of chair. 1-4 s.h.

6999.* *Thesis.* A student may register for 6 s.h. in one semester or for 3 s.h. in each of two semesters. 3-6 s.h.

COUNSELING

Kenneth Miller, Chair of the Department
3305 Beeghly College of Education
(330) 941-3257

5821, 5822. *Seminar in Guidance and Counseling* (1–3 s.h.)
5821G. *Life Span Development and Counseling* (3 s.h.)
5825.* *Group Processes in the School* (2 s.h.)
5879. *Consultation with Gifted/Talented Students and Their Families* (3 s.h.)
5888.* *Introduction to Health and Wellness Counseling* (3 s.h.)
5895. *Counseling Workshop* (1-3 s.h.)
5898. *Orientation and Ethical Issues in Professional Counseling* (3 s.h.)

3967.* *Guidance and Counseling Workshop* 1-3 s.h.

6900.* *Counseling Methods and Practice.* Methods and practices of professional counseling relative to relationship, goals, process, and documentation. Relevant ethical guidelines are stressed. Includes experiential skill training. For Counseling majors or by permission of Department of Counseling. 3 s.h.

6902. *Introduction to Chemical Dependency.* Theory and research on chemical dependency and its effects upon the individual and family. 3 s.h.

6903. *Chemical Dependency Counseling.* Theory and research on chemical dependency with emphasis on assessment and models for treatment and recovery. Prereq.: COUNS 6902. 3 s.h.

6961. *Introduction to School Counseling.* Provides students with an introduction to the foundations of school counseling. Addresses the following topics: history, philosophy, theories, cultural dynamics, classroom management issues, technology applications, assessment and evaluation responsibilities, legal and ethical issues, and current trends in school counseling and educational settings. It further examines the school counselor's role, function, and professional identity as a student advocate, program coordinator, individual and group counselor, and professional consultant. 2 s.h.

6962. *Counseling Theory.* Basic principles of counseling in an educational context. Development of procedural bases for counseling and educationally oriented counseling theory. Ethics and limitations involved in counseling practices. 3 s.h.

6963. *Occupational and Educational Information in Guidance.* Principles of career development and use of educational and occupational information resources in the guidance program. Lecture and discussion are used to explore occupational structure of the United States, sources of educational and occupational information including community resources, and the collecting, classifying, filing, and organization of educational and occupational information for use in the guidance program. 2 s.h.

6964.* *Appraisal Techniques in Counseling.* Overview of the administration, scoring, and interpretation of standardized tests and measures used in counseling practice with specific focus and supervised practice in the administration and interpretation of standardized ability, interest, intelligence, and aptitude tests. 3 s.h.

6965.* *Applied Testing in Career Counseling.* The administration, scoring, and interpretation of selected assessment tools and their application to career counseling. Prereq.: COUNS 6964. 2 s.h.

6968. *Research in Counseling.* The study and application of quantitative/qualitative research in counseling with statistical application component. 3 s.h.

6969. *Administration of Personnel and Guidance Services.* A comprehensive study of the dynamic qualities inherent in planning, management, functioning, and structuring of personnel and guidance services in public schools 2 s.h.

6970. *Counseling and Social Services in the Schools.* Examines the scope and comprehensive developmental programs for counseling and social services in the schools with consideration of need assessment and development of such programs. 2 s.h.

6971. *Human Relations for the Classroom.* The course focuses on skill development in human relations. These skills are studied and integrated with cognate skill development in the classroom, classroom planning and organization conflict resolution, and coping with behavior problems/motivation. Application is made to the classroom environment. 2 s.h.

* additional fee required

6972.* *Career Counseling.* Theories of vocational choice, vocational success and satisfaction, decision-making, and vocational testing. Career counseling as related to the economic and social context. 3 s.h.

6973. *Group Counseling: Theory and Practice.* Theories pertaining to group dynamics, process, interaction, consultation, and counselor intervention. For Counseling majors or by permission of Department of Counseling. 2 s.h.

6973L.* *Group Counseling Lab.* Supervised experience in the use of interventions appropriate to stages of group development. Emphasis will be placed on promoting self-awareness, interpersonal skills, and group skills and techniques. Lab is taken concurrently with COUNS 6973. 1 s.h.

6974. *Case Studies in School Guidance and Field Experience in Community Social Agencies.* Methods of collecting data, synthesis, and interpretation of data about a person and relationship to environment. Real and assumed situations of pupils over an extended period of time are presented for study and analysis. The course includes practical field experience with various community social agencies to acquaint the student with agency services and social case-work methods. Particular emphasis is placed on the disadvantaged and exceptional child. 2-4 s.h.

6975. *Counselor Consultation and Prevention.* This course is a study of the theoretical models of consultation and prevention. Techniques for implementation of consultation and prevention in schools, agencies, and higher education settings will be presented. 3 s.h.

6976. *Social and Cultural Issues in Counseling.* Counseling theory and techniques related to social and economic change, ethnic groups, subculture, issues of sexuality and gender, urban and rural societies, cultural mores, the use of leisure time, and differing life patterns. For Counseling majors or by permission of Department of Counseling. 3 s.h.

6980. *Diagnosis of Mental Disorders.* Overview of Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV-TR) format with emphasis placed on the development of diagnostic skills for the major mental and emotional disorders commonly encountered in social service, educational, and community counseling agencies. 3 s.h.

6982. *Educational Leadership in Primary and Intervention Strategies.* This course will identify mental health issues that impact on individuals, families, and the educational system. Prevention and intervention strategies will be explored as well as issues and procedures of referral. 2 s.h.

6990. *Independent Study.* Individual investigation of advanced topics under guidance of selected staff. Permission of instructor required. 1-3 s.h.

6991. *Family Systems.* Systems theory as applied to family functioning. Major theoretical approaches to family counseling, including ethics and techniques will be addressed. 3 s.h.

7001.* *Counseling Practicum I.* Supervised individual counseling practice with volunteer clients. Focus upon process, clarification, and resolution of counselee goals and counselor self-awareness/evaluation. Students are required to attend a scheduled orientation in the Counseling Center prior to the first class. (Times will be posted in the *Schedule of Classes.*) For Counseling majors or by permission of Department of Counseling. Prereq.: COUNS 5898, 6900, 6962, 6973, 6980. 3 s.h.

7002. *Counseling Practicum II.* Supervised individual and group counseling practices in settings appropriate to student's programs. Requires field placement of 150 hours. Prereq.: COUNS 7001, no PR grades, successful completion of department comprehensive exam, and permission of instructor. 3 s.h.

* additional fee required

7003. *Counseling Children and Adolescents.* Various theories and respective techniques for counseling and psychotherapy with children and adolescents. Research concerning the efficacy of such approaches will also be studied. Prereq.: COUNS 6962 and graduate course in human development. 3 s.h.

7004. *Higher Education Practicum.* This course will provide an orientation to the student services division, as well as offering students the opportunity to gain experience in a higher education setting. Requires field placement. Prereq.: Permission of instructor. 3 s.h.

7005. *Internship in College Student Personnel Work.* Supervised experience in selected college or university settings with involvement in such areas as student development, counseling center, placement center, residence hall counseling, student advisement, and student activities. Prereq: 7004, 7021, and 7023 or 7026. For Counseling majors or by permission of Department of Counseling. 3-6 s.h.

7006. *Guidance in the Classroom.* Studies various factors important to a facilitative climate in the classroom and activities through which elementary counselors and teachers can provide these conditions. Considered as classroom management and discipline techniques based upon learning theory, implementation of democratic group structure for elementary school classrooms, and organized activities designed to promote the development of self-understanding and understanding of others in the child's world. The course requires extensive reading and review of published materials designed for classroom guidance in addition to observation of classrooms and role-playing experiences. For Counseling majors or by permission of Department of Counseling. 2 s.h.

7008. *Assessment for Educational Decision Making.* Assessment procedures used for making leadership decisions in the educational setting. Emphasis will be given to community assessment, identifying high-risk students, and the development of guidance and state testing programs. 2 s.h.

7009. *School Counseling Internship.* Supervised internship in selected school counseling and human services programs. May be repeated to a maximum of 10 semester hours. For Counseling majors or by permission of Department of Counseling. Prereq.: COUNS 7002 and permission of instructor. 4-8 s.h.

7010. *Community Counseling Internship.* Supervised internship in selected community agencies offering counseling and other mental health services. May be repeated to a maximum of 10 semester hours. For Counseling majors or by permission of Department of Counseling. Prereq.: COUNS 7002 and permission of instructor. 4-8 s.h.

7013, 7014, 7015. *Topical Seminar in Counseling.* The course is for practicing counselors and counselor trainees and will include a survey of literature in counseling, contemporary issues, individual and small group study of special problems chosen by staff, for example: research in counseling, counselor values and the counseling process, student values and drug abuse, team approach to counseling services, etc. May be repeated to a maximum of 10 semester hours. Prereq.: Permission of instructor. 1-3 s.h.

7017. *Group Procedures in Counseling.* A laboratory course intended as an experimental introduction to dynamics of groups. Students will participate in community experiences involving the entire class as well as small group activities involving subdivisions of the class. Readings on group processes and involvement in relevant projects and reports are also included in the course. Prereq.: Permission of instructor. 2 s.h.

7021. *Legal and Ethical Issues in Higher Education.* An overview of the legal and ethical issues that relate to the Higher Education setting. Emphasis will be on utilizing legal research resources and developing a judicial decision-making process. 3 s.h.

* additional fee required

7023. *Introduction to Higher Education and Student Personnel Theory.* The history, theory and philosophy of student personnel programs will be presented. A review of the services provided by student personnel workers, relationships among various university departments relative to student personnel services and problems concerning student conduct and responsibilities will be explored. 3 s.h.

7026. *Introduction to Higher Education and Student Services Administration.* This course will provide an introduction to higher education administration and management to acquaint students with the expectations and roles of student services professional. 3 s.h.

7028.* *Advanced Counseling Theory and Treatment Seminar.* Research and discussion on selected counseling theories chosen by staff, e.g., Adler, Rogers, Ellis, Carkhuff, Berne. May be repeated. 3 s.h.

7030. *Human Relations Training for School Personnel.* Designed to improve the interpersonal relationships of administrators, counselors, teachers, and other professional staff. Objectives include examination of personal communication styles, the effect of the individual on task groups, and increasing leadership potential. For Counseling majors or permission of Department of Counseling. 2 s.h.

7031. *Clinical Psychopathology and Treatment.* Counseling theories of abnormal behavior and mental disorders throughout the life cycle. Included are specific personality theories and examinations of empirically-derived treatments. 3 s.h.

7032.* *Clinical Intellectual Testing.* Supervised practice in the administration and interpretation of standardized intelligence and aptitude tests. Prereq.: COUNS 6964. 3 s.h.

7033.* *Personality Objective/Projective Assessment.* Supervised practice in the administration and interpretation of standardized objective and projective measures of personality. Prereq.: COUNS 6964. 3 s.h.

7036. *Consultation and Educational Approaches to Prevention.* The study of consultation theory and models. Included will be educational approaches to prevention of substance abuse, child abuse, family and marriage problems, etc. 3 s.h.

7037. *Counseling and Psychopharmocological Treatments of Mental and Emotional Disorders.* The study of pharmacological, behavioral, cognitive, and emotive strategies and techniques associated with the treatment of mental and emotional disorders commonly encountered in mental health settings. Prereq.: COUNS 6980 or 7013A. 3 s.h.

7038. *Counseling with Couples.* Application of family systems theory to intervention and prevention strategies with couples. 3 s.h.

7039. *Administration and Supervision of Mental Health Services.* A comprehensive study of management, planning, function, personnel structuring, supervision, and counseling services in a mental health setting. 2 s.h.

7040.* *Supervision Practicum.* Theory and practice of counselor supervision. Includes practicum assignment in counselor education. For Counseling majors only and by permission of Department of Counseling. Prereq.: COUNS 7010. 3 s.h.

7041. *Clinical Counseling Practice III.* Laboratory experience in the evaluation and treatment of mental and emotional disorders, including the development and implementation of a treatment plan, assessment and reporting of treatment program, and referral procedures. Prereq.: COUNS 7010 or permission of instructor. 3 s.h.

7050.* *Clinical Counseling Internship.* Supervised experience in Community Counseling Clinic offering diagnosis and treatment of mental and emotional disorders. May be repeated. For Counseling majors or by permission of Department of Counseling. Prereq.: COUNS 7010.
3 s.h.

7060.* *Thesis Research.* Design, proposal, completion and reporting of scholarly research deemed acceptable by the department faculty. For Counseling majors or by permission of Department of Counseling. Prereq.: COUNS 6964, 6968, or permission of Department Chair.
1-6 s.h.

CRIMINAL JUSTICE

James Conser, Interim Chair of the Department, 2004-2005
2093 Cushwa Hall
(330) 941-2381

Tammy A. King, Chair of the Department
2087 Cushwa Hall
(330) 941-3279

5802. *Corrections Law and Liability* (3 s.h.)
5820. *Advanced Legal Research* (3 s.h.)
5825. *Criminal Procedures and Constitutional Issues* (3 s.h.)
5826. *Forensic Science and the Criminal Justice System* (3 s.h.)
5831. *Violence in America* (3 s.h.)
5865. *Gathering and Using Information in Criminal Justice* (3 s.h.)
5875. *The Juvenile Justice System* (3 s.h.)
5892. *Comparative and International Criminal Justice Systems* (3 s.h.)

6910. *Law and Criminal Justice.* A historical analysis of criminal law as a social control. An overview of substantive criminal law and criminal procedural law in the United States. 3 s.h.

6915. *Advanced Criminology.* A comprehensive analysis of the causes of crime from an interdisciplinary perspective. Major criminological theories are considered in light of contemporary empirical research. Prereq.: CRJUS 2630
3 s.h.

6920. *Criminal Justice Studies, Practices and Theories.* A critical analysis of the field of criminal justice studies including crime statistics, crime causation, the criminal justice process, and the agencies involved. Prereq.: CRJUS 1500.
3 s.h.

6925. *Administration and Management Theory.* Administration and management theory as applied to criminal justice agencies. Includes the functions of the executive, the nature of authority and leadership, organizational communication, and theories of employee motivation. 3 s.h.

6940.* *Statistical Techniques in Health and Human Services.* A consideration of the courses of statistical information in the human resource systems and the limits of such data, with primary emphasis upon multivariate statistics and their application to the field. Prereq.: CRJUS 6942 or permission of instructor.
3 s.h.

6942.* *Research and Statistics in Health and Human Services.* A consolidated statistical and research course in Human Services to: design and use qualitative and quantitative research; use and interpret descriptive and inferential statistics, and evaluate the research of others. Prereq.: CRJUS 3710 and CRJUS 3712 or permission of instructor.
3 s.h.

* additional fee required

6945. *Research Methods in Health and Human Services.* An analysis of the design and execution of both quantitative and qualitative research in the human services; the development of research designs most useful to human services research problems. Prereq.: CRJUS 6942 or permission of the instructor. 3 s.h.

6950 (A-Z). *Selected Topics Seminar in Criminal Justice.* Addresses specific topics relating to the crime problem and the criminal justice process. The topics may vary from semester to semester and will be announced prior to enrollment. This course is repeatable provided it is on different topics. 3 s.h.

6955. *Independent Study.* Study under the personal supervision of a faculty member with the approval of the graduate director. May be repeated once. 3 s.h.

6957. *Readings in Criminal Justice.* Extensive reading assignments in the student's interest area under the supervision of a graduate faculty member. Enrollment in this course must have the approval of the graduate director. May be repeated for no more than a total of 6 s.h. 1-4 s.h.

6960. *Program Planning and Evaluation.* A systematic review and evaluation of human services programs, with special attention to the posting of questions in context; questions relating to the selections of design, method, and process of summative evaluation and assessing the effectiveness of programs. 3 s.h.

6970. *Applied Police Management.* Systematic examination of the principles and practices related to the management of police organizations. Examples will reflect problems of the urban and suburban environments, relationships with political entities, and internal control. 3 s.h.

6971. *Human Resources in Policing.* Evaluation of police personnel systems; employment qualifications, psychiatric screening, polygraph examination, minority recruitment; police cadet systems, personnel costs, educational requirements, lateral entry, mandated state minimum training standards, and federal involvement in police manpower. 3 s.h.

6980. *Managing Correctional Operations.* Historical review of corrections in the United States. Modern Theories of correctional administration and organization in both facilities and community settings. Special focus on: financial operations, contagious illnesses, security, staff management, corruption, programming, architecture, hostage situations, and community concerns 3 s.h.

6981. *Correctional Case Management.* Case management, pre-sentencing investigation, classification, and risk assessment. Analysis of theories of rehabilitation as applied in corrections. Special focus on: training; recreation; health care and mental health services; religious programs; and specials needs offenders including sexual and drug offenders. 3 s.h.

6990. *Criminal Justice Public Policy Seminar.* Types of policy and how policies are formulated are covered. The evaluation of policy, with attention to what constitutes good public policy. Special attention is given to the impact of crime control policies, particularly crime legislation and current laws. 3 s.h.

6995. *Field Experience in Criminal Justice.* Supervised experience in an applied criminal justice setting. Prereq.: Majority of core and track courses completed and the recommendation of student's committee and approval by graduate director, permit required. 2-4 s.h.

6998. *Graduate Paper.* Graduate level research and a comparable paper under the supervision of the student's major professor. 2 s.h.

6999. *Research and Thesis.* 1-6 s.h.

* additional fee required

EARLY AND MIDDLE CHILDHOOD EDUCATION PROGRAM
(SEE TEACHER EDUCATION)

ECONOMICS

Tod Porter, Chair of the Department
303 DeBartolo Hall
(330) 941-3428

5801. *Economics of Industrial Organization* (3 s.h.)
5806. *History of Economic Thought* (3 s.h.)
5809. *Current Problems in Money, Banking, and Financial Markets* (3 s.h.)
5811. *International Trade* (3 s.h.)
5812. *International Finance* (3 s.h.)
5822. *Urban and Regional Economics* (3 s.h.)
5824.* *Applied Time Series Analysis of Economic and Business Data* (3 s.h.)
5831. *Labor Markets* (3 s.h.)
5853.* *Topics in Quantitative Econometrics* (3 s.h.)

6900. *Statistical Problems.* A survey of the fundamental statistical techniques used in business with special emphasis on interpreting the results generated by statistical software. Techniques covered: hypothesis tests of means and proportions; estimation; chi-square tests; analysis of variance; correlation; and regression. (Not applicable toward the M.A. in Economics.) 3 s.h.

6901. *Basic Economic Analysis.* An introduction to micro and macroeconomics with emphasis on the use of economic theory in business decision-making. This course is designed for professionals in business and other related areas with no previous background in economics. (Not applicable toward the M.A. in Economics.) 3 s.h.

6904. *Quantitative Methods for Economics.* A course designed to provide graduate students in economics with an opportunity to acquire the necessary skills in using the quantitative methods that are required to complete graduate-level economic theory and econometrics courses successfully. The course introduces the basic concepts and procedures of differential and integral calculus that are used in economic analysis, as well as the fundamental probability and statistics which are needed in the study of econometrics. 3 s.h.

6912. *Microeconomic Theory.* Study of demand and supply, consumer theory, the theory of the firm, various market structures, and Pareto efficiency. 3 s.h.

6915. *Health Policy.* A theoretical and empirical analysis of the health care sector. Topics include the demand for health care and health insurance; the perverse incentives of health insurance; moral hazard; physician and hospital behavior; and the role of competitive markets in the delivery of health care. Special emphasis is placed on the analysis of public policy, including financing and regulating the health care industry. Prereq.: ECON 6901 or equivalent. 3 s.h.

6922. *Macroeconomic Theory.* Examines models used to determine the value of various aggregate economic variables, such as the price level, national income, employment, interest rates, and wage rates. 3 s.h.

6939. *The Economics of Financial Markets and Institutions.* Study of the institutions, instruments, and markets that facilitate the distribution of financial resources throughout the economy. The course

* additional fee required

discusses the money, capital, and commodity markets. Also, the topics of accessing default risk and hedging against market risk are discussed. Prereq.: ECON 6901 or equivalent. 3 s.h.

6940. *Financial Economics.* Study of various topics including risk and the selection of the optimal monetary control tool, politics and monetary control, the financial firm as an optimizing institution and portfolio theory. Prereq.: ECON 6939 or permission of the instructor. 3 s.h.

6941. *Monetary Economics.* Study of the empirical analysis using multivariate time series methods, including the topics of distributed lag models, selection of the appropriate lag structures, causation versus correlation, and cointegration. Prereq.: ECON 6922 or permission of the instructor. 3 s.h.

6945. *Public Finance.* Study of the role of the government in the economy. The topics covered will include expenditure analysis, theories of taxation, provision of public goods, fiscal federalism, and public choice theory. Prereq.: ECON 6912 3 s.h.

6946. *State and Local Public Finance.* Study of the special problems of financing sub-national governments. Topics include: the optimal level of local government spending; public choice through voting; public choice through migration; the combination of taxes used by state and local governments; the theory of tax incidence; the effect of intergovernmental grants; and expenditure patterns of local governments. Special attention will be given to local governmental grants, and expenditure patterns of local governments as well as local government's role in financing education and transfer payments. Prereq.: ECON 6901 or equivalent. 3 s.h.

6950. *Labor Market Theory.* A theoretical analysis of the operation of the labor market. The topics covered will include the demand for labor; supply of labor; household production; labor market discrimination; the effects of transfer programs and the role of unions in the labor market. Prereq.: ECON 6901 or equivalent. 3 s.h.

6952. *Transfer Programs and Poverty.* A study of poverty and the effectiveness of antipoverty programs. Topics include: defining and measuring poverty; trends in the rate of poverty and the distribution of income; causes of poverty; models of discrimination; effectiveness of government training programs; transfer programs and their effect on labor supply; and the financial stability of the Social Security retirement program. Prereq.: ECON 6901 or equivalent. 3 s.h.

6955. *Antitrust and Market Structure.* Study of the pivotal court decisions that have determined the direction of antitrust law. Concentration is on the economic analysis of court decisions and the impact of the court's decision on market structure. Topics covered include price fixing; mergers; monopolization; and exclusion practices. Prereq.: ECON 6901 or equivalent. 3 s.h.

6970. *Economics Internship.* The practical application of economic knowledge and statistical skills in the workplace. Students assist participating professionals in various kinds of industrial, financial, and public service organizations. Prereq.: Economics 6904, 6912, and 6922. By permit only. May be repeated for a maximum of 3 s.h. 1-3 s.h.

6976. *Econometrics.* Study of the fundamentals of econometric techniques that are useful for estimating causal economic relationships. The objectives include (1) analysis of the effects of exogenous factors on the variable whose behavior we seek to explain, (2) testing of hypotheses about new and existing economic theories, and (3) forecasting estimated economic relationships beyond the sample period for the purpose of planning and control. The course will focus on the practice of econometrics with extensive applications to a variety of real world problems in many areas of economics. Prereq.: ECON 6904. 3 s.h.

6981. *International Finance.* Study of the foreign exchange market; the business and economic

consequences of changes in domestic and foreign banking; central banking; and financial market policies. The development of various exchange rate standards, foreign currency markets, and the eurocurrency and eurobond markets. Prereq.: ECON 6901 or equivalent. 3 s.h.

6985. *International Trade and Development.* Study of the determination of a country's exports and imports; the social welfare consequence of trade; free trade versus restricted trade; preferential trading agreements; and the current composition and direction of US trade. Prereq.: ECON 6901 or equivalent. 3 s.h.

6990. *Special Topics in Economics.* Special interest topics selected by the staff in the following areas: economic education, economic theory, and applied economics analysis. May be repeated to a maximum of six hours toward a graduate degree. 1-3 s.h.

6998.* *Research Seminar.* Applied quantitative research techniques will be discussed. Students are required to undertake an original quantitative research project in a field of economics and write a paper summarizing their results. Prereq.: ECON 6912 and 6922. Course may be taken concurrently with ECON 6976. 3 s.h.

6999. *Master's Thesis.* A research project undertaken under the supervision of a member of the department on the graduate faculty. Prereq.: ECON 6912, 6922, and 6976. 1-6 s.h.

EDUCATIONAL ADMINISTRATION

Robert J. Beebe, Chair of the Department
4101 Beeghly Hall
(330) 941-1437

6915. **Learning, Teaching and Instructional Leadership.* Leadership behaviors and expectations intended to build teacher commitment, increase teaching competence and improve the learning climate of students. The importance of and role which adult development and learning play in teacher leadership regarding curriculum and instruction decisions are stressed. 3 s.h.

6931. *Leadership in Educational Organizations: Theory to Best Practices.* Significant theories, research and professional practices in the leadership of schools and school systems. Detailed analysis of primary sources and application of sources to reflection on issues and problems of administrative practice. 3 s.h.

6933. *Educational Policy, Politics, and Change.* Explores who governs America's schools. Provides an introduction to schools as political systems and the values that shape educational politics and policy making. Examines the role of school leaders as agents of change and alternative change models and strategies. 3 s.h.

6947. *School Building Leadership: Models and Processes.* Theories of leadership and schooling that provide future principals with guides for action and behavior will be presented. Theories that shape personal decision-making processes which build schools as learning communities will be presented. 3 s.h.

6949. *Legal and Ethical Issues in Public Administration.* Defines law and professional ethics and discusses the role of each in public decision making. Explores the status and application of the law in various areas of school operations through the reading of cases, statutes, and constitutional provisions. 3 s.h.

6952. *School Finance, Resource Planning, and Management.* An analysis of school funding on a state and

* additional fee required

local level. School budgeting, site-based management and school business practice are major topics. An action research project is part of the course requirement. 3 s.h.

6954. **Marketing and Community Relationships.* Stresses effective communication that supports the marketing of school purposes and programs. Leadership skills which build community support and which recognize the value of message delivery to targeted audiences in the community will be related to the marketing of schools. 3 s.h.

6955. *Professional Development and Human Resources.* In-depth examination of policies and practices designed to reconcile the interests of schools and the people who make them up. Topics include professional and staff development, equal employment, position description, recruitment, selection, performance appraisal, removal, compensation and emerging issues. 3 s.h.

6975. *Introduction to Administration Clinical Experience.* Differentiated by school level. First clinical experience for candidates for the Master of Science in Education in Educational Administration designed as an exploratory experience. Students complete tasks in eight competency areas in the master syllabus. Prereq: Completion of five of the following seven courses: EdAdm 6915, EdAdm 6931, EdAdm 6933, EdAdm 6947, EdAdm 6949, EdAdm 6954, EdAdm 6955 and successful passing of all parts of the comprehensive examination. 3 s.h.

6982. *Independent Study/Action Research.* Individual investigation of advanced topics under the guidance of selected departmental faculty. May be repeated. 1-3 s.h.

6990. *Seminar in Educational Administration.* A seminar designed for the development of particular skills and/or perspectives on a topic related to educational administration. 1-3 s.h.

6995. *Workshop in Educational Administration.* A workshop designed for the development of particular skills and/or perspectives on a topic related to educational administration. 1-3 s.h.

7014. **Systematic Use of Information for Continuous School Improvement.* Information systems concepts: analysis, design, implementation and evaluation applied to individual, school, and program evaluation and improvement. Experience with information retrieval and synthesis from local and state educational databases. An action research project is a major course requirement. 3 s.h.

7018. *School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies.* Examines school discipline and youth problems that threaten student health, welfare, and safety and research-proven school programs for addressing such problems. Emphasizes the role of school leaders in developing and implementing comprehensive policies and student support programs. 2 s.h.

7022E. *Clinical Experience: Elementary Principalship.* Completed in a school covered by an elementary teaching certificate or license. Second administrative clinical experience designed to highlight building level tasks. Students are required to complete six tasks from the master syllabus and an integrated project, at the direction of an elementary building principal. Prereq: Completion of three of the following four courses: EdAdm 7014, EdAdm 7018, Sped 7077, Emce 6921. 3 s.h.

7022M. *Clinical Experience: Middle School Principalship.* Completed in a school covered by a middle school teaching certificate or license. Second administrative clinical experience designed to highlight building level tasks. Students are required to complete six tasks from the master syllabus and an integrated project, at the direction of a secondary building principal. Prereq: Completion of three of the following four courses: EdAdm 7014, EdAdm 7018, Sped 7077, Temc 6941. 3 s.h.

7022S. *Clinical Experience: Secondary Principalship.* Completed in a school covered by a secondary teaching certificate or license. Second administrative clinical experience designed to highlight building level tasks. Students are required to complete six tasks from the master syllabus and an

integrated project, at the direction of a secondary building principal. Prereq: Completion of three of the following four courses: EdAdm 7014, EdAdm 7018, Sped 7077, Seduc 6931.
3 s.h.

7024. *Collective Bargaining and Systems Issues in Human Resources Administration.* Human resources issues from the central office perspective. Statutory, regulatory, and political contexts for public sector collective bargaining. Conceptual and experiential treatment of traditional and interest-based bargaining. Approaches to human resources policy development. Grievances and management of written agreements. 3 s.h.

7025. *Educational Governance: Advanced Law and Policy Seminar.* Explores emergent legal developments affecting P-12 education systems and the role and limits of the law in promoting educational emergent reform. Reviews social science literature on governance issues and factors that affect the nature, degree and rate of organizational compliance. 3 s.h.

7026.* *Technology and Facilities for Learning Organizations.* Due to increasing demands upon the educational facilities by the instructional use of technology and the need to prepare students for the world of work, facility management and integration of technology into the facility are examined.
3 s.h.

7035. *The Superintendency and Evolving Ways of Looking at Leadership.* This course examines the role of superintendent in the administration of schools. Students will study leadership in complex social organizations so that they can apply current theory and research to their roles in complex chaotic educational environments. 3 s.h.

7040. *Clinical Practice for the Administrative Specialist.* Candidates for administrative specialist license in areas of Curriculum, Instruction, and Professional Development or Pupil Services Administration develop an individualized clinical plan and complete a set of tasks and an integrated project aligned with professional standards under the guidance of an appropriately licensed cooperating administrator. Preteq: Candidates must have completed all or be currently enrolled in remaining courses that comprise the requirement of respective specialist license. 3 s.h.

7050. *Clinical Experience: Superintendency.* Candidates for the superintendency license are required to complete four tasks from the master syllabus at the district-wide level, supervised by a school superintendent. A major component is the complete analysis of the financial structure of the candidate's school district, and a system-level integrated project. Prereq: Completion of three of the following four courses: EdAdm 7024, EdAdm 7025, EdAdm 7026, EdAdm 7035 and two years experience in a building level administrative capacity or equivalent. 3 s.h.

8100. **Professional Skill Development Seminar.* A doctoral student induction program which includes intensive writing, research and technology strands. The purpose is to assess the student's abilities as a doctoral student and begin the appropriate strategies necessary for successful completion of the doctoral program. Prereq.: Admission to the Doctoral Program. 3 s.h.

8122. *Leadership in Education.* In this course students will critically analyze contemporary ways of thinking about leadership. As students examine their present paradigm of leadership, they will also analyze a reconfiguration of leadership that reflects developments in the new sciences and other fields. Prereq.: Admission to the Doctoral Program. 3 s.h.

8125. *Educational Politics and Policy Making in the United States.* Reviews professional literature on politics and policy making at the local, state and federal level including the values, institutional actors, processes and interest groups that shape educational policy. Explores means of identifying problems, analyzing policy alternatives, and measuring policy outcomes. Prereq.: Admission to Doctoral Program. 3 s.h.

* additional fee required

8140. *Seminar in Administrative Theory.* Extension of the administrator's abilities to analyze professional problems, develop leadership strategies, and exercise sound decision making. Nontraditional (non-functionalist) theories are stressed, with emphasis on deconstructing and purposefully framing educational issues. Case studies strengthen the application of the theories. Prereq.: Admission to the Doctoral Program. 3 s.h.

8155. *Seminar in Current Educational Issues.* Informing educational leaders about contextual issues of schools is necessary in order to understand and recognize that school reform, both at the time of its proposal and during the developmental stages of its implementation, is intended to ameliorate educational problems. Prereq.: Admission to the Doctoral Program. 3 s.h.

8180. *Special Topics in Educational Leadership.* Selected topics for a focused study on problems, issues, or concerns that relate to educational leadership. Prereq.: Admission to the doctoral program. 1-3 s.h.

8185.* *Seminar in Educational Research/Dissertation Proposal.* The purpose of this course is to gain knowledge and skills in developing a research question and an appropriate methodology so that Chapters I and II of a doctoral dissertation can be completed. Prereq.: Admission to the doctoral program. 3 s.h.

8190. *Dissertation Study.* The culminating requirement of the Ed.D. program; the design, proposal, conduct, reporting, and defense of scholarly research that addresses a meaningful topic derived from and contributing significantly to the literature of the field. Prereq.: Completion of doctoral comprehensive examination. 1-9 s.h.

Electrical and Computer Engineering

Jalal Jalali, Chair of the Department
2046 Moser Hall
(330) 941-3012

5800. *Special Topics.* (1–3 s.h.)
5807.* *Advanced Digital and Analog Circuits* (3 s.h.)
5808.* *Signals and Systems* (3 s.h.)
5816.* *Theory and Fabrication of Solid-State Devices* (3 s.h.)
5817.* *Sensor Design and Application* (3 s.h.)
5840.* *Electric Power Systems* (4 s.h.)
5850.* *Communications Applications* (3 s.h.)
5860.* *Energy Radiation and Propagation* (3 s.h.)
5879.* *Computer-Aided Design* (3 s.h.)
5890.* *Power Electronics* (4 s.h.)

6900. *Seminar.* May be repeated once. 1-3 s.h.

6901.* *Control Systems 1.* Fundamental concepts in linear system theory: matrix algebra, linear vector spaces, linear operators. Input-output and state-space models for continuous-time and discrete-time systems; canonical forms. Solutions of state space equations. Characteristics of linear systems: stability; controllability and observability. 3 s.h.

6902.* *Control Systems 2.* State-variable feedback techniques; design of state estimators. Design using polynomial equations. Design of digital controllers: discrete equivalents and direct methods.

Introduction to implementation of digital control systems. Prereq.: ECEGR 6901.
3 s.h.

6903.* *Advanced Control Systems.* Introduction to nonlinear control systems: basic nonlinear phenomena, describing functions, Lyapunov stability, linearization techniques. Introduction to linear optimal quadratic control; stochastic modeling and Kalman filtering. Prereq.: ECEGR 6902
3 s.h.

6911*, 6912.* *Electromagnetic Fields 1 and 2.* Solution of boundary value problems in general form. Laplace, Poisson, and diffusion and wave equations in orthogonal coordinate systems.
3+3 s.h.

6931.* *Digital Systems Engineering 1.* Boolean algebra, logical mapping; combinational systhesis; analog and digital conversion: coding structures; hybrid numerical circuitry. Structures of combinational circuit systhesis; logical circuit methods of Quine, Huffman, Mealy, Moore: Boolean matrices, bilateral and cascade networks. 3 s.h.

6932.* *Digital Systems Engineering 2.* Continuation of ECEGR 6931 with emphasis on sequential systhesis. Prereq.: ECEGR 6931. 3 s.h.

6981.* *Electric Power System Engineering.* The formulation of equations to study electric power network problems, including feeders, power flow, short circuits, protection systems, and stability. The study of power system over-voltages and transients caused by short circuits, switching, and lightning. The application of numerical techniques to study and design special projects using digital computations. 3 s.h.

6983.* *Modern Power Sources.* Analytical and descriptive study of modern power plants. Combustion and environmental problems with fossil-fueled power plants. Electromagnetic circuits and devices with emphasis on the principles of electromechanical energy conversions. Cross listed with CHEGR 6983 and MECH 6983. 3 s.h.

6985.* *Electromechanical Motion Devices.* Thermodynamics of batteries, and of electric and fuel cells. Power from nuclear isotopes. Features common to rotating electromagnetic fields. Analysis and design of electromechanical power components. Logic circuit design with I/O structure and interface. Cross-listed with CHEGR 985 and MECH 985. 3 s.h.

6986.* *Power Electronics Circuits and Devices.* The design and analysis of power electronic circuits using solid-state switching devices. Topics include power semiconductor diodes and transistors, diode circuits and controlled rectifiers, thyristors, communication techniques, ac voltage controllers, and switching regulators, with applications. 3 s.h.

6987.* *Power Electronics and Industrial Drives.* The design and analysis of power electronic circuits and systems, static switches, power supplies, ac and dc drives, and protection of power electronic devices and circuits. 3 s.h.

6990.* *Thesis.* 1-6 s.h.

Engineering and Technology

6920.* *Project Planning and Management.* Methods for planning, organizing, scheduling, supporting, and controlling projects. Network techniques, including CPM, PERT, and time-cost trade-off analysis. Techniques for the estimation of time, manpower, and other resource requirements of the projects, including economic and statistical analysis, forecasting, learning curves, and line balancing. Management of time and other resources involved. Case studies and utilization of computer resources for the analysis and presentation of projects. Prereq.: Graduate standing or permission of instructor. 3 s.h.

* additional fee required

6921.* *Engineering Statistics.* Development and application of stochastic models of engineering systems. Elementary probability models applied to decision making under uncertainty. Development and use of theoretical probability distributions for describing stochastic systems. Models for point and confidence interval estimation and models for correlation analysis applied to engineering problems. Prereq.: MATH 2674. 3 s.h.

6922.* *Engineering Systems Analysis.* Formulation and solutions of mathematical models in the engineering field. Analysis includes frequency and time response, boundary value problems, and state space variables. 3 s.h.

6923.* *Information Technology Tools For Engineers.* Accessing information through library databases, newsgraphs, WWW sites, etc. Using synchronous and asynchronous communication through web-based technologies. Information content creation, HTML client/server computing and their application in the engineering domain will be covered. 3 s.h.

6924.* *Computer Based Tools For Engineers.* Computer simulation of engineering models used in different engineering disciplines. The computer tools will include mathematical solvers and spreadsheets. Numerical solutions of linear and non-linear equations and ordinary and partial differential equations. Prereq.: ENGR 6922. 3 s.h.

6925.* *Applied Environmental Management.* Practical application of environmental management practices in industry, with emphasis on regulatory compliance and international standards (ISO 14000). Areas of focus include monitoring of emission sources, air and water pollution control, solid and hazardous waste management, pollution prevention, employee health and safety, and property development and transfer. 3 s.h.

ENGLISH

Gary Salvner, Chair of the Department
202 DeBartolo Hall
(330) 941-3415

6900. *Methods of Literary Research.* Basic concepts and methods of literary research and analysis. 3 s.h.

6901. *Methods of Composition Research.* Theories and methods of composition research; emphasis on strategies for conducting, analyzing, and writing about classroom and workplace studies. 3 s.h.

6902. *Literary Thought.* May focus on particular theoretical approaches or provide an overview of literary criticism. May be repeated once with a different topic. 3 s.h.

6906. *Teaching of Literature.* Problems, issues, practices, and research which affect the teaching of literature at various grade levels and in college courses. 3 s.h.

6907. *Teaching of Writing.* Problems, issues, practices, and research which affect the teaching of writing at various grade levels and in college courses. 3 s.h.

6911. *The Medieval World.* Study of selected literary works reflecting medieval thought and culture. May be repeated once with a different topic. 3 s.h.

6912. *Sixteenth- and Seventeenth-Century British Studies.* Non-dramatic literature of the British Renaissance. May be repeated once with a different topic. 3 s.h.

6913. *Shakespeare and Renaissance Drama.* Varying emphases on the dramatic works of Shakespeare and/or his contemporaries. May be repeated once with a different topic. 3 s.h.

6914. *Restoration and Eighteenth-Century British Studies.* Prose, poetry, and/or drama of the period studied in historical and cultural context and from various critical perspectives. May be repeated once with a different topic. 3 s.h.

6915. *Early American Studies.* Prose, poetry, and/or drama from the colonial period up to the early nineteenth century examined in their historical and cultural contexts. May be repeated once with a different topic. 3 s.h.

6916. *Nineteenth-Century British Studies.* Prose, poetry, and/or drama of the period studied in historical and cultural context and from various critical perspectives. May be repeated once with a different topic. 3 s.h.

6917. *Nineteenth-Century American Studies.* Examines nineteenth-century American literature and culture through particular themes, genres, styles, periods, and/or figures. May be repeated once with a different topic. 3 s.h.

6918. *Studies in Children's Literature.* Contemporary children's literature. Emphasis may be on development, trends, critical standards, cultural context, classroom selection and use. May be repeated once with a different topic. 3 s.h.

6919. *Studies in Young Adult Literature.* Contemporary young adult literature. Emphasis may be on development, trends, critical standards, cultural context, classroom selection and use. May be repeated once with a different topic. 3 s.h.

6920. *Twentieth-Century British Studies.* Prose, poetry, and/or drama of the period studied in historical and cultural context and from various critical perspectives. May be repeated once with a different topic. 3 s.h.

6921. *Advising Student Publications.* A study of the role and responsibilities of the publication advisor in high school and college. Topics include the unique legal and ethical concerns of student publications, the training of writers and editors, the relationship of the student press to the academic administration, and a range of publication-management concerns. 3 s.h.

6922. *Twentieth-Century American Studies.* Examines works in relation to the history and social and cultural developments of the period. Nonliterary texts may be included, such as film, visual arts, and music. May be repeated once with a different topic. 3 s.h.

6923. *Working Class Literature.* A study of working-class literature, culture, and artistic production, with emphasis on the literary history, the material conditions, and the intersection of race, ethnicity, gender, and sexual orientation in the works of literature by and about the working class. 3 s.h.

6927. *Historical Survey of Literature for Young People.* A survey of the historical developments from the eighteenth through mid-twentieth centuries in British and American literature for young people. 3 s.h.

6935. *Studies in Romanticism.* Prose, poetry, and/or drama of the period studied in historical and cultural context and from various critical perspectives. May be repeated once with a different topic. 3 s.h.

6943.* *Technical Communication.* In-depth discussion of audience, format, document design, and corporate structure. Focus on refining skills and providing theoretical support for practical applications. Prereq.: ENGL 3743 and ENGL 4849 or 6949. 3 s.h.

* additional fee required

6944.* *Document Design and Production.* Application of computer software and hardware to design and produce professional/technical documents. 3 s.h.

6946. *Historical Editing.* Project-based approach to theoretical and practical aspects of editing historical and literary documents for both print and digital contexts. Topics include document selection, transcription, verification, and annotation, as well as the implications for teaching and learning using traditional print and electronic archives and texts. Cross-listed with HIST 6946. 3 s.h.

6949. *Professional and Technical Editing.* A study of the skills needed to make appropriate changes in the content, grammar, mechanics, style, format, and organization of manuscripts for scholarly, trade, journalistic, and other professional publications. The course deals with stages in the publishing process, hard-copy versus on-line editing, mechanical and substantive editing, and the use of house and press styles. 3 s.h.

6950. *Sociolinguistics.* An investigation of the relationship between language and society. Includes discussion of dialects and standard languages, language planning, linguistic identity, multi- and bilingualism, class, gender, ethnicity, and social interaction. 3 s.h.

6951. *Language Acquisition.* A study of research on the learning of first and second languages. Topics include developmental sequences, learner variables, critical periods and conditions for learning, and the roles of input and interaction. The course is designed for those planning to teach languages. 3 s.h.

6953.* *Publications Issues and Management.* Exploration of the issues involved in managing and producing professional publications, including publications in students' own fields. Focus on organizational, editorial, and authorial voice; editorial policies; audience analysis; and the processes by which publications are conceived, designed, and produced. 3 s.h.

6955. *Advanced Linguistics.* In-depth study of selected issues in contemporary linguistic theory. 3 s.h.

6956. *TESOL Methods.* Introduction to teaching English as a Second Language (ESL), including reading, writing, listening, and speaking. Focus will be on using communicative methods with non-native speakers. 3 s.h.

6957. *TESOL Practicum.* Supervised teaching in an English as a Second Language (ESL) program. Additionally, weekly seminar attendance is required. 3 s.h.

6958. *English Grammar.* Descriptions and analysis of English grammar structure. 3 s.h.

6960. *Studies in Linguistics.* Examines a specific topic such as stylistics, semantics, sociolinguistics, second language acquisition, TESOL, or computational linguistics. May be repeated twice with a different topic. 3 s.h.

6963. *Perspectives in Multicultural Studies.* An advanced study of primary and secondary texts from the field of multicultural literature and multicultural education. The course will emphasize the formation of social identities, the intersections of race, class, and gender, relationships among dominant and non-dominant subjects in US and other global cultures. The course will pay special attention to the theory and application of multiculturalist paradigms to education, professional work, and graduate study. May be repeated once with a different topic. 3 s.h.

6965.* *Studies in Film.* Analysis of motion pictures and their creators; topics may include classic and contemporary styles, genres, and methods of production, as well as film theory and criticism. May be repeated once with a different topic. 3 s.h.

* additional fee required

6966. *Writing of Poetry.* Discussion and application of approaches, techniques, and forms involved in the writing of poetry. May be repeated once with a different topic. 3 s.h.

6967. *Writing of Prose.* Discussion and application of approaches, techniques, and forms involved in the writing of fiction and/or nonfiction. May be repeated once with a different topic. 3 s.h.

6968. *Studies in Literary Form.* Examines forms such as poetry, the novel, the short story, essay, biography, autobiography, or travel literature. Emphasis may be on definition, development, cultural context, figures, or themes. May be repeated once with a different topic. 3 s.h.

6974. *English Education Workshop.* Intensive study and activity in a topic related to teaching English and the language arts. May be repeated. Grading is S/U. Does not count toward degree credit. 1-3 s.h.

6975. *English Education Seminar.* Approaches to teaching English and the language arts. May be repeated once with a different topic. 1-3 s.h.

6976. *Studies in English Education.* Theories, issues, and/or criticism in the teaching of English. May be repeated once with a different topic. 3 s.h.

6989. *Teaching Practicum.* Techniques and strategies for teaching college composition, including course design and classroom practice. Required of and limited to first-year English Department graduate assistants. To be repeated for two semesters for a total of 3 semester hours. Grading is S/U. Does not count toward degree credit. 2+1 s.h.

6990. *Special Topics.* May be repeated once. 3 s.h.

6992.* *Professional Communication.* Focus on a selected topic in technical writing or professional communication, e.g. proposal writing, science writing, computer documentation, nonfiction prose. May be repeated once with a different topic. 3 s.h.

6993. *Discourse Theory.* Examination and discussion of contemporary theories of discourse analysis, with some attention to the history and development of rhetorical theory. 3 s.h.

6997. *English Internship.* Supervised work-and-learning experience in English under the direction of an English department faculty member and an employee of a participating firm. Ten to twenty hours a week of student time are expected. Enrollment is contingent upon the availability of internships. Students are selected on the basis of personal qualifications, including GPA, courses taken, recommendations, and an interview. EITHER 6997 or 6998 (Professional Writing Internship) may count toward the degree—not both. 1-3 s.h.

6998. *Professional Writing Internship.* Supervised work-and-learning experience in professional communication under the direction of a University faculty member and an employee of a participating firm. Ten to twenty hours a week of student time are expected. Enrollment is contingent upon the availability of internships. Students are selected on the basis of personal qualifications, including GPA, courses taken, recommendations, and an interview. EITHER 6997 (English Internship) or 6998 may count toward the degree—not both. 1-3 s.h.

6999. *Thesis.* Prereq.: Thesis proposal accepted by departmental committee. 1-3 s.h.

Graduate Certificates in Professional Writing and Editing, Teaching of Writing, Literature for Children and Young Adults, and Teaching English to Speakers of Other Languages (TESOL) are available through the Department of English. Please see the appropriate information in the **Graduate Certificates** section of this catalog.

* additional fee required

ENVIRONMENTAL STUDIES (SEE GEOLOGICAL & ENVIRONMENTAL SCIENCES)

FINANCE (SEE ACCOUNTING AND FINANCE)

FOREIGN LANGUAGES AND LITERATURES

John Sarkissian, Chair of the Department
502 DeBartolo Hall
(330) 941-3461

5850. *Sociolinguistics* (English 5850) (3 s.h.)
5851. *Language Acquisition* (English 5851) (3 s.h.)

6900. *Seminar.* Study of selected topics common to several or all of the following languages: French, German, Italian, Spanish, Russian, and Latin. The topic will be announced each time the course is offered. May be taken three times for credit if content is not repeated. Prereq.: Proficiency in at least one of the languages taught by the department. 3 s.h.

6905. *Technology in Foreign Language Teaching.* Second language acquisition theory and practice. Application of pre-existing course enhancing software and development of interactive, multimedia lessons. Practical uses of the web for expanding classroom instruction. 3 s.h.

FRENCH

6901. *Special Topics in French.* Arranged course for graduate students only. Prereq.: Two 4800-level courses in French with grade of B or better. 3 s.h.

GERMAN

6901. *Special Topics in German.* Arranged course for graduate students only. Prereq.: Two 4800-level courses in German with grade of B or better. 3 s.h.

ITALIAN

6901. *Special Topics in Italian.* Arranged course for graduate students only. Prereq.: Two 4800-level courses in Italian with grade of B or better. 3 s.h.

SPANISH

5855. *Topics in Spanish Language and Linguistics* (3 s.h.)
5870. *Topics in Spanish Literature: Spain* (3 s.h.)
5885. *Topics in Hispanic Literature and Cinema.* (3 s.h.)
5890. *Topics in Spanish Literature: Spanish America* (3 s.h.)

6901. *Special Topics in Spanish.* Arranged course for graduate students only. Prereq.: Two 4800-level courses in Spanish with grade of B or better. 3 s.h.

FOUNDATIONS OF EDUCATION

Robert J. Beebe, Chair of the Department
4101 Beeghly Hall
(330) 941-1437

5875. *Seminar in Foundations of Education* (1-3 s.h.)
5880. *Special Topics in Foundations of Education* (1-3 s.h.)

6901. *Philosophical Analysis of Education.* A philosophical examination and critical reflection on educational theories, including a familiarization with historical contexts and socio/cultural conditions which fostered and related resistance to these theories. 3 s.h.

6902. *Sociological Bases of Education.* Selected sociological concepts and theories will form the basis for a critical analysis of schooling. Special attention will be given to how schools serve diverse populations and to the emergence of schools. 3 s.h.

6904.* *Introduction to Educational Research.* Basic methodologies and techniques of educational research design and elementary statistical concepts are introduced. This course relies on critical thinking and analytical discourse for the examination and evaluation of research studies. 3 s.h.

6905. *Educational Challenges in Historical Perspective.* Critical analysis of first-person and other historical accounts of teachers, students, communities, and school reforms as they inform curricular, professional, and social challenges that face educators in their communities today. 3 s.h.

6982. *Independent Study/Action Research.* Individual investigation of advanced topics under the guidance of selected department faculty. May be repeated. 1-3 s.h.

6990. *Advanced Seminar in Foundations of Education.* Selected topics for an advanced study of a topic to be addressed from a sociological, historical, philosophical, assessment, or research perspective. Prereq.: Completion of a Master's degree or advanced licensure. 1-3 s.h.

6995. *Workshop in the Foundations of Education.* A workshop designed for the development of particular skills and/or perspectives on a school-related topic. 1-3 s.h.

8102. *Perspectives on Leadership Among Diverse Populations.* An explorative study of constructs and concepts of cultural diversity within groups based on notions of class, race, sex, ethnicity, ableness, and religion/spiritualities. Consideration of expectations and organizational practices as informed by diversity issues. Prereq.: Doctoral admission and FOUND 6901, 6902, or 6905. 3 s.h.

8104. *Research Strategies in Educational Administration.* An examination of major research methodologies and a preview of the different paradigms and assumptions that underlie controlled disciplined inquiries. Techniques associated with particular methodologies in educational administration will be introduced, and their strengths and weaknesses will be analyzed. Prereq.: FOUND 6904. 3 s.h.

8110. *Theories of Inquiry.* Perspectives for critical analysis, investigation of ways of knowing, and an examination of criteria that have been used successfully for negotiating status and justifying claims within contested domains of inquiry. Prereq.: Doctoral admission and FOUND 6901. 3 s.h.

8112. *Qualitative Research for Educators.* Consideration of traditional and evolving qualitative method

* additional fee required

and literatures that apply to doctoral study of problems in teaching, school leadership, and school change. Prereq.: FOUND 8110. 3 s.h.

8114.* *Advanced Research Design and Statistics.* An in-depth treatment of the major correlational, experimental, and quasi-experimental research designs and associated statistical analyses including the design and analysis of surveys and factor analytic techniques. Experience in data analysis using SPSS or other statistical packages. Prereq.: FOUND 8110. 3 s.h.

Geography

Craig S. Campbell, Interim Chair of the Department
2034 Cushwa Hall
(330) 941-3317

6980. *Geography Education Workshop.* Intensive study and activity in a topic related to teaching geography. Graduate standing and consent of the instructor. May be repeated with a different topic. Grading is S/U. 1-3 s.h.

Geological & Environmental Sciences

Charles R. Singler, Chair of the Department
2120 Moser Hall
(330) 941-3612

Alan M. Jacobs, Program Director
Environmental Studies
2080 Moser Hall
(330) 941-2933

Geology

5802.* *Sedimentology and Stratigraphy* (3 s.h.)
5805. *Special Problems in Geology* (1-4 s.h.)
5815. *Geology and the Environment 2* (3 s.h.)
5817.* *Environmental Geochemistry* (3 s.h.)

6901. *Geology of Ohio and Pennsylvania.* The geologic history and development of the rocks, structure, landforms, and mineral resources of Ohio and Pennsylvania. Prereq.: GEOL 5802 or equivalent. 3 s.h.

Environmental Studies

5830. *Risk Assessment.* 3 s.h.

6900. *Advanced Environmental Studies.* A study of the principles and issues of environmental science, health, technology, and affairs. Topics will include: contaminant chemistry; terrestrial and aquatic ecology; risks to human health; waste management; conservation; and sustainable development, energy, and pollution. Local, regional, global issues will be studied. 3 s.h.

6901. *Sources of Contamination.* A study of the sources and fate and transport of air, water, soil contaminants that have potential to adversely affect human health and the environment. Topics will include: measurement of environmental parameters; data collection and reporting; interpretation of results; compliance issues; and economic implications. 3 s.h.

6910. *Environmental Management Systems Standards (ISO 14001).* Introduction to establishing a program to set internal industrial standards to identify, measure, and control the environmental impact of their activities, products and services. Including environmental policy, communication, legal requirements, training, documentation, and emergency preparedness. 1 s.h.

6920. *Environmental Compliance.* Regulatory compliance concerning operations of environmental and health and safety departments. RCRA permitting (NPDES and air emissions), landfilling, Right-to-Know, waste generation, storage, shipping (manifests and placarding), disposal of wastes, MSDS, OSHA regulations, safe work practices, hiring consultants (technical and legal), writing requests for proposals, and documenting and report writing. Prereq.: ENST 6900 or equivalent. 3 s.h.

6921. *Industry/Institutional Management for the Environmental Professional.* A comprehensive background in management principles and operations relating to the environmental professions. Topics include: budgeting, staffing, scheduling, leadership, and quality assurance/control. The student will learn to write, evaluate, and implement: technical and cost proposals for contracts and grants; scopes of work; operations plans; sampling and analysis plans; health and safety plans; job descriptions; resumes; statements of qualifications; mission statements; meeting agendas (for professionals and the general public); and other written and oral communications (reports, memoranda, memoranda of understanding, policy briefs, press releases, fact sheets, requests for information). Prereq.: ENST 6900 or equivalent. 3 s.h.

6930. *Risk Management.* Using the principles of risk assessment, the student will learn to manage existing environmental risks in the workplace. Topics will include: workplace health hazards; product liability; toxic tort claims; cleaning strategies for risk reduction such as brownfield redevelopment, voluntary action programs, alternative, and regulatory actions. Economic importance, resource allocation, technical feasibility, and public opinion will be discussed. Prereq.: ENST 6900 and ENST 5830 or equivalent. 3 s.h.

6931. *Ecological Risk Assessment.* The student will examine environmental risks to non-human populations. Topics will include the study of measurements of adverse effects due to one or more stressors by examining population communities and ecosystems. Also, the class will study the following issues: threatened and endangered species; wetlands; endocrine disruption; multiple stressors; sediment and soil toxicity; conservative screening versus site specific studies; and natural resource damage claims. Prereq.: ENST 6900 and ENST 5830 or equivalent. 3 s.h.

6990. *Thesis.* Hours arranged. Applicable to Master's degree in Environmental Studies. Research selected and supervised by departmental advisor and approved by graduate faculty of Environmental Studies Program and Graduate Dean. May be repeated. 1-6 s.h.

6999. *Special Topics in Environmental Science.* Environmental Science topics selected by faculty from fields of current research interest or of special emphasis. Prereq.: Permission of Director. May be repeated with a different topic up to a total of 6 semester hours. 1-3 s.h.

* additional fee required

Health Professions

Joseph Mistovich, Chair of the Department
1074 Cushwa Hall
(330) 941-3326

5807.* *Epidemiology for the Health Care Practitioner* (3 s.h.)
5816. *Environmental Regulations for Health Care* (3 s.h.)
5828.* *Grant Writing for Health Professions* (3 s.h.)
5840.* *Comparative Health Care Systems* (4 s.h.)
5893. *Workshop in Health Education* (1-3 s.h.)

6948. *Health Systems.* A study of the historical, political, philosophical, legal, and organizational elements of the American health care delivery systems. 2 s.h.

6956. *Organize and Administrate.* Principles of planning, implementing, evaluating, and administering programs in various health settings. Prereq.: HSC 6948. 2 s.h.

Health and Human Services

Carol Mikanowicz, Program Director
1086 Cushwa Hall
(330) 941-3658

6900. *Special Topics.* Topics may vary from semester to semester and will be announced along with prerequisites and hours. May be repeated once for a total of six hours. 1-3 s.h.

6918. *Program Planning and Evaluation.* Principles of planning, developing, implementing and evaluating programs for nonprofits to improve outcomes. Prereq.: CHHS student or permission of instructor. 2 s.h.

6922. *Planning and Fiscal Management.* Principles and skills to conduct strategic plans, analyze and administer programs, develop budgets, and familiarize students with fiscal matters related to funding sources. Prereq.: CHHS 6918 or permission of instructor. 4 s.h.

6949. *Community Health Practice.* An examination of various physiological, psychological, and sociological factors which influence the health and provision of healthcare in a community. Prereq.: HSC 3791 or equivalent or permission of instructor. 3 s.h.

6950. *Professional Codes in Healthcare.* An analysis of professional codes and personal ethical beliefs in relationships of trust in contemporary healthcare. Prereq.: PHIL 3725 or PHIL 6900 or PHIL 6901. 3 s.h.

6953. *Health Behavior.* A review of research studies, theories, and models which identify elements which influence behavior and determine factors which deter positive behaviors. Prereq.: CHHS 6949 or permission of instructor. 3 s.h.

6958. *Health Services Issues.* An examination of current philosophical, legal, and ethical issues in healthcare with inclusion of role of health professionals in national health policy, and healthcare reform. Prereq.: CHHS 6949 or permission of instructor. 3 s.h.

6959. *Foundation and Planning.* Developing effective health promotion programs through a study of

the history, philosophy, ethics, and values of health promotion as well as the principles of effective planning incorporating needs assessment, and formulation of objectives. Prereq.: CHHS student or permission of instructor. 3 s.h.

6960. *Implementation and Evaluation.* Examination of principles, methods and materials of conducting and evaluating health promotion programs in various community settings. Work will be documented in evaluation reports. Prereq.: CHHS 6959 or permission of instructor. 3 s.h.

6980. *Seminar.* A synthesis of the role of education and management in health or human services. Emphasis on specific problems, concerns, or relative issues related to various work settings. Researched, developed, and presented using manuscript form and power point. Prereq.: CHHS 6958 and any research class or permission of instructor. 3 s.h.

6981. *Grant Writing.* Insight into the methods, strategies, and techniques of grant writing with emphasis on the proposal components and exploration of funding sources. Each student will exhibit competence in planning, developing, and evaluating a proposal. Prereq.: CHHS 6918 and 6922 or 6959 and 6960; CHHS 6980 or permission of instructor. 2 s.h.

6990. *Practicum.* Supervised practicum in selected health and human services facilities offering health and human services administration experience. Prereq.: Approval of advisor.

1-2 s.h.

6999. *Thesis.* 1-4 s.h.

History

Martha Pallante, Chair of the Department
520 DeBartolo Hall
(330) 941-1607

5806. *American Architectural History* I (3 s.h.)
5807. *American Architectural History* II (3 s.h.)
5810. *The Conservation of the Historic Built Environment* (3 s.h.)

6900. *Introduction to Historical Research.* Instruction in the basic tools and techniques of historical research and study. Required of all candidates for advanced degrees in history. 3 s.h.

6902. *American Historiography.* An introduction to the professional study of American history, including an examination of the sources and nature of historical knowledge, historical criticism, and synthesis. Required of all candidates for advanced degrees with concentration in the field of American history. 3 s.h.

6904. *European Historiography.* An introduction to the professional study of European history including an examination of the sources and nature of historical knowledge, historical criticism, and synthesis. Required of all candidates for advanced degrees with concentration in the field of European history. 3 s.h.

6910. *Readings in American History.* Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who wish intensive concentration in specific areas of American history. May be repeated with permission of instructor. 3 s.h.

6912. *Research Seminar in American Colonial History.* Selected problems of early American history. May be repeated with permission of instructor. 3 s.h.

* additional fee required

6913. *Research Seminar in Nineteenth-Century America.* Selected problems of American history, 1800-1865. May be repeated with permission of instructor. 3 s.h.

6914. *Research Seminar in Twentieth-Century America.* Selected problems of American history in the 20th century. May be repeated with permission of instructor. 3 s.h.

6920. *Readings in European Literature.* Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who wish intensive concentration in European history. May be repeated with permission of instructor. 3 s.h.

6921. *Research Seminar in Medieval Culture and Society.* The main intellectual and social currents of the Middle Ages. May be repeated with permission of instructor. 3 s.h.

6922. *Research Seminar in Renaissance and Reformation.* Trends and aspects of the Renaissance and Reformation. May be repeated with permission of instructor. 3 s.h.

6923. *Research Seminar in Seventeenth-Century Europe.* Dutch Commercial Enterprise; the France of Louis XIV; Austria and the Empire; emergence of Brandenburg-Prussia; rise of Modern Science; the Age of Reason; the Development of the Baroque in Arts and Literature. 3 s.h.

6924. *Research Seminar in Eighteenth-Century Europe.* Selected areas of the Enlightenment, Old Regime, and the French Revolution. May be repeated with permission of instructor. 3 s.h.

6925. *Research Seminar in Nineteenth-Century Europe.* The Napoleonic and post-Napoleonic era and the rise of nationalism in Europe. May be repeated with permission of instructor. 3 s.h.

6926. *Research Seminar in Twentieth-Century Europe.* Investigation of the causes of the great world wars, the rise of totalitarianism, and the cold war. May be repeated with permission of instructor. 3 s.h.

6927. *Research Seminar in Russian History.* Selected problems of Russian history. May be repeated with permission of instructor. 3 s.h.

6928. *Research Seminar in British Empire.* An examination of major problems confronting the British Empire after 1783. May be repeated with permission of instructor. 3 s.h.

6929. *Research Seminar in English History.* An examination of selected problems in the political, social, economic, and intellectual history of England. May be repeated with permission of instructor. 3 s.h.

6930. *Readings in World History.* Readings in the standard works and monographic studies to meet the requirements of qualified students who wish concentration in world history. May be repeated with permission of instructor. 3 s.h.

6932. *Research Seminar in Middle Eastern History.* This course will deal with topics from the Ancient Near East down to the contemporary clash of nationalisms in the Middle East. May be repeated with permission of instructor. 3 s.h.

6934. *Readings in African History.* Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who wish intensive concentration in African history. May be repeated with permission of instructor. 3 s.h.

6935. *Research Seminar in African History.* Selected problems in the political, social, economic, and intellectual history of Africa. May be repeated with permission of instructor. 3 s.h.

6939. *Labor in U.S. History.* Emphasis on work processes, workforce composition and labor organizations in the industrial Midwest. 3 s.h.

6940. *Oral History.* Instruction in the methods of taking, processing, and utilizing oral depositions

relating to history. The course will include assignments in the field. May be repeated once. 3 s.h.

6941. *American Material Culture.* A discussion and analysis of the use and importance of material artifacts as texts for the recovery of the American past. The emphasis will be on non-traditional sources. Examples include children's books, sacred spaces and foodways. 3 s.h.

6942. *Applied History.* This course provides an overview of the field of applied history. Topics include historic preservation, museum studies, heritage tourism, archives and related topics. 3 s.h.

6943. *Practicum in Applied History.* Examines problems in the field of applied history through student participation in a wide variety of community-based projects. Prereq: History 3715 or 6942 or instructor's permission. 3 s.h.

6944. *Applied History Internship.* Practical application of principles and methods in the field of applied history with the goal of producing a completed project. Internship to be selected by the student in conjunction with the program director. May be repeated once. Prereq: History 6942 and approval of program director. 3 s.h.

6945. *Interpretation and Preservation of the Industrial Built Environment.* Through lectures and readings, this course examines and interprets the industrial built environment. This includes, but is not limited to, factories, neighborhoods, infrastructure, and commercial districts that make up the fabric of industrial communities. Prereq.: Graduate standing and completion of HIST 6942 or permission of instructor. 3 s.h.

6946. *Historical Editing.* Project-based approach to theoretical and practical aspects of editing historical and literary documents for both print and digital contexts. Topics include document selection, transcription, verification, and annotation, as well as the implications for teaching and learning using traditional print and electronic archives and texts. Cross-listed with ENGL 6946. 3 s.h.

6950. *Studies in the Teaching of History.* Investigation and discussion of the research and some of the underlying assumptions in the teaching of history, with implications for the teacher of social studies in the secondary schools and for the prospective history professor. Degree students may receive credit for this course only once. 3 s.h.

6951. *Special Topics in History.* Special topics in History selected by the staff. May be repeated up to 6 s.h. 1-3 s.h.

6952. *Independent Study.* Individual study in concentrated areas of history under the supervision of a staff member. Prereq.: Permission of the instructor and the graduate director. May be repeated. 1-3 s.h.

6953. *Research, Thesis.* 1-6 s.h.

6955. *Museum Curation and Interpretation I.* An introduction to curatorial and interpretative work in a museum setting. Students will learn how to acquire and catalog objects and other materials; plan, research and write an exhibit; select objects and images for an exhibit. Prereq: History 6942. 3 s.h.

6956. *Museum Curation and Interpretation II.* The exhibit planning begun in History 6955 will continue in this course, where the exhibit will actually be prepared and installed. Prereq: History 6955 and permission of the instructor. 3 s.h.

6957. *Special Topics in Applied History.* This course will focus on topics selected by the applied history faculty. Prereq: History 6942. 3 s.h.

* additional fee required

Human Ecology

Jean Hassell, Chair of the Department
3044 Cushwa Hall
(330) 941–3344

FNUTR 5825. *Current Nutrition Concepts* (3 s.h.)
FNUTR 5862. *Food and Culture* (2 s.h.)
FNUTR 5862L.* *Food and Culture Laboratory* (1 s.h.)
CHFAM 5860. *Coordination and Evaluation of Early Childhood Programs* (3 s.h.)
HMEC 5870. *Human Ecology Workshop* (1-3 s.h.)
FNUTR 5872.* *Maternal and Child Nutrition* (3 s.h.)
FNUTR 5873. *Nutrition and Aging* (3 s.h.)
HMEC 5892. *Community Programming in Human Ecology* (3 s.h.)
HMEC 5893. *Work and Family* (3 s.h.)
HMEC 5895. *International Studies in Human Ecology* (1-4 s.h.)

FNUTR 6902. *Nutrition Education.* Examination of common nutrition assumptions and claims, techniques in teaching nutrition, development of teaching materials and plans, emphasizing integration into existing courses. Prereq.: Four semester hours in teaching methods or equivalent. 2 s.h.

HMEC 6904. *Family Life Education.* Focus on current issues and challenges impacting on families, investigation of literature and application of theory; development of techniques and materials for teaching family relationships and child development at various grade levels. Prereq.: Eight semester hours of child and/or family studies. 3 s.h.

HMEC 6910. *Special Topics in Human Ecology.* Issues and problems of current interest chosen on the basis of need. Prereq.: CHFAM 731 or equivalent. 1-3 s.h.

HMEC 6925. *Current Concepts in Nutrition.* Role of diet in disease prevention/health promotion; relationship of specific dietary factors to the occurrence of chronic diseases; current recommendations for nutrient intake and diet pattern for reducing the risk of chronic diseases and disabilities. Prereq.: FNUTR 6760 or permission of instructor. 3 s.h.

HMEC 6950. *Readings in Human Ecology.* Individual investigation of a special topic; annotated bibliography required. Prereq.: Departmental approval. May be repeated for up to 4 s.h. 1-2 s.h.

HMEC 6999. *Thesis.* 1-6 s.h.

Human Performance and Exercise Science

Richard Walker, Chair of the Department
307 Beeghly Physical Education Center
(330) 941-3650

5994. *Workshop in Physical Education/Athletics* (1-3 s.h.)

6900. *Pedagogical Analysis.* Description and analysis of pedagogical theories, models, and practices in physical education with emphasis on teaching methodology, the improvement of teaching skills,

* additional fee required

and planning for maximum student learning. 3 s.h.

6901. *Sport in Society.* Sport studied as a social system interdependent with culture and society and as a social institution which is related to, or a part of, other basic institutions such as the family, education, religion, the economy, politics, and the mass media. Prereq.: HPES 4851 or 4855. 3 s.h.

6903. *Curriculum Development.* Progressive development of the physical education curriculum for P-12 based on an analysis of contemporary curriculum theories and models in physical education. Emphasis on program planning and theory to practice. 3 s.h.

6905. *Contemporary Issues in Sport Pedagogy.* A critical investigation and analysis of contemporary sport pedagogy issues, trends, problems and concerns. 3 s.h.

6910. *Teaching of Motor Skills.* Analysis of research on motor learning and its application to the acquisition, the teaching, and the coaching of movement skills. Prereq.: HPES 3795 or equivalent. 3 s.h.

6920. *Mechanical Analysis of Motor Movements.* Scientific basis for teaching correct form for the exact execution of movement skills through the fundamental laws of physics pertaining to motion. Analysis of various motor activities to determine the proper mechanics for obtaining the most effective and efficient results. Prereq.: HPES 3720 or equivalent. 3 s.h.

6930.* *Laboratory Instrumentation.* A laboratory course designed to provide instruction and practical experience in operating laboratory equipment for the measurement of physiological parameters in the human. Two hours lecture and two hours laboratory per week. Prereq.: HPES 4899 or equivalent. 2 s.h.

6935. *Biodynamics and Human Performance.* The physiology of human exercise responses to various stress conditions such as environmental, psychosocial, disease, and maximal performance. Prereq.: HPES 4899 or equivalent. 2 s.h.

6940. *Administration of Exercise Programs.* General guidelines for managing, developing, delivering and evaluating exercise programs with specific behavioral objectives for program directors, exercise leaders, and exercise technicians as established by the American College of Sports Medicine. Prereq.: HPES 3710 or consent of instructor. 3 s.h.

6945. *Technological Integration in Physical Education.* An analysis of the instructional design process and technology integration applied to physical education. Includes step-by-step process of designing, implementing, and evaluating the effectiveness of technological instructions into both existing and new units of instruction. Prereq.: CSIS 1500 or equivalent. 2 s.h.

6990. *Independent Study.* Individual study and projects under faculty supervision. Prereq.: Permission of instructor and department Chair. May be repeated to a maximum of 3 s.h. 1-3 s.h.

INDUSTRIAL AND SYSTEMS ENGINEERING

Hojjat Mehri, Option Coordinator
2500 Moser Hall
(330) 941-3023
hmehri@cc.ysu.edu

5801.* *Operations Research I* (3 s.h.)
5820. *Advanced Quality for Engineers* (3 s.h.)

* additional fee required

5823. *Automation and Computer-Aided Manufacturing* (3 s.h.)
5825.* *Advanced Engineering Economy* (3.h.)
5830. *Human Factors Engineering* (3 s.h.)
5850.* *Operations Research* II (3 s.h.)
5880. *Management of Technology* (3 s.h.)

6901.* *Optimization Techniques.* A study of the theory of optimization and its application to problems from several engineering disciplines. The principles will be applied to constrained and unconstrained engineering problems. Algorithms will be developed for solving optimization problems, which can be formulated as linear, nonlinear, integer, or dynamic programming models. 3 s.h.

6902.* *Digital Simulation.* A study of simulation methods using digital computers, random number generation, Monte Carlo techniques, queuing models, and analysis of simulation output. The student will be provided the opportunity to simulate moderately complex systems on digital computers. Primary emphasis will be on models of technical, scientific, and economic systems. 3 s.h.

6903.* *Engineering Statistics.* Development and application of stochastic models of engineering systems. Elementary probability models applied to decision making under uncertainty. Development and use of theoretical probability distributions for describing stochastic systems. Models for point and confidence interval estimation and models for correlation analysis applied to engineering problems. 3 s.h.

6910. *Workshop in Industrial/Manufacturing Engineering.* For professionals from business and industry and students. Specific topics will be announced each time the workshop is offered. Credit hours based on frequency and duration of workshop meetings. 1-6 s.h.

6930.* *Microcomputer Models for Deterministic Engineering Systems.* Microcomputer model development, implementation, evaluation, and application for deterministic engineering systems. Recognition of engineering systems amenable to analysis as deterministic microcomputer models. Determination of model structure; identification of model parameters; verification of model validity; exercising the model; and interpretation of results. 3 s.h.

6970. *Advanced Manufacturing Processes I.* Advanced manufacturing processes for metallic materials. Included are continuous casting, powder techniques, fluidized bed reactors, and directional solidification. 3 s.h.

6971. *Advanced Manufacturing Processes II.* Advanced manufacturing processes for nonmetallic materials. Included are sintering, slip-casting, plastic forming techniques, and extrusion of non-plastic materials. 3 s.h.

6990. *Special Topics.* Special topics in Industrial/Manufacturing Systems Engineering covering areas not otherwise available. Topics are selected by the faculty from fields of current research interest or special emphasis and may vary from semester to semester. May be repeated up to a maximum of 6 s.h. 3 s.h.

Information Technology

5826. *Teaching Intensive and Cooperative Business Education* (3 s.h.)
5875. *Advanced Multimedia Authoring* (3 s.h.)

MANAGEMENT

Rammohan R. Kasuganti, Chair of the Department
646 Williamson Hall
(330) 941-3070

5825.* *Microcomputers in Business* (3 s.h.)
5845. *Work in America* (3 s.h.)
5835.* *Systems Analysis* (3 s.h.)
5860. *Comparative Management* (3 s.h.)
5865.* *Database Management Systems* (3 s.h.)
5875.* *Decision Support/Expert Systems* (3 s.h.)

6900. *The Foundation of Management.* A study of the fundamental concepts and functions of management. Each functional area is analyzed and the interrelationship of the functions emphasized. Topics such as organization design, authority-power relationships, control systems, group behavior, participative management, and span of control will be covered. 2 s.h.

6910. *Business Internship.* Provides graduate students the opportunity to relate theory to practice through on-the-job work experience with a participating organization. The internship will serve as an elective MBA course. Prereq.: Completion of Level I MBA coursework and 6 s. h. of Level II MBA coursework. 1-3 s.h.

6916.* *Quantitative Analysis for Business Decisions.* The application of computer-based mathematical models to managerial decision-making with emphasis on problem formation, sensitivity analysis, and other aspects of model interpretation. Prereq.: MGT 6900 and ECON 6900. 2 s.h.

6917. *Information Systems for Management.* An introduction to the design, implementation, and utilization of information systems. Emphasis is on the managerial and decision support aspects of information systems as well as current issues. Prereq.: MGT 6900. 2 s.h.

6920. *Global Business Environments and Operations.* The environments and operating issues affecting firms doing business in the global arena. Economic, cultural, political, legal, and competitive environments are covered, along with the global management of functional areas including finance, marketing, operations, and human resources. Cross-listed as MKTG 6920 and FIN 6920. Prereq.: Level I MBA courses. 3 s.h.

6921.* *Operations Management.* Product design and selection, process planning, plant location, plant layout, methods study and labor standards, forecasting, aggregate planning and master scheduling, inventory control, scheduling, quality control. Prereq.: MGT 6916. 3 s.h.

6925. *Quality Management.* Study of philosophies, strategies, and techniques used in quality management (QM). QM and its relationship to business strategy and other functional areas. Pedagogical emphasis on case studies and projects. Prereq.: MGT 6921 and MKTG 6900. 3 s.h.

6954. *International Management.* Planning, organizing, and control within the context of a multinational corporation, with emphasis upon problems of adaptation to different sociological, cultural, legal, political, and economic environmental characteristics. Prereq.: MGT 6961 plus 6 s.h. of Level II MBA coursework. 3 s.h.

6960. *Strategic Issues Facing MNEs in the 21st Century.* This course focuses on strategic issues facing multinational enterprises to enable students to gain insight into a range of conceptual models and

* additional fee required

empirical methodologies in the field of global strategic management and to apply these concepts and models in the analysis of practical case situations. Prereq: Mgt 6920. 3 s.h.

6961.* *Organizational Behavior.* The study of the behavior of individuals and groups in organizations. Major theoretical positions and research findings are examined with emphasis on the implications for organizational design and management practice. Prereq.: MGT 6900. 3 s.h.

6962. *Organizational Staffing Process.* Brief survey of the field of human resource management, followed by intensive analysis of programs for personnel acquisition, maintenance, and development. Emphasis on determination of organizational needs and the development and effective utilization of available human skills and competencies. Examination of applicable federal and other employment legislation. Prereq.: MGT 6961. 3 s.h.

6963. *Industrial Relations.* Analysis of managerial and organizational aspects of employee relations arising out of relations with union negotiation, and application of contracts, living with contracts, and pertinent legislative matters. Prereq.: MGT 6961. 3 s.h.

6965.* *Strategic Management and Leadership.* The correlation of theory and practice in the development of business policy. Emphasis on the problems of executive management, decision making, and administrative action. Prereq.: FIN 6921, MKTG 6942, MGT 6961, and MGT 6921. Must be taken concurrently with MGT 6967. 3 s.h.

6967.* *The MBA Integrated Project.* Integrating the functional areas of business using a simulation game or similar project. Course is to be taken concurrently with Strategic Management and Leadership, the MBA capstone course. Prereq.: Concurrent with MGT 6965. 1 s.h.

6968. *Special Topics in Management.* Topics may vary from semester to semester and will be announced along with prerequisites and hours. May be repeated. 1-3 s.h.

6969. *Seminar in Management.* Analysis of long-range planning, organizational development, systems management, executive decision making, organizational behavior, control systems, and others. Prereq.: MGT 6961 plus 6 s.h. of Level II MBA courses. 2 s.h.

6970. *Small Business Entrepreneurship.* An in-depth analysis of the elements of entrepreneurship, the process of planning and starting a business, the cross-functional skills required to manage a successful start-up, and the special circumstances of small business management. Cross-listed as MKTG 6970. Prereq.: MGT 6900, MKTG 6900, and FIN 6900. 3 s.h.

6971. *Business and Society.* Complex and dynamic interrelationships between business and society: social, cultural, legal, ethical, economic and technological issues, philosophies and points of view which influence business. Prereq.: MGT 6961. 3 s.h.

6996. *Research Problems.* Special research project under the supervision of a graduate faculty member. Credit will be determined in each case in light of the nature and extent of the project. Prereq.: 15 hours of Level II MBA courses or permission of MBA Director. 1-3 s.h.

MARKETING

James Kohut, Chair of the Department
536 Williamson Hall
(330) 941-3149

6900. *Foundations of Marketing.* A basic examination of marketing as a business process by which

products are matched with markets and through which transfers of ownership are effected. This course satisfies the appropriate prerequisite requirement for the M.B.A. degree. 2 s.h.

6910. *Business Internship.* Provides graduate students the opportunity to relate theory to practice through on-the-job work experience with a participating organization. The internship will serve as an elective MBA course. Prereq.: Completion of Level I MBA coursework and 6 s. h. of Level II MBA coursework. 1-3 s.h.

6920. *Global Business Environments and Operations.* The environments and operating issues affecting firms doing business in the global arena. Economic, cultural, political, legal, and competitive environments are covered, along with the global management of functional areas including finance, marketing, operations, and human resources. Cross-listed as MGMT 6920 and FIN 6920. Prereq.: Level I MBA courses. 3 s.h.

6942. *Strategic Marketing Management.* A managerial approach to the planning and implementation of marketing with emphasis on the integration of the marketing function with other business activities. Through conceptual material and case analysis, students develop abilities to analyze markets and design effective marketing strategies in the areas of product, promotion, pricing, and distribution. Prereq.: MKTG 6900 or equivalent. 3 s.h.

6945. *Integrated Marketing Communications Management.* A focused study of the promotional aspects of marketing decisions is presented along with how each part (advertising, sales promotion, public relations, and personal selling) of the promotional mix works synergistically with the other parts to create an integrated message and/or image the marketer. Prereq.: MKTG 6942. 3 s.h.

6946. *Consumer Behavior.* Analysis of the behavior of consumers, both in groups and as individuals, in order to assist the marketing manager in areas such as selection of target markets; advertising and media strategies; personal selling; product development; marketing research; pricing; and distribution decisions. In addition to business writings, relevant material from psychology, sociology, economics, and anthropology will be utilized to familiarize the student with the behavior of the consumer in the market place. Prereq.: MKTG 6942. 3 s.h.

6947. *Marketing and Social Responsibility.* Current marketing problems created by emerging social, environmental, and consumer pressures and the need to balance consumer satisfaction, profits, and social responsibility. Topics include: selling practices; product safety; consumerism; environmental issues; disadvantaged market segments; product quality; consumer advocates; and social critics. Prereq.: MKTG 6900 or equivalent. 3 s.h.

6949. *International Marketing Management.* The functions, problems, and decision-making processes of marketing executives in business organizations involved in foreign markets are studied. Students are given the opportunity to develop foreign market evaluations applying classroom knowledge to practical decision problems. Involvement of the student on an individual basis is stressed. Prereq.: MKTG 6942. 3 s.h.

6950.* *Marketing Research and Analysis.* The use of exploratory, descriptive, and experimental research methods and techniques to solve marketing problems in the context of role-playing, cases, and projects. Emphasis is on understanding the research process: defining management decision problems; formulating research problems and data requirements; selecting proper research methods and techniques; collection, analysis, and interpretation of data; and reporting results. Prereq.: ECON 6900, MKTG 6942. 3 s.h.

6967.* *The MBA Integrated Project.* Integrating the functional areas of business using a simulation game or similar project. Course is to be taken concurrently with Strategic Management and

* additional fee required

Leadership, the MBA capstone course. Prereq.: Taken concurrently with MGMT 6965. 1 s.h.

6968. *Special Topics in Marketing.* Topics may vary from semester to semester and will be announced along with prerequisites and hours. Course may be repeated. 1-3 s.h.

6970. *Small Business Entrepreneurship.* An in-depth analysis of the elements of entrepreneurship, the process of planning and starting a business, the cross-functional skills required to manage a successful start-up, and the special circumstances of small business management. Cross-listed as ACCT 6970 and MGMT 6970. Prereq.: MGMT 6900, MKTG 6900, and FIN 6900. 3 s.h.

6996. *Research Problems.* Special research project under the supervision of a graduate faculty member. Credit will be determined in each case in light of the nature and extent of the project. Prereq.: 15 hours of Level II MBA course work or permission of MBA Director. 1-3 s.h.

Mathematics and Statistics

Nathan P. Ritchey, Chair of the Department
1055 Cushwa Hall
(330) 941-3302

Mathematics

5821. *Topics in Abstract Algebra* (3 s.h.)
5822. *Abstract Algebra II* (3 s.h.)
5825. *Advanced Linear Algebra* (3 s.h.)
5828. *Number Theory* (3 s.h.)
5832. *Euclidean Transformations* (3 s.h.)
5835. *Combinatorics and Graph Theory* (3 s. h.)
5843. *Theory of Probability* (3 s.h.)
5844. *Theory of Statistics* (3 s.h.)
5845.* *Operations Research* (3 s.h.)
5851. *Topics in Analysis* (3 s.h.)
5852. *Real Analysis II* (3 s.h.)
5855. *Ordinary Differential Equations* (3 s.h.)
5860. *Topics in Numerical Analysis* (3 s.h.)
5861.* *Numerical Analysis II* (3 s.h.)
5875. *Complex Variables* (3 s.h.)
5880. *Topology* (3 s.h.)
5884. *Mathematical Logic* (3 s.h.)
5895. *Selected Topics in Mathematics* (3 s.h.)

6900. *Mathematics Workshop.* Intensive study and activity in a topic related to mathematics, its applications, or the teaching of mathematics. May be repeated. Grading is S/U. Prereq.: Consent of graduate coordinator. 1-6 s.h.

6905. *Teaching Practicum.* Intensive preparation for teaching lower level mathematics courses featuring formal instruction and orientation on teaching issues, evaluated presentations, mentored classroom instruction, and weekly teaching seminars. Topics include course design, policies, syllabi, grading;

classroom teaching problems; orientation in Mathematics Assistance Center, specific lower level mathematics courses, online tutorial services. Required of and limited to graduate assistants in the Department of Mathematics & Statistics. To be taken each Fall semester student is a graduate assistant. Grading is S/U. Does not count toward credit in the program.
1 s.h.

6915. *Mathematical Foundations.* Order-theoretic and monadic foundations of mathematics: ordered structures; topologies; powerset operators of a function; applications to continuity, compactness, algebra, logic and calculus. Prereq: Math 3721 and 3751; or consent of graduate coordinator.
3 s.h.

6920. *Advanced Abstract Algebra.* Study of algebraic structures, substructures, morphisms, and quotient structures, with additional topics from group theory, field extensions, and/or Galois Theory. Prereq.: MATH 5822 and 5825; or consent of graduate coordinator. 3 s.h.

6925.* *Advanced Numerical Analysis.* Eigenvalue-eigenvector analysis, boundary value problems, and approximation methods for partial differential equations, and additional topics. Prereq.: MATH 3720, 3760, knowledge of high-level programming language, and either MATH 5852 or 5861; or consent of graduate coordinator. 3 s.h.

6928. *Advanced Number Theory.* Advanced study of number theory: theory and distribution of primes, computational number theory, and additive number theory. Prereq.: MATH 5828.
3 s.h.

6930. *Differential Geometry.* Classical differential geometry of curves and surfaces, differentiable manifolds with tensors. Prereq.: MATH 5852. 3 s.h.

6933. *Geometry.* General theory of incidence structures and modern geometric theories. Prereq.: MATH 3721 and either 4830 or 5835. 3 s.h.

6937. *Graph Theory.* Advanced study of graph theory, graph algorithms, and applications of graph theory. Topics may include Ramsey theory, extremal graph theory, flows and networks, planarity, graph colorings, and combinatorial optimization. Prereq.: MATH 5835. 3 s.h.

6938. *Combinatorics.* Advanced study of combinatorial models. Topics may include extremal set theory, matroids, inversion formulae, counting techniques, generating functions, difference sets, combinatorial designs, and incidence structures. Prereq.: MATH 5835 and MATH 3721.
3 s.h.

6940. *Advanced Data Analysis.* Identical with STAT 6940. 3 s.h.

6942.* *Advanced Operations Research.* Topics may include integer programming, advanced linear programming, nonlinear programming, dynamic programming, queuing theory, Markov analysis, game theory, and forecasting models. Prereq.: STAT 3743 and MATH 5845. 3 s.h.

6943. *Mathematical Statistics I.* Identical with STAT 6943. 3 s.h.

6944. *Mathematical Statistics II.* Identical with STAT 6944. 3 s.h.

6945. *Stochastic Processes.* Identical with STAT 6945. 3 s.h.

6948. *Linear Models.* Identical with STAT 6948. 3 s.h.

6955. *Advanced Differential Equations.* Proofs of existence and uniqueness of non-autonomous, nonlinear equations. Additional topics may include advanced linear systems, partial differential equations, and integral equations. Prereq.: MATH 5852 and either 3705 or 5855; or consent of graduate coordinator. 3 s.h.

* additional fee required

6965, 6966. *Abstract Analysis I, II.* Lebesgue integration and measure on the real line. General measure theory and functional analysis, including the Radon-Nikodym theorem, the Fubini theorem, the Hahn-Banach theorem, the closed graph and open mapping theorems, and weak topology. Prereq.: MATH 5852 and either 5880 or 6915 for 6965, 6965 for 6966; or consent of graduate coordinator. 3+3 s.h.

6975. *Complex Analysis I.* Analytic and meromorphic functions of a complex variable, contour integration, the Cauchy-Goursat theorem, Taylor and Laurent series, residues and poles, conformal mapping. Prereq.: MATH 3751; or consent of graduate coordinator. Credit will not be given for both MATH 5875 and 6975. 3 s.h.

6976. *Complex Analysis II.* The Cauchy theorem, the Weierstraß, Mittag-Lefler, Picard, and Riemann theorems, Riemann surfaces, harmonic functions. Prereq.: MATH 5875 or 6975; or consent of graduate coordinator. 3 s.h.

6980. *Topology I.* Basic concepts of topological spaces and mappings between them, including compactness, connectedness, and continuity. Prereq.: MATH 3721 and 3751; or consent of graduate coordinator. Credit will not be given for both MATH 5880 and 6980. 3 s.h.

6981. *Topology II.* Separation, metrization, compactification. Additional topics will be selected from point-set topology, fuzzy topology, algebraic topology, combinatorial topology, topological algebra. Prereq.: MATH 5880 or 6980; or consent of graduate coordinator. 3 s.h.

6984. *Mathematical Logic I.* Syntax and semantics of propositional and first-order calculi with applications. Prereq.: PHIL 3719 or MATH 3721 or MATH 3751; or consent of graduate coordinator. Credit will not be given for both MATH 5884 and 6984. 3 s.h.

6985. *Mathematical Logic II.* Topics may include elements of recursive function theory, Gödel's incompleteness theorem, decision problems for theories, order-theoretic models, fuzzy semantics. Prereq.: One of MATH 2683 or 6915, and one of MATH 5884 or 6984; or consent of graduate coordinator. 3 s.h.

6990. *Independent Study.* Study under the supervision of a staff member. Prereq.: Consent of graduate coordinator. May be repeated. 3 s.h.

6995. *Special Topics.* Specialized topics selected by the staff. Prereq.: Consent of graduate coordinator and department Chair. May be repeated up to 12 s.h. 3 s.h.

6996. *Mathematical Project.* Individual research project culminating in a written report or paper, though not as broad in scope as a thesis. May be repeated once if the second project is in a different area of mathematics. 1-3 s.h.

6999. *Thesis.* A student may register for 6 s.h. in one semester or for 3 s.h. in each of two semesters. 3-6 s.h.

Statistics

5817.* *Applied Statistics* (3 s.h.)
5840.* *Statistical Computing* (3 s.h.)
5843.* *Theory of Probability* (3 s.h.)
5844.* *Theory of Statistics* (3 s.h.)
5846.* *Categorical Data Analysis* (3 s.h.)
5847.* *Nonparametic Statistics* (3 s.h.)
5848.* *Regression Analysis* (3 s.h.)
5849.* *Multivariate Statistical Analysis* (3 s.h.)

5895. *Selected Topics in Statistics* (2-4 s.h.)

6940.* *Advanced Data Analysis.* An overview of techniques in data analysis. Includes a strong emphasis on visual interpretation of dara. Topics include one or more samples, proportions, odds, regression, and multiple comparisons. Prereq.: MATH/STAT 5844; or consent of graduate coordinator. 3 s.h.

6943. *Mathematical Statistics I.* Random variables, their distributions and densities. Families and exponential families of distribution. Independence, joint distributions, conditional probability and expectation. Convergence and limit theorems. Prereq.: MATH 3751; or consent of graduate coordinator. Credit will not be given for both 5843 and 6943. 3 s.h.

6944. *Mathematical Statistics II.* A study of theories and properties of statistical hypothesis testing and estimation, including maximum likelihood method, likelihood ratio tests, sufficiency, and related topics. Prereq.: MATH/STAT 5843 or 6943; or consent of graduate coordinator. Credit will not be given for both 5844 and 6944. 3 s.h.

6945. *Stochastic Processes.* An advanced study of stochastic processes. Topics include: Markov chains; Poisson process; non-homogeneous Poisson processes; renewal theory; conditional probability and expectation. Prereq.: MATH/STAT 5843 or 6943; or consent of graduate coordinator. 3 s.h.

6946. *Sampling Methods.* Methods for survey and design and analysis. Topics include: basic theory of surveys; descriptions of data; sampling distributions; design of survey; sources of error; questionnaire design; and sampling techniques. Prereq.: STAT 5817; or consent of graduate coordinator. 3 s.h.

6948.* *Linear Methods.* A study of linear statistical methods of the relationship between analysis of variance and regression and the assumptions underlying the analysis of variance. Prereq.: MATH 3720 and either MATH/STAT 5844 or 6944; or consent of graduate coordinator. 3 s.h.

6949.* *Design and Analysis of Experiments.* Fundamental principles of design and analysis of experiments. Topics include blocking; multi-factor testing; multiple comparisons; repeated measures; crossing and nesting designs. Prereq.: MATH/STAT 5844 or 6944; or consent of graduate coordinator. 3 s.h.

MECHANICAL ENGINEERING

Hyun W. Kim, Chair of the Department
2515 Moser Hall
(330) 941–3015

5811.* *Solar Engineering* (3 s.h.)
5825.* *Heat Transfer II* (3 s.h.)
5836. *Fluid Power and Control* (3 s.h.)
5852. *Stress and Strain Analysis II* (3 s.h.)
5872.* *Engineering Acoustics* (3 s.h.)
5884.* *Finite Element Analysis* (3 s.h.)
5892.* *Control of Mechanical Systems* (3 s.h.)

6900. *Special Topics.* Special topics and new developments in mechanical engineering. Subject matter

* additional fee required

and credit hours to be announced in advance of each offering. Prereq.: As announced, or permission of instructor. May be taken three times. 2-4 s.h.

6904. *Advanced Thermodynamics.* Laws of equilibrium thermodynamics; relations between properties and aspects of the Second-Law. Exergy analysis. Macroscopic and microscopic considerations for the prediction of properties. Microscopic description based on classical and quantum statistics. General stability criteria, statistical equilibrium, and trend toward equilibrium fluctuations. Prereq.: Senior standing or consent of graduate advisor. 3 s.h.

6915.* *Failure Analysis.* Advanced methods in failure analysis of metallics, ceramics, polymers, and composites. Numerous practical examples will be discussed. Individual student projects using SEM are required. Three hours lecture and three hours laboratory. 3 s.h.

6925.* *Computational Heat Transfer.* Numerical modeling techniques and methods in heat transfer. Computational analysis of conduction and convection by the finite element method, finite difference method, and the method of coordinate transformation. Prereq.: MECH 3725 and MATH 3705, or consent of instructor. 3 s.h.

6930.* *Advanced Fluid Mechanics and Heat Transfer.* Viscous and inviscid flows: Navier Stokes equations, Euler equations, and complex variables methods. Analytic solutions to advanced heat transfer problems; advanced boundary-value problems. Prereq.: MECH 3725 or equivalent. 3 s.h.

6945.* *Advanced Dynamics.* Three-dimensional vector statics; kinematics and kinetics of particles and rigid bodies; energy, momentum, and stability. LaGrange's equations of motion for particles and rigid bodies impulse; small oscillations; non-holonomic and dissipative systems. Prereq.: Consent of graduate advisor. 3 s.h.

6952.* *Applied Elasticity.* Equations or equilibrium, compatibility and boundary conditions; their applications to plane-stress and plane-strain problems. Stress functions, strain energy methods, stress distribution in anile symmetrical bodies; special problems in structures involving torsion and bending of prismatical bars. Prereq.: MECH 3751 or equivalent or consent of graduate advisor. 3 s.h.

6962.* *Mechanical Design Analysis.* The study of analytical aspects and the application of engineering science topics to machine elements and machinery. Some case studies in mechanical design. Prereq.: Consent of graduate advisor. 3 s.h.

6963.* *Advanced Stress Analysis.* Theory and engineering applications of the most recent techniques of experimental stress analysis; brittle coatings, photoelasticity, strain gauges, photostress. Prereq.: MECH 3751 or equivalent or consent of graduate advisor. 3 s.h.

6983. *Modern Power Sources.* Analytical and descriptive study of modern power plants. Combustion and environmental problems with fossil fueled power plants. Electromagnetic circuits and devices with emphasis on the principles of electromechanical energy conversions. Cross-listed as CHEGR 6983 and ELEGR 6983. Prereq.: Consent of graduate advisor. 3 s.h.

6985. *Electromechanical Motion Devices.* Thermodynamics of batteries, and electric and fuel cells. Power from nuclear isotopes. Features common to rotating electromagnetic fields. Analysis and design of electromechanical power components. Logical circuit design with I/O structure and interface. Cross-listed as CHEGR 6985 and ELEGR 6985. 3 s.h.

6990. *Thesis.* 2-6 s.h.

6991. *Thesis.* 2-6 s.h.

* additional fee required

6992. *Graduate Projects.* Analysis, design, research, or other independent investigation on projects selected with the advice and approval of the student's graduate committee. 3 s.h.

Music

Michael Crist, Chair of the Department
3004 Bliss Hall
(330) 941-1439

5800 A, B. *Performance Minor* (1+1 s.h.)
5814. *Selected Topics in Music Education* (2 s.h.)
5821, 5822. *Composition for Minors* (2+2 s.h.)
5828.* *Music Technology* (3 s.h.)
5830. *Materials of Twentieth-Century Music* (3 s.h.)
5831. *Modal Counterpoint* (3 s.h.)
5832. *Tonal Counterpoint* (3 s.h.)
5833. *Theory Seminar* (3 s.h.)
5834.* *Electronic Music* (3 s.h.)
5840.* *Instrumentation* (3 s.h.)
5841. *Music Workshop* (1-3 s.h.)
5858. *Piano Pedagogy* (3 s.h.)
5860. *Keyboard Literature* (3 s.h.)
5871. *Baroque Music* (3 s.h.)
5872. *Eighteenth-Century and Viennese Classical School* (3 s.h.)
5873. *Opera History* (3 s.h.)
5874. *Nineteenth-Century Romantic Period* (3 s.h.)
5878. *Selected Topics in Music History* (3 s.h.)
5879. *Vocal Literature* (3 s.h.)
5880. *Vocal Pedagogy* (1 s.h.)

Music Performance

For Music Performance majors in the following areas:
Brass Instruments: baritone horn, French horn, trombone, trumpet, tuba
Conducting
Keyboard Instruments: harpsichord, organ, piano
Percussion Instruments
String Instruments: guitar, string bass, viola, violin, violoncello
Voice
Woodwind Instruments: bassoon, clarinet, flute, oboe, saxophone

1) Assignments of students to teachers are made by the coordinators of Keyboard, Voice, String, Woodwind, Brass, and Percussion Studies. Requests for change of teacher should be addressed to the Director of the Dana School of Music.

2) Students registered for 4-semester hour courses receive 50 minutes of individual instruction weekly and practice three hours daily. Students registered for 3-semester hour courses receive 50 minutes of individual instruction weekly and practice two hours daily. Students registered for 2-semester hour courses receive 50 minutes of individual instruction weekly and practice one hour daily. Students registered for 3-semester hour and 4-semester hour courses are also required to

* additional fee required

attend the weekly seminars held by their individual instructors.

3) Students in the performance major courses 6905-6906 must present a public recital of at least 50 minutes of music. The pre-recital hearing must be held during the semester in which the student is enrolled in Music 6906. The supporting document must be completed during the semester in which the student is enrolled in Music 6905. In the event that the paper is not completed during the 6905 semester, a PR grade will be issued for the course. Further information is available from the faculty member in charge of graduate studies in music.

4) Students who fail to meet the standards of the faculty in the area of their performance study may be required to reduce the number of credit hours for which they register in subsequent semesters, or they may be required to withdraw completely from the course sequence.

6901*, 6902.* *Performance Minor.* For music education majors. Students receive 50 minutes of individual instruction weekly and practice one hour daily. Prereq.: Music 2606 or equivalent. 2+2 s.h.

6903*, 6904.* *Performance Concentration.* Music performance through individual instruction. Students receive 50 minutes of individual instruction weekly, practice two hours daily, and are required to attend the weekly seminars held by their individual instructors. Prereq.: Music 3706 or equivalent. 3+3 s.h.

6905*, 6906.* *Performance Major.* For music performance majors. Students receive 50 minutes of individual instruction weekly, practice three hours daily, and are required to attend the weekly seminars held by their instructors. Prereq.: Music 4806 or equivalent. 4+4 s.h.

Music Theory and Composition

6903, 6904. *Advanced Composition.* Individual instruction in the composition of larger forms for chorus, orchestra, or chamber ensembles. Prereq.: Consent of instructor. 3+3 s.h.

6913. *Pedagogy of Theory.* The study and critical analysis of methods for teaching harmony, sightsinging, and ear-training. 3 s.h.

6916. *Fugue.* Analysis of the fugal style used in seventeenth-century trio sonatas and in both volumes of *The Well-Tempered Clavier* by J.S. Bach; writing three to four voice fugues employing imitative and invertible counterpoint. Prereq.: Music 5831 Tonal Counterpoint or 5832 Modal Counterpoint. 3 s.h.

6921, 6922. *Seminar in Materials of Music.* The study of techniques used in musical composition with emphasis in analyzing and writing. Course requirements will be determined by student's field of interest. Admission to course by permission of instructor. Can be repeated for credit. 3+3 s.h.

6930. *Baroque Music Styles.* Stylistic and structural analysis of compositions from the Baroque era. 3 s.h.

6931. *Classic Music Styles.* Stylistic and structural analysis of compositions from the Classic era. 3 s.h.

6932. *Romantic Music Styles.* Stylistic and structural analysis of compositions from the Romantic era. 3 s.h.

6933. *Twentieth Century Music Styles.* Stylistic and structural analysis of compositions from the 20th century. 3 s.h.

6935. *Jazz Theory.* This course examines the process of jazz improvisation and undertakes a critical

evaluation of the existing modes of analyzing improvisation. Students will learn to differentiate between pedagogical, speculative, and analytical theory and to apply appropriate analytical techniques according to the musical context. Emphasis will be placed on the development of critical listening and reading skills. 3 s.h.

6936. *Jazz Composition.* Students will study the styles of leading jazz composers and arrangers in the process of developing their craft and their own style. Assignments will include a portfolio of compositions and analysis of compositions by Jelly Roll Morton, Duke Ellington, Thad Jones, and others. 3 s.h.

Music History

6940. *Music in the Middle Ages.* The development of polyphonic music early organum to c. 1450, with emphasis on techniques, styles, and forms. Seminar, with readings, reports, and musical illustrations. 3 s.h.

6941. *Music in the Renaissance.* Musical developments from c. 1450-1600 dealing with the vocal music of this period, both sacred and secular, and the formulation of independent instrumental styles. Seminar with readings, reports, and musical illustrations. 3 s.h.

6942. *Introduction to Music Bibliography.* Fundamental concepts in bibliographic control with emphasis on the functional and analytic approach to bibliography. 3 s.h.

6943. *Seminar in Musicology.* An examination of select problems in musicology. May be repeated with permission of instructor. 3 s.h.

6944. *Seminar in Symphonic Literature.* An investigation of the literature written for symphony orchestra. 3 s.h.

6945. *Selected Topics in Music Literature.* Various topics related to the study of music literature. Specific topic is announced each time the course is offered. May be repeated with a different topic. 3 s.h.

6946. *Selected Topics in Jazz History.* Topical studies will develop a historical perspective of a specific period of jazz or a specific jazz artist including related cultures, events, and the development of musical style. Sample topics: Early Jazz, the Post Bop Era, the Music of John Coltrane. May be repeated with a different topic. 3 s.h.

Music Education

6950. *Conducting Pedagogy.* The study and critical analysis of methods for teaching conducting. Prereq: One semester of applied conducting study. 2 s.h.

6970. *Foundations of Music Education.* An examination of basic principles and techniques of music instruction; contemporary trends viewed from historical perspective. 3 s.h.

6972. *Seminar in Music Education.* Individual projects and discussion of fundamental issues in music education. Course may be repeated once with permission of instructor. 3 s.h.

6973. *Research Methods and Materials in Music Education.* A study of research tools and techniques and their application to problems in music education; critique of research studies. Research report required in nonthesis music education program. 3 s.h.

6975. *Music and the Humanities.* Designed to aid in the development of interdisciplinary courses involving music and the humanities in the secondary school. 3 s.h.

6976. *Directed Study in Conducting.* Study of significant works, vocal or instrumental; special problems

* additional fee required

in conducting. May be repeated for credit. 3 s.h.

6978. *Contemporary Trends in Music Education.* Examination and discussion of music education in contemporary society. Consideration of repertoire, methods, and teaching aids with regard to current needs and emerging trends. 3 s.h.

6979. *Workshop in Music Education.* For students and teachers in service. Specific topics are announced each time the workshop is offered. Grading is satisfactory or unsatisfactory (S/U). May be repeated with different topic. 1-3 s.h.

6981. *Elementary School Music Practicum.* Field experiences, demonstrations, and lectures to acquaint the student with the many facets of elementary music instruction. Contemporary trends and innovative programs will be examined. Students will be encouraged to introduce certain programs and approaches in their own teaching situations. Prereq.: Teaching experience or student teaching. 3 s.h.

6982. *Secondary School Music Practicum.* An examination of the total secondary school music program through guided field experiences, demonstrations, and lectures. The development of curriculum in general music and instrumental and vocal music will be considered in light of the student's needs and abilities. Prereq.: Teaching experience or student teaching. 3 s.h.

Music Research

6990, 6991. *Thesis I and II.* Individual research and writing culminating in the preparation of a master's thesis. Prereq.: Completion of 20 s.h. coursework and approval of thesis proposal by the Dana Graduate Committee. 2+(1 or 2) s.h.

6992. *Independent Projects in Music.* Individual research topics in music of a library, laboratory, or field-work nature. Prereq.: Approval of Dana Graduate Committee. 1-4 s.h.

Music Ensemble

Graduate students may apply up to two s.h. of Ensemble credit as music electives in the various degree programs, subject to approval by their faculty advisor. 0-1 s.h.

0002 Dana Chorale
0003 Dana Madrigal
0004 University Chorus
0005 Concert Band
0006 Marching Band
0007 Symphonic Wind Ensemble
0008 Symphony Orchestra
0009 Percussion Ensemble
0010 String Ensemble
0011 Men's Chorus
0012 Opera Workshop
0013 Contemporary Music Ensemble
0014 Women's Chorus
0015 Early Music Ensemble
0016 Woodwind Ensemble
0017 Brass Ensemble
0018 Horn Ensemble
0019 Trombone Ensemble
0020 Tuba Ensemble
0021 Brass Chamber Ensemble
0022 Trumpet Ensemble
0023 Jazz Ensemble
0024 Composer's Ensemble
0026 Chamber Orchestra
0028 Chamber Winds
0029 Guitar Ensemble
0030 Jazz Combo
0035 Saxophone Quartet
0040 University Band
0041 Basketball Pep Band
0051 Piano Chamber Ensemble

* additional fee required

Nursing

Patricia Hoyson, Chair of the Department
2044 Cushwa Hall
(330) 941-3292

5870. *School Nurse Role Development* (3 s.h.)
5871. *Health Problems of School Age Children* (3 s.h.)
5872. *School Nurse Practicum* (3–9 s.h.)

6900. *Professional Issues in Nursing.* Exploration of nursing issues including changing roles and scope of practice, discipline concerns, health care delivery, legal and ethical dilemmas, politics, and health care policy. 3 s.h.

6901. *Nursing Science and Research I.* Historical and present development of concepts, models, frameworks, theories, and research in nursing along with understanding and application of the following steps of the research process: problem and hypothesis formulation and literature review. 3 s.h.

6902. *Advanced Pathophysiology.* Normal physiologic functions and pathologic mechanisms are examined to prepare nurses for advanced practice roles. 3 s.h.

6903. *Advanced Pharmacology.* Application of pharmacological concepts in clinical settings with examination of major categories of pharmacological agents. Prereq: NURSG 6902. 3 s.h.

6904. *Advanced Health Assessment.* Development of advanced clinical knowledge and skills in assessment of clients and interactions with their environments. Emphasis is on research from nursing, biological, behavioral, and social sciences. Prereq.: NURSG 6901, 6902, and 6903. 3 s.h.

6905.* *Advanced Health Assessment Practicum.* Application of advanced nursing knowledge and skills from Nursg. 6904 focusing on the assessment of clients and interactions with their environments. To be taken concurrently with Nursg. 6904. Prereq.: NURSG 6901, 6902, and 6903. 4-5 s.h.

6906.* *Advanced Statistics.* Advanced inferential and multivariate statistical techniques used in nursing and other health professions, with emphasis on SPSS-PC computer analysis for interpretation of nursing and health data. Prereq.: An undergraduate statistics course, or equivalent. 2 s.h.

6907. *Health Assessment of School Children.* Development of advanced clinical knowledge and skills in assessment of school children. Emphasis on research from nursing, biological, behavioral, and social sciences. Prereq: NURSG 6901, 6902, & 6903, or enrollment in school nurse licensure program. 3 s.h.

6908. *Health Assessment of School Children Practicum.* Application of advanced nursing knowledge and skills from NURSG 6907 focusing on assessment of children in school settings. To be taken concurrently with NURSG 6907. Prereq: NURSG 6901, 6902, & 6903. 5 s.h.

6910. *Professional Aspects of Nurse Anesthesia.* Ethics, legal aspects, and professional issues associated with a career in nurse anesthesia. Includes a history of anesthesia and the role of Certified Registered Nurse Anesthetists (CRNA). Prereq.: Acceptance into Nurse Anesthesia Option. 3 s.h.

* additional fee required

6911. *Pharmacology 1 for Nurse Anesthetists.* Basic principles of pharmacology including drug effectiveness, mechanism of action, and drug interactions. Emphasis on pharmacological action of drugs on specific organ systems and use in treatment of disease conditions. Prereq.: Acceptance into Nurse Anesthesia Option. 3 s.h.

6912. *Pharmacology 2 for Nurse Anesthetists.* Comprehensive study of drugs and adjunctive agents used in anesthesia practice. Includes a review of inhalation and intravenous anesthetics, local anesthetics, neuromuscular blocking agents, and adjunctive drugs. Prereq.: NURSG 6911. 3 s.h.

6913. *Medical Chemistry and Physics for Nurse Anesthetists.* Application of organic-chemistry, biochemistry, and medical physics in the practice of anesthesia. Prereq.: Acceptance into Nurse Anesthesia Option. 3 s.h.

6914. *Human Anatomy, Physiology, and Pathophysiology 1 for Nurse Anesthetists.* Study of the structure and function of the human body. Prereq.: Acceptance into Nurse Anesthesia Option. 3 s.h.

6916. *Anesthesia Principles 1.* Introduction to anesthesia practice and techniques including preoperative assessments, anesthesia drugs, care plan development and implementation, and safety issues. Prereq.: Acceptance into Nurse Anesthesia Option. 2 s.h.

7000. *Chronic Illness Care.* Advanced nursing management of chronic health care needs of clients and interactions with their environments. Prereq.: NURSG 6904 and 6905. 3 s.h.

7001. *Chronic Illness Care Practicum.* Application of knowledge and skills from Nursg. 7000 focusing on advanced nursing management of the health care needs of clients and interactions with their environments. To be taken concurrently with Nursg. 7000. Prereq.: NURSG 6904 and 6905. 4-5 s.h.

7002. *Nursing Science and Research II.* Continuation of NURSG 6901 focusing on design, instrumentation, data collection methods, data analysis and data interpretation. Prereq.: NURSG 6901 and 6906. 2 s.h.

7003. *Role Development.* The examination of concepts, theories, and research related to advanced practice role development, teaching, learning, technology, evaluation strategies, leadership, program development, marketing skills, and health care delivery in community settings. Prereq.: NURSG 7000, 7001 and 7002. 3 s.h.

7004.* *Role Practicum.* Application of concepts, theories, and research from Nursg. 7003 in a variety of nursing education, health care, and community settings. Prereq.: NURSG 7002 and 7003. 4-5 s.h.

7005. *Research Practicum.* The culminating course requirement of the MSN program. Synthesis of learned concepts and theories in the form of an individual scholarly project, and dissemination of findings under the direction of a graduate faculty member. Prereq.: Completion of all coursework and approval of the MSN faculty committee. 2 s.h.

7006. *Special Topics in Nursing.* Special interest nursing topics selected by the faculty which reflect current trends and issues in nursing practice. May be repeated as desired. 1-5 s.h.

7010. *Human Anatomy, Physiology, and Pathophysiology 2 for Nurse Anesthetists.* Continuation of *Anatomy, Physiology, and Pathophysiology I* with further emphasis on cardiovascular, respiratory, renal, hepatic, and endocrine systems. Prereq.: NURSG 6914. 3 s.h.

7011. *Anesthesia Principles 2.* Examines specific anesthetic techniques used in a variety of surgical procedures. Prereq.: NURSG 6916. 6 s.h.

* additional fee required

7012. *Anesthesia Principles 3.* Administration of anesthesia for high risk patients. Prereq.: NURSG 7011. 8 s.h.

7014. *Health Management in Schools.* Advanced nursing management of health care needs of children in schools, pre-k through high school. Prereq: NURSG 6907 or enrollment in school nurse licensure program. 3 s.h.

7015. *Health Management in Schools Practicum.* Application of knowledge and skills from NURSG 7014 focusing on advanced nursing management of health care needs of children in schools, pre-k through high school. To be taken concurrently with NURSG 7014. Prereq: NURSG 6907. 5 s.h.

7016. *School Nurse Role.* Examination of concepts, theories, and research related to advanced practice role development, teaching, learning, technology, evaluation strategies, leadership, marketing skills and health care delivery in school settings. Prereq: NURSG 7014, 7015 or enrollment in the school nurse licensure program. 3 s.h.

7017. *School Nurse Role Practicum.* Application of concepts, theories, and research from NURSG 7016, in pre-k, k-12 school settings. To be taken concurrently with NURSG 7016. Prereq: NURSG 7014, 7015 or enrollment in the school nurse licensure program. 3-5 s.h.

Philosophy and Religious Studies

Thomas A. Shipka, Chair of the Department
402 DeBartolo Hall
(330) 941-3447

Philosophy

6900. *Ethics in Medicine and the Health Care Professions.* Examines issues raised by the institutional structure of medicine and the health care system; major emphasis is given to the diverse roles played by health care professionals and the practical and ethical conflicts that they produce. 4 s.h.

6901. *Bioethics and Public Policy.* Emphasizes the larger policy issues that impact bioethics; examines their constitutional, social, and moral aspects and their impact on patients, health care providers, and the institutional structure of health care. 4 s.h.

Physical Therapy

Suzanne Giuffre, Interim Chair of the Department, 2004-2005
B086 Cushwa Hall
(330) 941-3227
smgiuffre@ysu.edu

Marleen I. McClelland, Chair of the Department
B086 Cushwa Hall
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mmcclelland@ysu.edu

* additional fee required

5800. *Pathology* (4 s.h.)

6901. *Clinical Decision Making I.* Decision making process for clinical management of uncomplicated cases in practice patterns. Emphasis on posture and movement assessment; safety; body mechanics; and monitoring physiological status. Prereq.: Admission to MPT program. 6 s.h.

6902. *Functional Anatomy.* Study of kinetics, kinematic variables, and mechanical properties of tissue; motion analysis: posture, gait and functional activities; environmental contexts and constraints; and life span applications. Prereq.: Admission to MPT program. 3 s.h.

6903. *Language, Culture, and Health.* Examination of cultural theory, language, and application to clinical interactions. Cultural assumptions and patterns of health-related activity related to: disability, socio-economic status, age, gender, ethnicity/race, sexual orientation, and religion. Prereq.: Admission to MPT program. 2 s.h.

6904. *Clinical Education I.* Initial clinical experience in evaluating and treating basic cases of illness/injury prevention, posture and movement dysfunction, and interprofessional practice. Six week full-time experience. Grade is S/U. Prereq.: Admission to MPT program. 3 s.h.

6905. *Clinical Decision Making II.* Decision making process for clinical management of both routine and less common cases in practice patterns. Emphasis on outcomes research, personnel supervision, individualized and culturally-sensitive intervention, and program design. Prereq.: Admission to MPT program. 6 s.h.

6906. *Critical Inquiry I.* Introduction to physical therapy literature and resources for PT related scholarly activity. Review of qualitative and quantitative methods, measurement issues; and outcomes research. Understand the basic components of ethical critical inquiry in order to become informed consumers of professional literature. Prereq.: Admission to MPT program. 1 s.h.

6907. *Special Topics—Pediatrics.* Theories of human growth and development and application to typical and atypical motor development and illnesses or injuries of children. Clinical management of cases across the practice patterns with emphasis on family/caregiver participation, team approach, and setting-specific expectations. Prereq.: Admission to MPT program. 3 s.h.

6908. *Legal and Ethical Issues in P.T.* Foundation knowledge and skills necessary for legal and ethical practice of physical therapy. Emphasis on legal principles and concepts; contract, business, and educational law; ethical theory and ethical decision making approaches; and professional code of ethics. Prereq.: Admission to the MPT program. 2 s.h.

6909. *Clinical Decision Making III.* Evaluation of decision making process for clinical management of complex and complicated cases. Emphasis on reimbursement, professional development, interprofessional activities, and program evaluation. Prereq.: Admission to MPT program. 6 s.h.

6910. *Critical Inquiry II.* Analysis of literature based on historical and state-of-the-art theories and methods. Evaluate research on selected physical therapy topics. Emphasis on case report methods of critical inquiry. Introduction to funding, IRB process, collaborative endeavors, and proposal writing. Prereq.: Admission to MPT program. 2 s.h.

6911. *Special Topics—Geriatrics.* Theories of life span development and human aging with application to systems development and dysfunction. Emphasis on prevention, well elderly, and illnesses/injuries common to the elderly. Clinical management of cases, considering functional goals; cognition; pharmacology; and reimbursement issues. Prereq.: Admission to MPT program. 2 s.h.

6912. *Posture, Movement, and Health.* Study of health promotion and illness/injury prevention as it applies to posture and movement across the life span. Includes community health programming and program evaluation. Prepares the student as a health educator within community and professional settings. Prereq.: Admission to MPT program. 1 s.h.

6913. *Management and Leadership in P.T.* Theories of resource planning, management strategies for utilizing resources (human, information, fiscal, and space/equipment) for health care delivery, and clinical management issues in various physical therapy settings. Prereq.: Admission to MPT program. 2 s.h.

6914. *Clinical Education II.* Second clinical experience in evaluating and treating a diverse case load of illness/injury prevention, posture and movement dysfunction, and specialty practice. Includes supervision of support personnel, interprofessional evaluation and treatment, and administrative tasks. Six week full-time experience. Grade is S/U. Prereq.: Admission to the MPT program. 3 s.h.

6915. *Clinical Decision Making IV.* Topics that integrate practice patterns (musculoskeletal, neuromuscular, cardiopulmonary, and integumentary) such as multiple trauma, burns, amputations, and critical care. Also includes complex cases, within rourine diagnoses, due to severity, chonicity, or co-morbidity. Emphasis on outcome studies. Prereq.: Admission to MPT program. 6 s.h.

6916. *Critical Inquiry III.* Peer review of formally-presented case reports. Design of a clinically-related project based on the findings of the case report. Emphasis will be given to formal research proposals, clinical applications, and resources for project implementation. Prereq.: Admission to MPT program. 2 s.h.

6917. *Problem-Based Cases: Electives.* Problem-based topic exploration within an actual or hypothetical community health issue. Individual contributions are combined within a consultative approach, with emphasis on data-driven recommendations. Prereq: Admission to MPT program. 1 s.h.

6918. *Professional Issues.* Discussion of professional topics related to entry-level practice, such as leadership, interagency and interprofessional collaboration, future trends and technologies, and opportunities for professional growth. Prereq.: Admission to MPT program. 2 s.h.

6919. *Clinical Education III.* Continuation of clinical experience in evaluating and treating a diverse case load of illness/injury prevention, posture and movement dysfunction, and specialty practice. Includes supervision of personnel, interprofessional practice, administrative tasks, and effective time management. Five week full-time experience. Grade is S/U. Prereq.: Admission to MPT program. 2 s.h.

6920. *Clinical Education IV.* Final clinical experience in evaluating and treating a diverse case load of illness/injury prevention, posture and movement dysfunction, and specialty practice. Collaborative client-oriented practice, professional conduct, and professional development. Fifteen week of full-time experience. Grade is S/U. Prereq.: Admission to MPT program. 8 s.h.

6921. *Independent Study.* Individual study and projects under faculty supervision. Prereq.: Permission of instructor and department chair. May be repeated for a total of 6 s.h. Prereq.: Admission to MPT program. 1-6 s.h.

6922. *Research.* Research under the supervision of a graduate faculty member. Prereq.: Permission of instructor and department chair. May be repeated for a total of 6 s.h. Prereq.: Admission to MPT program. 1-6 s.h.

* additional fee required

Physics and Astronomy

William Sturrus, Chair of the Department
2014 Ward Beecher Science Hall
(330) 941-3615

Physics

5810. *Quantum Mechanics I* (3 s.h.)
5811. *Quantum Mechanics II* (3 s.h.)
5823. *Laser Physics and Photonics* (3 s.h.)
5826. *Nuclear Physics and Nuclear Physics Lab* (3 s.h.)
5830. *Condensed Matter Physics* (3 s.h.)
5835. *Spectroscopy* (3 s.h.)
5835L.* *Spectroscopy Laboratory* (1 s.h.)
5850. *Special Topics in Physics* (2-6 s.h.)
5890. *Physics and Astronomy for Educators* (3 s.h.)

6900. *Physics Education Workshop.* Intensive study of selected topics of current interest in Physics education. May be repeated. 1-3 s.h.

Political Science and Social Science

William C. Binning, Chair of the Department
444 DeBartolo Hall
(330) 941-3435

Political Science

5800. *Select Problems, American Government* (2-4 s.h.)
5830. *Public Human Resource Management* (4 s.h.)
5860. *Select Problems, International Relations* (2-4 s.h.)
5865. *Global Environmental Policy & Law* (3 s.h.)
5880. *Select Problems, Political Thought* (2-4 s.h.)

6905. *Public Administration and the Political Process.* Political factors which condition the structure and function of public agencies, including the public interest, agency constituencies, and political influence. Prereq.: Admission to YSU/CSU MPA program. 4 s.h.

6963. *Budgetary Policy.* Covers the importance of budgeting and finance to public policy makers and public administrators: Sources of city and state finance information; examination of the revenue, expenditure and debt structure of American cities. Also includes examination of budgetary processes, formats, and accounting systems. Prereq.: Admission to YSU/CSU MPA program. 4 s.h.

* additional fee required

Psychology

James C. Morrison, Chair of the Department
321 DeBartolo Hall
(330) 941-3400

5807. *Introduction to Counseling* (3 s.h.)

6903. *Psychology of Learning and Education.* Examination of the teaching and learning process and its implications for use in education. 3 s.h.

6905. *Human Growth and Development.* A life-span perspective to theoretical and empirical issues of development from conception to death. 3 s.h.

6906. *Advanced Child Development.* Expanded aspects of child and adolescent psychology. 3 s.h.

6907. *Psychology of Adjustment.* Basic problems dealing with mental health, individual differences, motivation, and minor deviant behavior. 2 s.h.

6930. *Child and Adolescent Health Psychology.* Comprehensive theoretical and empirical coverage of topics in pediatric and health psychology. Prereq.: PSYCH 6905. 3 s.h.

6936. *Cognitive and Social Development.* This course will survey major theories and empirical findings of cognitive development and the development of interpersonal relations across childhood. Prereq.: PSYCH 6905. 2 s.h.

6940. *Personality Theory.* The study of major personality theories and their implications for psychotherapy and mental health work. Prereq.: PSYCH 3740. 2 s.h.

6955. *Psychopathology.* The study of abnormal behavior with an emphasis placed on psychopathological conditions. Prereq.: PSYCH 6940. 2 s.h.

6960. *Fundamentals of Applied Behavior Analysis.* The scientific and theoretical foundation for applied behavior analysis including techniques of descriptive analysis, demonstrating functional relationships, single-subject research designs, and ethical behavior standards for professionals. 3 s.h.

6981. *Seminar in Special Education.* (see SPED 6981) 1-2 s.h.

6990. *Seminar in Psychology.* Study of topics in psychology. To be announced by topic. Prereq.: Permission of instructor. Repeatable to 6 s.h. with change in topic. 1-3 s.h.

7000. *Psychopharmacology.* An introduction to the basic principles of pharmacology; a review of the structures and mechanisms of the central nervous system with emphasis on neurotransmission; and a survey of the drugs that especially affect the central nervous system including possible mechanisms of action. 2 s.h.

7010. *Counseling Internship.* (see COUNS 7010) 1-10 s.h.

7060. *Thesis.* 4 s.h.

* additional fee required

Public Health

John J. Yemma, NEOU MPH Program Co-Director
Dean, Bitonte College of Health and Human Services
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1080 Cushwa Hall
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Amy Lee, NEOUMPH Program Director
Division of Community Health Sciences
NEOUCOM
(330) 747-2247 or (330) 325-6164

6901. *Public Health Concepts.* Organizational structure, history, law, ethics, essential services, global problems, and future of public health. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6902. *Social and Behavioral Sciences in Public Health.* Theories of health education and promotion; Intervention (communication, collaboration, and strategies): socio-cultural, diversity, and regional issues as pertains to public health. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6903. *Epidemiology in Public Health.* Epidemiological methods, including study design, legal/ethical aspects, and Epi Info, applications of methods including screening, disease surveillance, outbreak investigation, and community needs assessment. Student presentations to focus on special topics such as infectious diseases, chronic conditions, etc. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6904. *Biostatistics in Public Health.* Principles of biostatistics in the context of multiple public health applications, Epi Info, SAS, and JMP statistical packages to be used. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6905. *Health Services Administration in Public Health.* Management principles, including personnel administration, budgeting, financing, and continuous quality improvement as pertains to public health. Planning and evaluation principles, grant writing, public health economics, public health policy, and data sources. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6906. *Environmental Health Sciences in Public Health.* Air quality, water quality, food hygiene, sanitation, solid waste management, hazardous materials management, vector-borne disease, other special topics, occupational health, legal issues, environmental hazard identification and response. Prereq.: Graduate standing, permission of course director required for non-MPH students. 3 s.h.

6907. *Grant Writing in Public Health Practice.* Methods and techniques for writing and managing grant proposals to support public health programs. Prereq: Permission of instructor required for non-MPH students. 3 s.h.

6994. *Individual Investigation in Public Health.* Intensive research or readings on selected topic or

problem to be selected in consultation with MPH graduate faculty. Prereq: MPH 6901 and 6904. 1-3 s.h.

6995. *MPH Special Topics.* Sections will focus on specific topics of current interest to public health workers. Fliers describing the section offering will be distributed prior to registration each semester. Prereq.: Graduate standing, permission of program director required for non-MPH students. 1-5 s.h.

6996. *MPH Practicum.* Student is teamed with a faculty advisor and community preceptor(s) to work on a meaningful public health issue. For students who desire additional field experience. Prereq.: Graduate standing, permission of program director required for non-MPH students. 3-6 s.h.

6997. *MPH Capstone Project.* A faculty advisor and community preceptor(s) are teamed with each student who will develop a paper (i.e. grant, study, proposal) on a meaningful public health issue learned from the core MPH courses. Prereq.: Graduate standing; MPH 6901, 6902, 6903, 6904, 6905, and 6906. 3-6 s.h.

Social Work

Joseph L. Mosca, Chair of the Department
3030 Cushwa Hall
(330) 941-1598

5820. *Social Policy* (3 s.h.)
5822.* *Social Work Methods* 3 (3 s.h.)
5823. *Cultural Diversity in Practice* (3 s.h.)

6900. *Human Behavior and the Social Environment I.* An overview of normal individual development throughout the life span. Developmental stages, tasks, and circumstances as well as diversity in individual development will be examined. The influence of biological, psychological, and social systems on individual development throughout the life span constitutes the organizing theme for the course. 3 s.h.

6901. *Oppressed Populations.* Examination of the history, demographic trends, and cultures of diverse groups who have been disenfranchised based on differences that include race, gender, age, socioeconomic class, sexual orientation, religion and ability. Emphasis will be placed on understanding the experience of oppression among diverse groups and the implications for social work practice. 3 s.h.

6902. *Social Welfare Policy and Program Analysis.* A historical perspective on the development of social problems as well as a critical analysis of social welfare institutions, programs and policy efforts and services. Attention is given to the consequences of social and economic injustice and the effects that policy initiatives have upon vulnerable populations. 3 s.h.

6903. *Social Work Foundation Practice I.* A foundation methods course based on an advanced generalist social work practice perspective. This course demonstrates application of the problem-solving process or the planned change process in the context of the strengths perspective. Attention will be placed on planning interventions with diverse individuals, families and small groups. 3 s.h.

* additional fee required

6904. *Field Education I.* Professionally supervised practice in approved community agencies. Focus will be on increasing the student's analytic skills and repertoire of intervention modalities. The course is based on foundation coursework that emphasizes advanced generalist practice while promoting a strengths-based approach. Must be taken concurrently with SCWK 6903. 3 s.h.

6905. *Human Behavior and the Social Environment II.* An overview of theories and knowledge of the behavior of groups, organizations, and communities as well as the impact of these systems on individual behavior. Special emphasis is given to understanding the influence of mesosystems and macrosystems on social service organizations. Empowerment-based policies are explored. Prereq.: SCWK 6900. 3 s.h.

6906. *Business Skills for Social Workers.* Overview of the principles, concepts, and terminology related to social work business practice. Topics include time management, financially responsible practice, managed care issues, organizational efficiency and effectiveness, outcome measurements, performance evaluation, marketing for non-profit organizations, community building and collaborative efforts. State-of-the-art technology will be reviewed. Prereq.: SCWK 6905. 3 s.h.

6907. *Social Work Foundation Practice II.* A foundation methods course based on an advanced generalist social work practice perspective. This course demonstrates application of the problem-solving process or planned change process in the context of the strengths perspective. Attention will be placed on planning interventions with diverse organizations and communities. Prereq.: SCWK 6903. 3 s.h.

6908. *Research.* A review of the scientific method, quantitative and qualitative research strategies, and related concepts. Principles of conceptualization, research design, sampling, instrumentation, descriptive and inferential data analysis, scientific report writing, and the significance of research for social work practice will be emphasized. Attention will be placed on developing strengths-based performance indicators. Prereq.: SCWK 6903. 3 s.h.

6909. *Field Education II.* Professionally supervised practice in approved community agencies. Focus will be on increasing both the student's analytic skills and repertoire of intervention modalities. The course is based on foundation coursework that emphasizes advanced generalist practice while promoting a strengths-based approach. Must be taken concurrently with SCWK 6907. 3 s.h.

7000. *Advanced Direct Practice I.* An advanced course that emphasizes social work values, ethical dilemmas/implications, and the development of practice methods that integrate a strengths-based empowerment approach with individuals, families and groups. Prereq.: SCWK 6907. 3 s.h.

7001. *Management Practice.* A review of the skills, theories, concepts, and strategies related to large systems or macro practice, and the application of knowledge and skills to resource development, management and community intervention. The focus is on resiliency and empowerment of communities through collaborative efforts, partnerships, community building, advocacy and macro intervention. Prereq.: SCWK 6907. 3 s.h.

7002. *Adversities and Resiliencies.* The development of adversities experienced by individuals from conception through adulthood. The course employs a multisystems ecological perspective in discussing risk conditions, stressful life events, and the interplay of risk and protective factors that appear to be common to many childhood disorders and problems. Prereq.: SCWK 6907. 3 s.h.

7003. *Theory and Practice of Supervision.* A review of the education, administration, and support aspects of supervision, as well as individual, group, and peer group modalities. Emphasis will be placed on

supervisory issues as they relate to diversity, strengths-based assessment, and the development of multicultural competence. Prereq.: SCWK 6905. 3 s.h.

7004. *Practice Evaluation.* Single-system research for evaluating individual, family, and small group outcomes. The course includes theory-based principles of conceptualization, single systems designs, sampling, instrumentation and measurement, descriptive statistics and tests of significance, report writing, and other relevant outcome measurements. Special emphasis will be placed on developing strengths-based performance indicators. Prereq.: SCWK 6908. 3 s.h.

7005. *Program Evaluation.* An exploration of advanced techniques for developing and directing research projects for large systems. Methods and strategies for conducting needs assessments, personnel reviews, program monitoring, cost/benefit analyses, quality assurance studies and program evaluation will be emphasized. Prereq.: SCWK 6908. 3 s.h.

7006. *Social Work in Aging.* A substantive area course that examines social work with the elderly through critical analysis of policy, specific human behavior content, and research. Students will critique practice interventions, program design and service strategies specific to social work practice in settings for the aged. Must be taken concurrently with SCWK 7009. 3 s.h.

7007. *Social Work in Child and Family Settings.* A substantive area course that examines social work in child and family settings through critical analysis of policy, specific human behavior content, and research. Students will critique practice interventions, program design and service strategies specific to social work practice in child and family settings. Must be taken concurrently with SCWK 7009. 3 s.h.

7008. *Social Work in Mental Health.* A substantive area course that examines social work in mental health settings through critical analysis of policy, specific human behavior content, and research. Students will critique practice interventions, program design and service strategies specific to social work practice in mental health settings. Must be taken concurrently with SCWK 7009. 3 s.h.

7009. *Field Education III.* Advanced field education placement. Students participate in planned experiences that integrate theoretical knowledge, social work practice skills, and social work ethics and values in direct or macro practice settings. Theoretical frameworks address micro and macro concerns respectively by emphasizing empowerment, individual strengths, solution focused practice, community building, collaboration and organizational structures. Must be taken concurrently with SCWK 7000 or 7001. 3 s.h.

7010. *Advanced Direct Practice II.* A continuation of Advanced Direct Practice I. In addition to developing practice methods that integrate a strengths-based empowerment approach with individuals, this course incorporates theoretical frameworks and constructs from empowerment theory, the ecological perspective, solution-focused practice, the feminist perspective, person-centered practice and other relevant brief practice approaches. Prereq.: SCWK 7000. 3 s.h.

7011. *Organizational Management and Community Change.* Examination of theoretical frameworks and principles of organizational management, governance, and leadership. Organizational design, behavior, performance and effectiveness are examined. Emphasis will be placed on human service organizations. An assets and strengths-based approach will be utilized to examine agency issues. Prereq.: SCWK 7001. 3 s.h.

7012. *Field Education IV.* Advanced field education placement. Students participate in planned experiences that integrate theoretical knowledge, social work practice skills, and social work ethics and values in direct or macro practice settings. Theoretical frameworks address micro and macro concerns respectively by emphasizing empowerment, individual strengths, solution focused practice, community building, collaboration and organizational structures. Must be taken concurrently with SCWK 7010 or 7011. 3 s.h.

* additional fee required

7013. *Capstone.* This course provides opportunities for students to synthesize and integrate previous coursework from their social work education. Theoretical and experiential assignments are utilized to assist students with increased self-awareness and to prepare them for the transition from college to advanced professional social work practice that emphasizes the strengths-based approach. Must be taken concurrently with SCWK 7012. 3 s.h.

Sociology and Anthropology

John R. White, Chair of the Department
420 DeBartolo Hall
(330) 941-3441

Sociology

6900. *Special Sociological Problems.* Advanced seminars focusing on independent study at the graduate level; social organization in a changing world; social disorganization (or deviance) and social controls; social and cultural factors in personality development; minority relationships: sociology of law; social change; comparative institutions. each 3 s.h.

6905. *Social Gerontology.* Integration and application of gerontological theories; major conceptual issues regarding life span development; and contemporary gerontological concepts and research. 3 s.h.

Anthropology

6910. *Special Anthropological Problems.* Advanced seminars focusing on independent study at the graduate level. The study of archaeology, its methods and functions; human origins and differentiation; anthropology of religion; cultural change and its impact. May be repeated with different topic. each 3 s.h.

Department of Teacher Education

Marianne Dove, Chair of the Department
2406 Beeghly Hall
(330) 941-3251

Early and Middle Childhood Education Program

5816. *Diagnosis and Remediation of Elementary School Mathematics* (2 s.h.)
5888. *Topical Seminar* (1-3 s.h.)

5900 (EMCE). *Early/Middle Childhood Education Workshop.* Intensive study of selected topics, issues, or problems of current interest in early and/or middle childhood education. May be repeated. Grading is S/U. 1-4 s.h.

5901 (EMCE). *Early/Middle Childhood Education Workshop.* Intensive study of selected topics, issues,

or problems of current interest in early and/or middle childhood education. May be repeated. Grading is S/U. 1-4 s.h.

5902 (EMCE). *Early/Middle Childhood Education Workshop.* Intensive study of selected topics, issues, or problems of current interest in early and/or middle childhood education. May be repeated. Grading is S/U. 1-4 s.h.

5903 (EMCE). *Early/Middle Childhood Education Workshop.* Intensive study of selected topics, issues, or problems of current interest in early and/or middle childhood education. May be repeated. Grading is S/U. 1-4 s.h.

6911 (ECE). *Early Childhood Pedagogy.* An analysis of early childhood programs and theorists with an emphasis on constructivist teaching and learning theory. Techniques to promote children's problem solving, thinking, construction of knowledge, and positive dispositions will be addressed. Includes field inquiry. 4 s.h.

6912 (ECE). *Curriculum, Theories and Methods in Early Childhood Education, Pre-K-Grade 3.* Investigation of curriculum, theories, and assessment and how they relate to children's learning. Attention given to the role of parents as teachers. Prereq.: EMCE 6911. 3 s.h.

6917 (TERG). *Survey of Reading and Language Arts Programs.* A critical appraisal of reading and language arts programs in schools and an analysis of contemporary methodological issues. 3 s.h.

6918 (EMCE).* *Elementary School Mathematics Programs.* An analysis of past and present programs of elementary school mathematics; evaluation of programs including a consideration of adequacy of content, recognition of mathematics as a system, provision of number experiences for the learner. 3 s.h.

6919 (EMCE). *Social Studies Programs in the Elementary School.* Objectives of elementary school social studies programs in terms of current needs; adaptation of materials of instruction in terms of the social science skills; evaluation of student progress; critical analysis of methods of improving instruction in social studies. 3 s.h.

6920 (EMCE). *Elementary School Science Programs.* Focus on the objectives for science education in the elementary school; the elementary school science curriculum; process and inquiry in the elementary school science curriculum; process and inquiry in the elementary scholl science program; teacher education; educational media; and the evaluation of science teaching. 3 s.h.

6920 (ECE). *Seminar in Early Childhood Education.* Analysis of contemporary issues, trends, and current educational policies which impact classroom practices. Emphasizes informed examination of issues using case-based, discussion-orientated approach. Includes service learning component. 3 s.h.

6921 (EMCE).* *Issues, Problems, Developments, and Curriculum in Elementary Education.* A study of recent trends in elementary school organization and instruction (non-graded units, team teaching, middle schools, etc.) Developing an understanding of the meaning of curriculum at the elementary level, evidence of need for curricular changes, influences of society on curriculums, exploration of current status and trends; the role of teacher and administrator in curriculum appraisal and development. 3 s.h.

6921(ECE). *Special Project in Early Childhood Education.* Designed as a culminating experience. Direct participation is required for the successful completion of a field study, onsite project, or other classroom-based experience deemed suitable by the student's major faculty advisor. 3 s.h.

* additional fee required

6923 (TERG).* *Reading and Language Learning: Early Years.* Investigation and research of the philosophy, principles, and practices of reading and language arts development of the child, birth through age 8. Language learning need of diverse populations will be addressed. 3 s.h.

6924 (TERG).* *Reading and Language Learning in the Middle & Adolescent Years.* Investigation of research-based philosophies, principles, and best practices for learning to read and perform the language arts as well as to use reading and the language arts as tools in learning and communication during ages 10 through 22. Prereq.: TERG 6917. 3 s.h.

6926 (TERG).* *Reading and Language Arts Assessment I.* An examination and application of formal and informal assessment procedures in the context of reading and language arts instruction. Emphasis will be placed on the use of background information and discrete data. Strategies providing for effective appraisal procedures and developmentally appropriate activities will be included. Prereq.: TERG 6917. 3 s.h.

6927 (TERG). *Reading and Language Arts Assessment II.* The selection, administration, and interpretation of formal and informal assessment tools in the context of reading and language arts instruction. Emphasis will be placed on the assessment of factors affecting student comprehension of text and the application of study procedures and the use of assessment information for informed decision making in the language arts curriculum. Prereq.: TERG 6926. 3 s.h.

6928 (TERG). *Practicum: Case Study in Reading and Language Arts.* Application of previous course content involves supervised formal and informal assessment of school-age pupils, developing an individualized reading plan, selecting appropriate strategies and materials for teaching, writing, tutoring log entries, developing a student portfolio, evaluating results of instruction, and writing a case study report. Prereq.: EMCE 6927. 3 s.h.

6929 (TERG).* *The Reading and Language Arts Professional.* Investigation of theories and performance-based procedures for creating, analyzing, guiding, and changing school- and system-wide reading and language arts programs. Prereq.: TERG 6927. 3 s.h.

6938 (TEMC).* *Early Adolescent Characteristics and Educational Program Needs.* Application of research and theories about the physical, cognitive, emotional, moral, and social development of 10- to 15-year olds to middle grade instructional decisions. Students will reflect upon and analyze policy and program implications based on developmental principles and investigate effective collaboration with family and others involved with the age group. Includes field inquiry. 3 s.h.

6939 (TEMC).* *Organizational Components of Middle Level Schools.* Reflection on theory and research information concerning the historic, philosophical, and organizational components of middle level schools, including program assessment and evaluation of learning environments for appropriateness to early adolescent learners. Prereq.: TEMC 6938. 3 s.h.

6940 (EMCE). *Inquiry Into Current Issues in Middle Level Education.* Application of previously acquired knowledge, critical thinking, inquiry techniques including Internet searches, and collaborative synthesis strategies to significant middle level education problems. Cohort inquiry team participants will present a multimedia reform proposal. May be repeated. Prereq.: TEMC 6938, 6939. 1-3 s.h.

6941 (TEMC).* *Pedagogy Appropriate for Early Adolescent Learners.* A course linking the learning needs of early adolescents with a variety of curricular and instructional approaches and assessments. Students will reflect on pedagogical theories and research on ways to integrate middle-level curriculum and promote learning construction by students, participate in professional collaboration, investigate alternative assessment techniques, and design an action research project to apply their understanding. Prereq.: TEMC 6940. 3 s.h.

6942 (TEMC). *Action Research: Pedagogy Appropriate for Early Adolescent Learners.* A culminating middle-grade level classroom teacher research project implementing the design of the study organized in TEMC 6941. Students will review authentic assessment literature, collect and analyze evaluation data collaboratively with students, interpret results, and propose improvements. Prereq.: TEMC 6941. 3 s.h.

6943 (TEMC). *Field Experience: Service Learning and School-Community Collaboration.* Field experience study of middle-grade level school-community collaboration and opportunities for service learning to promote healthy development of early adolescents. Participants design, administer, and analyze an interview survey and propose a collaborative model for interaction. 3 s.h.

6990 (SEDUC). *Independent Study.* (Couns. 990, Sec.Ed. 990) Individual investigation of advanced topics under guidance of selected staff. Prereq.: FOUND 6904. 1-4 s.h.

7042 (EMCE, SPED, SEDUC). *Professional Development for Classroom Teacher Educators.* A restricted professional development course for classroom teacher educators invited to supervise the instructional program of student teachers and field experience students. The course concentrates on developing analytical observation, conferencing, evaluation, and supervision skills based on scientific knowledge and theoretical constructs. Prereq.: Invitation from YSU and endorsement from home school district to serve as a classroom teacher educator. (cross-listed with SEDUC 7042) 2 s.h.

Secondary Education Program

EDTC 5899. *Integration of Instructional Computing* (3 s.h.)

5991, 5992, 5993. *Seminar in Secondary Education.* Various topics of current interest in the secondary education area as selected by the staff. Prereq.: Admission to School of Graduate Studies and Research. Grading is S/U. 1-5 s.h.

6905 (EDTC). *Technology in Instructional Settings.* This course provides an introduction to the technological issues, theories and skills used in instructional settings. EDTC 6905 covers current technologies (equipment and software) that facilitate productivity and/or instructional practice. Discussions and projects can be adapted for various target audiences. This course may not be used to satisfy the requirements for the technology endorsement, but this must be taken before technology endorsement courses are taken, unless a comparable course has been taken that satisfies the prerequisite. 3 s.h.

6931. *The Secondary School Curriculum.* Historical development of the American secondary school curriculum, present nature, and recent developments. Study of reports, experiments, and typical programs. The roles of supervisors, administrators, teachers, pupils, and public in the development of curriculum. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6958. *Instructional Supervision for Nonschool Personnel.* Strategies of teaching and supervision including the use of media, the evaluation of instruction and pupil performance, and related personnel issues will be covered. The course is designed for personnel in nonschool settings who have teaching or supervisory responsibility in inservice programs. Prereq.: Permission of instructor. 3 s.h.

6970 (EDTC). *Educational Computing and Technology.* The design of courseware in integrating instructional technology into school settings. Participants will learn and design technology integration projects for curricular areas, including educational uses of desktop publishing, multimedia, print materials, graphics, and record keeping. Issues in establishing and maintaining instructional

* additional fee required

technology in schools, including Ohio School Net, EMIS, planning, organization, staffing, financing, coordinating, managing, and assessing are included. Prereq.: Completion of EDTC 3771 or Novice Training Certificate from the State Board of Education or permission of chairperson. 4 s.h.

6971 (EDTC). *Educational Internet Use and Site Design.* In-depth study of Internet uses within instruction. Topics include accessing teaching-learning resources, audio, visual, and graphic design, and site development. Students will design their own web site using HTML, DHTML, JaveScript, self-generated graphics, audio, and FTP protocols. Prereq.: EDTC 6970. 4 s.h.

6972 (EDTC). *Design Principles for Technology in Instruction.* Designing computer-mediated unit plans for instruction using frameworks from critical constructivist and related experiential learning theory. Focuses on the integration of principles of learning and instruction with key elements of educational computing and technology designs. Using an instructional design approach, students develop and produce audio, video, multimedia, and print materials for unit-plan specific instructional purposes. Prereq.: SEDUC 6922 or permission of instructor. 4 s.h.

6973 (EDTC). *Directed Field Experience in Educational Technology.* An opportunity for students to apply knowledge and skills through a Directed Field Experience project in a working environment. The Directed Field Experience requires submission of a formal project, paper, or research study relative to a computer education and technology program for an educational setting within parameters decided by the student's field experience supervisor based upon the nature of the field setting and discussions with the student. (Students selecting a thesis option will not be required to take this course). Prereq.: SEDUC 6922, 6936, EDTC 6970, 6971, or permission of chairperson. 2 s.h.

6990. *Independent Study.* Individual investigation of advanced topics under guidance of selected staff. Prereq.: FOUND 6904. 1-4 s.h.

6999. *Thesis.* Prereq.: Approval of department graduate faculty and Chair. 2-6 s.h.

7020. *Field Experience in Supervision.* A field experience in supervisory practices. Admission by permission of Chair of Secondary Education. Prereq.: FOUND 6904, SEDUC 6922, 6946, 7036, EDADM 6949, 6954. 2 s.h.

7025. *Seminar in Secondary Education.* Study of selected topics chosen by the secondary education staff. Prereq.: Permission of instructor. May be repeated by nondegree students. 1-5 s.h.

7042. *Professional Development for Classroom Teacher Educators.* A restricted professional development course for classroom teacher educators invited to supervise the instructional program of student teachers and field experience students. The course concentrates on developing analytical observation, conferencing, evaluation, and supervision skills based on scientific knowledge and theoretical constructs. Prereq.: Invitation from YSU and endorsement from home school district to serve as a classroom teacher educator. Cross-listed with EMCE 7042. 2 s.h.

Special Education Program

5802.* *Education of Exceptional Children* (3 s.h.)
5810. *Introduction to Sign Language* (3 s.h.)
5828. *Education of Seriously Emotionally Disturbed Children and Youth* (4 s.h.)
5834. *Educational Strategies and Methods for Children and Youth with Moderate/Intensive Disabilities* (4 s.h.)
5835. *Classroom Management for Exceptional Children and Youth* (4 s.h.)
5836. *Characteristics and Needs of Exceptional Children and Youth with Moderate/Intensive Disabilities* (4 s.h.)
5851. *Transition Planning, Social Skill Development, and Health-Related Issues* (4 s.h.)

* additional fee required

5853.* *Diagnosis and Intervention in Mathematics for Special Education* (3 s.h.)
5858.* *Intervention Concepts and Strategies in Early Childhood Special Education* (2 s.h.)
5863. *Characteristics and Needs of Children and Youth with Mild/Moderate Disabilities* (4 s.h.)
5864. *Service Coordination, Collaboration, and Consultation for Students with Special Needs* (4 s.h.)
5865. *Workshop in Special Education* (1-4 s.h., may be repeated up to 12 s.h.)
5866.* *Assessment and Referral of Exceptional Children and Youth for the Intervention Specialist* (3 s.h.)
5867.* *Intervention and Remediation of Receptive/Expressive Language Dysfunctions* (4 s.h.)
5868. *Mild/Moderate Disabilities Practicum* (4 s.h., may be repeated up to 6 s.h.)
5870. *Independent Study in Special Education* (1-4 s.h.)
5871.* *Characteristics and Needs of Gifted Children* (3 s.h.)
5878.* *Teaching Gifted and Talented Students* (3 s.h.)

6965. *Special Topics in Disabilities Education.* Workshop will include information on various current topics appropriate to the education of students with disabilities. These include assessment, identification, and instructional processes. 1-4 s.h.

6970G. *Special Topics in Gifted Education.* Workshop will include information on the various identification techniques used in gifted education with particular emphasis on the role of the regular education teacher. In addition, instructional strategies for use within the regular education classroom will be explored. 1-4 s.h.

6980. *Topical Seminar in Special Education.* Selected topics in special education. May be repeated for different content. 1-4 s.h.

6981.* *Seminar: Current Issues in Special Education.* Advanced seminar in Special Education detailing current issues in the field involving research, pedagogy, methodologies, and application. Emphasis on legislative updates and current trends. Discussion of critical issues in special education. 4 s.h.

6982.* *Educational Assessment in Gifted and Special Education.* The course focuses on the educational assessment process as it applies to students with exceptionalities (students with disabilities as well as gifted students). Topics include a review of state and federal regulations, data collection techniques including both formal and informal methods, appropriate test preparation and interpretation, design of identification and placement procedures. 3 s.h.

6984. *Major Concepts and Program Design for Students in Special Education.* Major concepts, program development, and program evaluation involving service delivery to youth with special needs will be stressed. 4 s.h.

6985. *Alternative Delivery Services for Children in Special Education.* Designing and organizing programs for children receiving special education services in inclusive and other settings. Collaboration and consultation strategies for both special education and general education teachers are emphasized. Service delivery models from least to most restrictive are also addressed. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6986. *Severe Behavior Disabilities.* A comprehensive analysis of programs. An analysis and description of the delivery of services to a wide range of youth in serious conflict will be described. 3 s.h.

6991.* *Referral and Assessment in Early Childhood Special Education.* Intensive hands-on experience in referral and assessment of young children. Emphasis on philosophies and ethical considerations, as well as techniques, instruments, and the referral process. Participation within the assessment team with parents involved as equal partners in the multidisciplinary process. Written assessment reports are required based upon knowledge of child development and a variety of sources of input. Prereq.: Admission to COE Upper Division; SPED 5858. 3 s.h.

* additional fee required

6992.* *Teaching Methods in Early Childhood Special Education.* Examines accepted curricular models in early childhood special education as well as classroom management and motivation strategies as they relate to young children with special needs. Emphasizes the inclusion of parents in planning process. Students will learn to integrate curriculum with individual IEP/IFSP goals and objectives. Prereq.: SPED 5858. 3 s.h.

6993.* *Health and Related Issues in Early Childhood Special Education.* A study of curricular experiences focusing on those aspects of early childhood special education dealing with the instructional applications of technology and the use of adaptive equipment and related services as these relate to technologically dependent or chronically ill children. Prereq.: SPED 5858. 2 s.h.

6994. *Field Experiences in Early Childhood Special Education.* Supervised field experiences incorporating theory, planning and implementation of services for young children with special needs. Prereq.: SPED 5858, 6991, 6992, 6993. 4-8 s.h.

6996. *Teaching Strategies/Autism.* Application of assessment, curriculum planning, preparation of materials and practice teaching methods for students with autism spectrum disorders and related disabilities. Methodology emphasizes most effective practices for instructing students who need academic and/or life skill curricula. Prereq: Admission to Graduate Studies. Psych 6960 or Psych 6990 or equivalent. 4 s.h.

6998. *AAC Strategies.* Assessment and application of methods to increase communication form, function and literacy for individuals who need alternate and/or augmentative communication (AAC). Prereq: SPED 6997 and PSYCH 6990 or PSYCH 6960. 3 s.h.

6999. *Field Experiences Autism/Related Disorders.* Supervised field experiences incorporating theory, planning and implementation of services for children with autism spectrum disorders. Weekly seminars connect theory to practice. Prereq: SPED 6996 and SPED 6998 and PSYCH 6990 or 6960. 3 s.h.

7021. *Field Experience I.* (see EDADM 7021) 2 s.h.

7040. *Field Experience in Gifted and Talented Education.* (SEDUC 7040) Supervised field experience that incorporates theory, planning, and implementation of curriculum for gifted and talented students. Individual conferences and completion of contracted assignments. Prereq.: SPED 5802, 5871, 5878, 6879, 6977, 6982. 2 s.h.

7042. *Professional Development for Classroom Teacher Educators.* A restricted professional development course for classroom teacher educators invited to supervise the instructional program of student teachers and field experience students. The course concentrates on developing analytical observation, conferencing, evaluation, and supervision skills based on scientific knowledge and theoretical constructs. Prereq.: Invitation from YSU and endorsement from home school district to serve as a classroom teacher educator. 2 s.h.

7043. *Instructional Leadership in Special Education.* Implementation, coordination, and evaluation of quality instructional programs for exceptional, at-risk, and other students experiencing learning problems. Administrative roles and strategies related to instructional leadership, school climate, collaborative decision making, and restructuring. Prereq.: COUNS 6961 and SPED 7977. 3 s.h.

7077.* *Leadership in Gifted and Disabilities Education.* The course focuses on leadership, administration, and supervision of a broad range of programs and services for students with exceptionalities (students with disabilities as well as gifted students). Topics include review of theoretical foundations, historical and sociological issues as these relate to education of special populations as well as in-depth study of federal and state legal issues, differentiated programming and procedures, student identification and placement, individualized education plans, due process, least restrictive environment, and program monitoring and evaluation. 3 s.h.

* additional fee required

Teacher Education (TECED)

6901. *National Board for Professional Teaching Standards: (NBPTS) Assessment Center.* The participants of this course will practice for the National Board for Professional Teaching Standards Assessment Center entries, which emphasize content knowledge. Participants will learn how to assess their own content knowledge. They will continue to write their NBPTS Portfolio entries with direction from the professor, an NBCT-mentor, and feedback from peers. Helpful aids, techniques, technology, and resources will be accessed. Prereq: Baccalaureate Degree, three years of teaching, currently teaching, NBPTS Candidate. 3 s.h.

6902. *National Board for Professional Teaching Standards: (NBPTS) Portfolio Development.* The participants of this course will write their National Board for Professional Teaching Standards Portfolio with direction from the professor, a NBCT-mentor, and feedback from peers. Helpful aids, techniques, and resources will be accessed. Participants will learn how to assess their own teaching and how to best represent themselves through writing, evidence, artifacts and videotapes. Prereq: Baccalaureate Degree, three years of teaching, current teaching, NBPTS Candidate. 4 s.h.

6903. *National Board for Professional Teaching Standards (NBPTS): Advanced Candidacy.* The participants of this course need an additional year in obtaining National Board for Professional Teaching Standards Certification and want to take advantage of guidance in demonstrating he/she is an accomplished teacher. This course allows candidates to choose either a portfolio or an assessment center entry to intensely address, as it helps candidate analyze the development needed to clearly, consistently and convincingly address the NBPTS entry in writing. Prereq.: Baccalaureate degree, three years of teaching, currently teaching, NBPTS Advanced Candidate. 1 s.h.

6904. *National Board Certified Teacher (NBCT) Facilitator/Mentor.* The participants of this course will learn how to mentor/facilitate a teacher through writing their National Board for Professional Teaching Standards Portfolio and research content for the NPBTS Assessment Center. It is also designed for teachers who are mentoring entry year teachers. Mentoring and facilitating techniques will be researched and practiced. Prereq.: Baccalaureate degree, three years of teaching, currently teaching, National Board Certified Teacher or Pathwise Trained, currently mentoring. 1 s.h. per mentee up to 4. May be repeated. 1 s.h.

6922. *Principles of Instruction.* A course for practitioners dealing with principles of pedagogy for both traditional and nontraditional classroom settings. Emphasis is on relationships between instruction and learning outcomes. Historical and cognitive bases for instructional strategies are examined inlight of student, teacher, and curriculum variables. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6934. *Assessment in Education.* Issues in the field of assessment in education. Readings and discussions analyze the implementation of, consequences of, and alternatives for assessment processes in school settings. Final project involves the investigation, practical application, and analysis of an assessment issue of specific interest. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6936. *Fundamentals of Curriculum Development.* Historical and social bases for curriculum development in school in the United States. Principles for determining content and its sequence and grade placement. Theoretical issues and patterns of cultural organization. 3 s.h.

6946. *Supervision of Instruction.* A course dealing with the supervision of classroom teachers and other personnel for those aspiring to be principals or supervisors. Classroom observation systems, professional development programs, accountability models, and common staff relationship problems are examined. 3 s.h.

* additional fee required

6951. *Interpersonal Communications for Educators.* Techniques of communicating effectively with teachers, administrators, non-teaching personnel, pupils, and parents. Organizing the overall communications programs within the school. Related problems. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6959. *Law and Ethics for the Classroom Teacher.* Examination of the legal, ethical, and civic dimensions and interrelations in teaching and schooling from the standpoint of the roles of the teacher and student. Prereq.: Admission to the School of Graduate Studies and Research. 3 s.h.

6999. *Proactive Grantseeking.* Study of recent trends in grantseeking (values-based grantseeking, proactive grants systems, looping, etc.); developing an understanding of the grants marketplace; developing and refining grant-winning ideas; examining the role of teacher, administrator, and community members in grantseeking; using advisory committees/advocacy groups; writing grant proposals; government and private funding sources; choosing the correct marketplace; follow-up procedures. 3 s.h.

7032. *Theories of Supervision.* Theories germane to supervision in education from research and theory in education, business, and the applied behavioral sciences with emphasis on clinical supervision. 3 s.h.

UNIVERSITY POLICIES

Graduate Student Grievance Procedure

The Graduate Student Grievance Procedure provides the graduate students at YSU with a formal channel through which complaints concerning academic matters may be heard. It creates a system whereby the student may receive assistance in pressing a claim within the organization of the University.

Informal discussions between persons directly involved in a grievance are essential in the early stages of a dispute and should be encouraged at all stages. An equitable solution to the problem should be sought before the respective persons directly involved in the case have assumed official or public positions that might tend to polarize the dispute and make resolution more difficult. If a problem still exists after discussion, the student should bring the complaint to the attention of the Graduate Program Director and Department Chair. If the problem remains unresolved, the student should bring the complaint to the School of Graduate Studies and Research.

Scope

The procedure provides the student with an opportunity to appear to seek redress for concerns involving an academic or administrative practice. This procedure may not be used as a means of modifying or changing departmental, University and/or School of Graduate Studies and Research policies, but may be used to address policy issues.

The Graduate Student Grievance Committee will be responsible for coordinating and implementing this formal procedure. The Committee membership will be appointed by Graduate Council and will be composed of three full-service faculty chosen by Graduate Council, three graduate students, and the designee of the Vice President for Student Affairs. Any matters pertaining to conflict of interest concerning a particular grievance shall be resolved by the Committee. Two students and two faculty shall constitute a quorum. Any action taken by the Committee shall require a majority vote of a quorum.

Procedure

Before initiating the formal procedure, any student who has a complaint is urged to resolve the conflict through informal discussion as described above. If such discussion fails to resolve the matter, the following procedure should be implemented:

Step 1

A) The student must submit the Graduate Student Grievance Form to the chair of the Graduate Grievance Committee within twenty-four school days (a school day is defined as any day, including Saturdays, on which classes are conducted) following an event or the student's awareness of a situation that the student wishes to grieve. Within six school days after the student files the form with the Grievance Committee Chair, the committee shall designate three of its members, two faculty and one student, to serve as a subcommittee to attempt to resolve the issue. The subcommittee shall meet with each involved party either on an individual basis, or in a joint conference, as deemed appropriate.

B) Within six school days after the subcommittee completes its conferences, it shall issue a disposition notice concerning the grievance, together with a form upon which the student may indicate a) acceptance or rejection of the disposition, and b) a determination to pursue or not to pursue the issue further. The student must sign the Grievance Form and forward it to the Chair of the Graduate Student Grievance Committee within six school days after receiving the disposition.

Step 2

A) If the student or person against whom the grievance was filed rejects the disposition, the student must submit a formal written grievance to the Chair of the Graduate Student Grievance Committee within six school days. The Grievance Committee may waive the deadline for submitting the formal written grievance. In this and all subsequent steps of the grievance process, the student is entitled without cost for the services to an advocate from the Office of the Vice President for Student Affairs, or may employ at his/her own expense any other advocate. The individual against whom the grievance is directed may also be represented by an advocate.

B) Within 18 school days of the receipt of the formal written grievance, the Graduate Student Grievance Committee will hold a hearing on the grievance. All parties shall be notified well in advance of the day, time, and place of the hearing. At least three school days prior to the hearing, the Committee will receive written materials from the affected parties so that the Committee members have an opportunity to review them. This does not preclude the admission of additional written materials at the hearing. At the hearing itself, the following rights are guaranteed all parties: each will appear, each may be assisted by an advocate, each may speak, each may present pertinent relevant evidence, each may confront those expressing opposing viewpoints, and each may rebut evidence. After the hearing has been concluded, the Grievance Committee will meet in private and within six school days reach a decision.

Implementation

The Committee's disposition shall be signed by its Chair and forwarded to the student and faculty/staff members who were parties of the grievance, the Dean of Graduate Studies, the Chair or Director/Head of the department where the faculty or staff member is located, and the Provost. Copies of the disposition, along with a summary of the substantive issues of the grievance, shall be placed in the student's file, as well as in the faculty or staff member's or administrator's personnel file. A master file of all pertinent documents of all grievances shall be kept in the School of Graduate Studies and Research.

The Grievance Committee decision is final and allows for a change of grade.*

*revision approved by the Graduate Faculty on June 3, 1999

GRADUATE FACULTY

Administrative Members

DAVID C. SWEET, Ph.D., President
ANTHONY ATWATER, Ph.D., Provost
PETER J. KASVINSKY, Ph.D., Dean, School of Graduate Studies and Research
ROBERT BOLLA, Ph.D., Dean, College of Arts and Sciences
BETTY JO LICATA, Ph.D., Dean, Williamson College of Business Administration
PHILIP GINNETTI, Ph.D., Dean, Beeghly College of Education
CYNTHIA S. HIRTZEL, Ph.D., Dean, Rayen College of Engineering and Technology
GEORGE MCCLOUD, Ph.D., Dean, College of Fine and Performing Arts
JOHN J. YEMMA, Ph.D., Dean, Bitonte College of Health and Human Services

Faculty Members

ACCOUNTING AND FINANCE

DAVID E. STOUT, Professor: B.S., LaSalle College, 1973; M.B.A., Ph.D., University of Pittsburgh, 1978, 1982.

RONALD P. VOLPE, Professor: B.S. in B.A., Youngstown State University, 1964; M.B.A., Central Michigan University, 1968; Ph.D., University of Pittsburgh, 1975.

FRAN MARIE WOLF, Professor: B.A., Miami University, 1974; M.B.A., Youngstown State University, 1988; Ph.D., Kent State University, 1994.

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ART

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