



**Youngstown
State
University**

**Graduate
Bulletin
Supplement
2001-2002**

Effective August 2001
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, who is responsible for coordinating the University's programs for compliance with Section 504 of the Rehabilitation Act of 1973 and Title IX of the Education Amendments of 1972. Inquiries can be initiated in writing or by calling (330) 742-3370.

**Youngstown State University
Graduate Bulletin Supplement**

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EFFECTIVE AUGUST 2001

School of Graduate Studies
Youngstown State University
One University Plaza
Youngstown, OH 44555

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For other graduate programs and general information, please refer to the 2000-2002 Graduate Bulletin.

The Academic Calendar - Fall 2001

Date	Day	Time	Event
Aug. 27	Mon.	8 a.m.	Fall term begins
Sept. 3	Mon.		Legal holiday—University closed (Labor Day)
Sept. 6	Thurs.	6 p.m.	Last day for adds
Sept. 14	Fri.	5 p.m.	Last day to apply for fall semester graduation
Oct. 27	Sat.	Noon	Last day to withdraw with a W
Nov. 12	Mon.		Legal holiday—University closed (Veteran's Day)
Nov. 21	Wed.	11 p.m.	Thanksgiving academic break begins
Nov. 22	Thurs.		Legal holiday—University closed (Thanksgiving)
Nov. 23	Fri.		Legal holiday—University closed (Columbus Day observed)
Nov. 26	Mon.	8 a.m.	Thanksgiving academic break ends
Dec. 10	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies
Dec. 16	Sun.		Fall term ends
Dec. 16	Sun.	10 a.m.	Fall Commencement

Spring 2002

Nov. 5	Mon.		Registration of current students begins
Nov. 16	Fri.		Registration of current students ends
Nov. 20	Tues.		Registration of admitted transfer, former, transient, and graduate students
Nov. 27	Tues.		Orientation/registration of admitted new students
Dec. 4	Tues.		Registration of admitted transfer, former, transient, and graduate students
Dec. 6	Thurs.		Orientation/registration of admitted new students
Dec. 15	Sat.		Last day to apply for admission
Dec. 24	Mon.		Legal holiday—University closed (President's Day observed)
Dec. 25	Tues.		Legal holiday—University closed (Christmas Day)
Jan. 1	Tues.		Legal holiday—University closed (New Year's Day)
Jan. 8	Tues.		Orientation/registration of admitted new students
Jan. 9	Wed.		Registration of admitted transfer, former, transient, and graduate students
Jan. 10	Thurs.		Late and final registration (payment due at registration)
Jan. 11	Fri.		Change of registration begins
Jan. 14	Mon.	8 a.m.	Spring term begins
Jan. 21	Mon.		Legal holiday—University closed (Martin Luther King Day)
Jan. 24	Thurs.	6 p.m.	Last day for adds
Feb. 1	Fri.		Last day to apply for spring term graduation
Mar. 11	Mon.		Spring break begins
Mar. 18	Mon.	8 a.m.	Spring break ends
Mar. 23	Sat.	Noon	Last day to withdraw with a W
May 7	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies
May 12	Sun.		Spring term ends
May 18	Sat.	10 a.m.	Spring Commencement

The Academic Calendar - Summer 2002

Date	Day	Time	Event
Apr. 8	Mon.		Registration of current students begins
Apr. 11	Thurs.		Registration of current students ends
Apr. 15	Mon.		Last day to apply for admission
Apr. 30	Tues.		Registration of admitted transfer, former, transient, and graduate students
May 2	Thurs.		Orientation/registration of admitted new students
May 9	Thurs.		Orientation/registration of admitted new students
May 14	Tues.		Registration of admitted transfer, former, transient, and graduate students
May 17	Fri.		Late and final registration (payment due at registration)
May 18	Sat.		Change of registration begins
May 20	Mon.	8 a.m.	Full term and first term begin
May 24	Fri.	6 p.m.	Last day for adds (first term)
May 27	Mon.		Legal holiday—University closed (Memorial Day)
May 28	Tues.	6 p.m.	Last day for adds (full term)
June 5	Wed.		Full and first term summer student registration for Fall 2002
June 7	Fri.		Last day to apply for summer semester graduation
June 14	Fri.		Late admit registration for interim term
			Last day to withdraw with a W—first term classes
June 17	Mon.	8 a.m.	Interim term begins
June 21	Fri.	6 p.m.	Last day for adds (interim term)
June 28	Fri.		Late admit registration for second term
June 29	Sat.		First term ends (final examinations are given during the last scheduled class period)
July 1	Mon.	8 a.m.	Second term begins
July 4	Thurs.		Legal holiday—University closed (Independence Day)
July 8	Mon.	6 p.m.	Last day for adds (second term)
July 9	Tues.		Last day to withdraw with a W—full term
July 12	Fri.		Last day to withdraw with a W—interim term
July 17	Wed.		Second and interim term summer student registration for Fall 2002
July 26	Fri.		Last day to withdraw with a W—second term
July 27	Sat.		Interim term ends (final examinations are given during the last scheduled class period)
Aug. 5	Mon.		Deadline to submit theses to the School of Graduate Studies
Aug. 10	Sat.		Second and full terms end (final examinations are given during the last scheduled class period)
Aug. 17	Sat.	10 a.m.	Summer Commencement

The Academic Calendar - Fall 2002

Date	Day	Time	Event
Apr. 15	Mon.		Registration of current students begins
Aug. 25	Thurs.		Registration of current students ends
			Registration of new, transfer, former, transient, and graduate students by appointment during summer
July 15	Mon.		Last day to apply for admission
Aug. 22	Thurs.	7 p.m.	Late and final registration (payment due at registration)
Aug. 23	Fri.		Change of registration begins
Aug. 26	Mon.	8 a.m.	Fall term begins
Sept. 2	Mon.		Legal holiday—University closed (Labor Day)
Sept. 5	Thurs.	6 p.m.	Last day for adds
Sept. 13	Fri.		Last day to apply for fall semester graduation
Oct. 26	Sat.	Noon	Last day to withdraw with a W
Nov. 11	Mon.		Legal holiday—University closed (Veteran's Day)
Nov. 27	Wed.	11 p.m.	Thanksgiving academic break begins
Nov. 28	Thurs.		Legal holiday—University closed (Thanksgiving)
Nov. 29	Fri.		Legal holiday—University closed (Columbus Day observed)
Dec. 2	Mon.	8 a.m.	Thanksgiving academic break ends
Dec. 9	Mon.	8 a.m.	Final examinations begin
			Deadline to submit theses to the School of Graduate Studies
Dec. 15	Sun.		Fall term ends
Dec. 15	Sun.	10 a.m.	Fall Commencement

2001-2001 Student Fees and Charges

Tuition

Instructional Fee (including audit)

Graduate Students, all credits (both graduate and undergraduate)	\$ 180	per credit
Master of Public Health, all credits	306	per credit

General Fee

All Students, 1-11 credits	35	per credit
All Students, 12 credits or more	420	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:

Students registering for all credits	95	per credit
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Outside of Regional Service Area:

Students registering for all credits	195	per credit
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Housing

Room and Board (per academic year)	4970	
(Payable as follows: \$200 room reservation fee, \$2485 Fall Semester, and \$2285 Spring Semester)		
Break housing, one to three days (does not include meals)	18	per day
Break housing, per week (includes 7 meals per week)	150	per week
Room, summer session, per week (includes 10 meals per week)	135	per week
Security Deposit (paid first semester)	100	
University Apartments (room only, per person, per academic year)	3250	
(Payable as follows: \$200 room reservation fee, \$1625 Fall Semester, and \$1425 Spring Semester)		
Summer Apartments (room only, per person, per week)	80	per week
<i>Voluntary Meal Plans (for students not living in University housing)</i>		
Nineteen-meal plan per week	999	per semester
Fourteen-meal plan per week	865	per semester
Ten-meal plan per week	695	per semester
Five-meal plan per week	350	per semester

Special Purpose Fees and Service Charges

Career Planning Program Test	30	per use
Computing Fee	50	per semester
Credit by Examination	15	per credit
Graduate Student Application Fee	30	

Health and Physical Education Locker and Towel:

All authorized users	38	per semester
I.D. Replacement	15	
International Student Credentials Evaluation	45	
Late Application for Graduation (after third week of the semester)	25	
Late Payment Rebill Fee	15	
Late Registration	25	
Multi-service Fee:		
Full Time	36	per semester
Part Time	24	per semester
Performance Music Fee	53	per credit
Parking Permit	68	per semester
Parking Per Day Without Permit	3	
Proficiency Examination	45	per course
Returned Check or Credit Card Charge	30	
Student Locker Rental (paid at Kilcawley per academic year)	15	per year
Technology/Laboratory Materials Fee: Level 1	30	per course
Level 2	45	per course
Level 3	60	per course
Thesis Binding	25	per copy
Tuition Payment Plan Service Fee	4	per month

Fines*Library/Curriculum Center*

Overdue book: \$.10 per day to a maximum of \$11, plus cost of book replacement and a \$10 processing charge.

Overdue reserve book: \$.55 per day to a maximum of \$11, plus cost of book replacement and a \$10 processing charge.

Unauthorized removal of closed reserve book: same as overdue reserve, plus \$5.

Parking

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

Class II: Parking in or at a handicap zone without proper permit, a no parking sign, tow away zone, loading zone, an official use only sign, fire lane, or 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.

Computing Fee. This fee is charged to all students and 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.

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/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.

Graduate Management Admission Test (GMAT) Fee. The GMAT is an aptitude test designed to measure abilities important to the study of business at the graduate level. It is offered four times a year. Registration forms are available at the Testing and Special Programs Office.

Graduate Record Examination (GRE) Fee. The aptitude portion of the Graduate Record Examination is administered on campus five times a year. Registration forms are available at the Testing and Special Programs Office.

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.

Service Charges

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 (6) 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 repeal.

Graduate Programs and Revisions

Master of Health and Human Services

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Admission Requirements

In addition to the minimum School of Graduate Studies admission requirements, applicants must complete undergraduate courses in methodology, statistics, ACCT 2602, 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). The MHHS Advisory Committee may require the Graduate Record Examination (general test) of students who do not meet admission criteria.

Master of Science in Education Educational Administration

Howard W. Pullman, Program Director
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Principalship Provisional Licensure

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.

Principalship Licensure Ages 3-14 (16 semester hours)

EDADM 6950	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.
EDADM7022E	Field Experience: The Principalship Entry Year Program	3 s.h.
ECE 6912	Curriculum, Theories and Methods in Early Childhood Education, Pre-K-Grade 3	3 s.h.
SPED 7077	Leadership in Gifted and Disabilities Education	3 s.h.
COUNS 6961	Introduction to Pupil Personnel Services	2 s.h.

Principalship Licensure Ages 8-21 (16 semester hours)

EDADM 6950	Systematic Use of Information for Continuous School Improvement	3 s.h.
EDADM7018	School Discipline and Student Support Services: Policies, Programs, and Prevention Strategies	2 s.h.
EDADM7022S	Field Experience: The Secondary Principalship Entry Year Program	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.

Master of Science in Environmental Studies **Center for Environmental Studies**

Alan M. Jacobs, Program Director
Center for Environmental Studies
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Program Description

The Center for Environmental Studies (CES) offers a multidisciplinary, interdepartmental Graduate Program leading to a Master of Science degree in Environmental Studies. CES, housed in Moser Hall, 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., Associate Professor, Environmental Studies and Geology
Site characterization; health risk assessment; project management; groundwater contamination

Carl G. Johnston, Ph.D., Assistant Professor, Environmental Studies and 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., Associate 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 may consider provisional admission of a student with less than a 2.7 grade-point average if a 1400 combined 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 (6) 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.
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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	2 s.h.

(4) Business Management

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.

No more than nine (9) 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 (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 (9) 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 in Nursing

Options in:

Clinical Nurse Specialist
Nurse Anesthetist

Sharon P. Shipton, Program Director
2148 Cushwa Hall
(330) 742-1792
sshipton@cc.yzu.edu

Patricia Hoyson, Option Coordinator for Nurse Anesthetist
3087 Cushwa Hall
(330) 742-3087
plhoyson@cc.yzu.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 two options, with specialization in clinical nursing for chronic illness care and nurse anesthesia. 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.

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 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.

The National League for Nursing Accreditation Commission (61 Broadway Ave., New York, NY 10006; (800) 669-9656) is a resource of information regarding tuition, fees, and length of program.

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. and is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA). 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.

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.

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@cboss.com

Admission Requirements

In addition to the minimum School of Graduate Studies 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 current 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;
- 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@cboss.com.

Regular admission requires an unrecalculated cumulative undergraduate grade-point average of at least 3.0 (on a 4.0 scale). 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 option (27 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 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.

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.

Graduate Certificates

Graduate Certificate in Health Care Management Health and Human Services

Carol Mikanowicz, Program Director
 Bitonte College of Health and Human Services
 1086 Cushwa Hall
 (330) 742-3658
 ckmikano@cc.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 health care management courses.

Certificate Requirements

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 complete twelve semester hours from the following:

MGT 6961	Organizational Behavior	3 s.h.
MHHS 6918	Program Planning and Evaluation	2 s.h.
MHHS 6922	Planning and Fiscal Management	4 s.h.
MHHS 6949	Community Health Practice	3 s.h.
MHHS 6959	Foundation and Planning	3 s.h.
MHHS 6960	Implementation and Evaluation	3 s.h.

Graduate Certificate in Literature for Children and Young Adults

Department of English

Betty T. Greenway, Certificate Director
 College of Arts and Sciences
 243 DeBartolo Hall
 (330) 742-1648
 bettygreenway@aol.com

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 at YSU. Certificate courses must be completed with a GPA of at least 3.0.

Graduate Certificate in Working-Class Studies

Center for Working-Class Studies

Sherry Linkon, Co-director
 John Russo, Co-director
 Smith Building, First floor
 (330) 742-2977
 sjlinkon@cc.ysu.edu

The Center for Working-Class Studies (CWCS) at YSU, the only center of its kind in United States, is a multidisciplinary research, teaching, and outreach center focused on working-class culture and history. Faculty from the English, History, Management, and Psychology Departments comprise the nucleus of CWCS in affiliation with various faculty members from 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 the following four courses:

AMER 5850	Class and Culture	3 s.h.
ENGL 6923	Working-Class Literature	3 s.h.
HIST 6945	Preservation and Interpretation of the Industrial Built Environment	3 s.h.
MGT 5845	Work in America	3 s.h.

While this program is open to all graduate students, it may be of particular interest to those in Business, English, Historic Preservation, and History. Students in the aforementioned disciplines may earn the certificate along with their Master's degree and may count two of the four courses toward degree coursework. To complete the certificate, the remaining two courses must be taken as additional credits.

COURSES

American Studies

Sherry Linkon, Coordinator
Smith Building, First floor
(330) 742-2977

5850. *Class and Culture* (3 s.h.) **New swing course**

Biological Sciences

Paul C. Peterson, Chair of the Department
4037 Ward Beecher Hall
(330) 742-3601

5832. *Principles of Neurobiology* (4 s.h.) **Change in course description and hours**
5868 and 5868L.* *Gross Anatomy I* (4 s.h.) **New swing course**
5869 and 5869L.* *Gross Anatomy II* (4 s.h.) **New swing course**

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. **(New course.)** 2-3 s.h.

Chemistry

Daryl W. Mincey, Chair of the Department
5054 Ward Beecher Hall
(330) 742-3662

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. Suitable for students in the natural sciences. **(New course.)** 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-aloud protocols, interviews, observations, and action research. Suitable for students in the natural sciences. Prereq.: CHEM 6971. **(New course.)** 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, preservice science teacher education, assessment, and the impact of standards on advanced placement chemistry. Prereq.: CHEM 6971 or science teaching experience. **(New course.)** 3 s.h.

* additional fee required

Counseling

Don Martin, Chair of the Department
3305 Beeghly Hall
(330) 742-3257

5888. *Introduction to Health and Wellness Counseling* (3 s.h.) **Change in prerequisite**

5821G. *Life Span Development and Counseling* (3 s.h.)

Change in course number, title, description, prerequisite, and hours

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. **(Change in course description.)** 3 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. **(Correction in course hours.)** 3 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, and aptitude tests. Prereq.: Basic statistics course. **(Change in course prerequisite.)** 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. **(Change in course description and hours.)** 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. **(New course.)** 1 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. **(Change in course description.)** 3 s.h.

6980. *Diagnosis of Mental Disorders*. Overview of *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV) 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. Prereq.: COUNS 7031. **(Change in course description.)** 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. **(Change in course description and prerequisite.)** 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, successful completion of department comprehensive exam, and permission of instructor. **(Change in course description and hours.)** 3 s.h.

7004. *Higher Education Practicum*. Supervised individual and group practical experience in settings appropriate to student's programs. Requires field placement. Prereq.: Permission of instructor. (New course.) 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. For Counseling majors or by permission of Department of Counseling. Prereq.: Permission of instructor. (Change in prerequisite.) 3-6 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. (Change in course description.) 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. (Change in course description.) 4-8 s.h.
- 7032.* *Clinical Intellectual Testing*. Supervised practice in the administration and interpretation of standardized intelligence and aptitude tests. Prereq.: COUNS 6964. (Change in course prerequisite.) 3 s.h.
7037. *Counseling and Psychopharmacological Treatment 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. (Change in course title and prerequisite.) 3 s.h.
7038. *Counseling with Couples*. Application of family systems theory to intervention and prevention strategies with couples. (Change in course title, description, and prerequisite.) 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. (Change in course description and hours.) 3 s.h.

Educational Administration

Howard Pullman, Chair of the Department
4103 Beeghly Hall
(330) 742-1436

- 6950.* *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. (Change in course title and description.) 3 s.h.

6988.* *Leadership for Continuous School Improvement: Research and Program Evaluation*. Methods of school and program evaluation are examined in view of the application to reach school settings. Testing and its implications for program evaluation are a major focus. An action research project is a major course requirement. **(Delete course.)** 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. **(Change in course description and hours.)** 2 s.h.

7022E.* *Field Experience: The Elementary Principalship Entry Year Program*. Completed in a school covered by an elementary teaching certificate. This is the second administrative field experience and is designed to highlight building-level tasks. Students are required to complete six tasks from the master syllabus, all at the direction of an elementary building principal. **(Change in course number, title, and description.)** 3 s.h.

7022S.* *Field Experience: The Secondary Principalship Entry Year Program*. Completed in a school covered by a secondary teaching certificate. This is the second administrative field experience and is designed to highlight building-level tasks. Students are required to complete six tasks from the master syllabus, all at the direction of a secondary building principal. **(Change in course number, title, and description.)** 3 s.h.

English

Gary M. Salvner, Chair of the Department
206 DeBartolo Hall
(330) 742-3414

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. **(Change in description.)** 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. **(Change in description.)** 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. **(New course.)** 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. **(New course.)** 3 s.h.

History

Martha Pallante, Chair of the Department
520 DeBartolo Hall
(330) 742-3452

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. (New course.) 3 s.h.

Management

Rammohan R Kasuganti, Chair of the Department
646 Williamson Hall
(330) 742-3071

5845. *Work in America* (3 s.h.) **New swing course**

5851.* *Problems in Industrial Management* (2 s.h.) **Delete swing course**

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. (Change in course prerequisite.) 2 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. (Change in course prerequisite.) 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. (Change in course prerequisite.) 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. (Change in course prerequisite.) 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. (Change in course prerequisite.) 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. (Change in course prerequisite.) 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.

(Change in course prerequisite.)

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.

(Change in course description.)

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. (Change in course prerequisite.)

3 s.h.

Mechanical Engineering

Hyun W. Kim, Chair of the Department
2515 Moser Hall
(330) 742-3015

5811.* *Solar Engineering* (3 s.h.) **New swing course**

5825.* *Heat Transfer 2* (3 s.h.) **Change in course prerequisite**

5852.* *Stress and Strain Analysis 2* (3 s.h.) **Change in course prerequisite**

5884.* *Finite Element Analysis* (3 s.h.) **Change in course prerequisite**

5892.* *Control of Mechanical Systems* (3 s.h.) **Change in course prerequisite**

Nursing

Patricia A. McCarthy, Chair of the Department
2045 Cushwa Hall
(330) 742-3293

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.

(New course.)

3 s.h.

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. (New course.)

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.

(New course.)

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. (New course.) 3 s.h.
6914. *Human Anatomy, Physiology, and Pathophysiology I for Nurse Anesthetists*. Study of the structure and function of the human body. Prereq.: Acceptance into Nurse Anesthesia Option. (New course.) 3 s.h.
6916. *Anesthesia Principles I*. 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. (New course.) 2 s.h.
7010. *Human Anatomy, Physiology, and Pathophysiology 2 for Nurse Anesthetists*. Continuation of *Anatomy, Physiology, and Pathophysiology 1* with further emphasis on cardiovascular, respiratory, renal, hepatic, and endocrine systems. Prereq.: NURSG 6914. (New course.) 3 s.h.
7011. *Anesthesia Principles 2*. Examines specific anesthetic techniques used in a variety of surgical procedures. Prereq.: NURSG 6916. (New course.) 6 s.h.
7012. *Anesthesia Principles 3*. Administration of anesthesia for high risk patients. Prereq.: NURSG 7011. (New course.) 8 s.h.

Physical Therapy

Marleen I. McClelland, Chair of the Department
B086 Cushwa Hall
(330) 742-2558

5800. *Pathology* (4 s.h.) New swing course

6900. *Pathology*. Disease processes and trauma in humans from a structural and functional level; relationship between pathology and clinical signs and symptoms, etiology, differential diagnosis, prognosis, and treatment. Prereq.: Admission to the MPT program. (Delete course.) 4 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 the MPT program. (Change in course description.) 3 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. (Change in course description.) 3 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 the MPT program. (Change in course description.) 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 full-time experience. Grade is S/U. Prereq.: Admission to the MPT program.

(Change in course description and hours.)

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.

(New course.)

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.

(New course.)

1-6 s.h.

Department of Teacher Education

Mary Lou DiPillo, Chair of the Department
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Special Education Program

5810. *Introduction to Sign Language* (3 s.h.) **New swing course**

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. (Change in course hours.)

1-4 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 both assessment, identification, and instructional processes.

(Change in course title, description, and hours.)

1-4 s.h.

