Ohio Northern University is a private, United Methodist Church-related university in Ada, Ohio, including the Colleges of Arts and Sciences, Business Administration, Engineering, Pharmacy, and Law.

Ohio Northern University does not discriminate on the basis of race, religion, national or ethnic origin, gender, sexual orientation, age, or disability.

Title IX Coordinator
Sherry Young
Tilton Hall of Law 181
(419) 772-2217

While every effort is made to ensure the accuracy of the information available at the time copy is prepared for this Catalog, the University reserves the right to make changes at any time without prior notice.

The University’s Internet electronic mail address:
info@onu.edu

Visitors Welcome
Visitors to the campus are welcome at any time. An appointment in advance is suggested to avoid waiting or disappointment when an interview is desired. University personnel are usually available at their offices between 8 a.m. and 4:30 p.m., Monday through Friday. See the University Calendar for holiday office closing dates. There is limited staffing in offices during some portions of holiday periods.

The University’s telephone number:
(419) 772-2000

The University’s administrative FAX number:
(419) 772-1932

The University’s address:
Ohio Northern University
525 S. Main St.
Ada, Ohio 45810

The University’s Internet web home page:
http://www.onu.edu/

Communications with the University

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President Daniel A. DiBiasio 772-2031
Interim Vice President for Academic Affairs David C. Crago 772-2034
Vice President for Financial Affairs Robert W. Ruble 772-2022
Vice President and Dean of Enrollment Karen P. Condeni 772-2260
Vice President for Student Affairs Adriane Thompson-Bradshaw 772-2205
Acting Vice President for University Advancement Kenneth Block 772-2036
Dean, College of Arts and Sciences Catherine Albrecht 772-2132
Dean, College of Business Administration James W. Fenton Jr. 772-2070
Dean, College of Engineering Eric T. Baumgartner 772-2372
Dean, College of Law David C. Crago 772-2205
Dean, College of Pharmacy Jon E. Sprague 772-2277
Dean of Students Adriane Thompson-Bradshaw 772-2433
Budget Director and Assistant Vice President for Financial Affairs Suzette Fronk 772-3555
Controller and Assistant Vice President for Financial Affairs Michelle Mahoney 772-2010
Registrar Tammy Bash 772-2024
University Chaplain Vernon F. LaSala 772-2200
Executive Director of Development Kenneth Block 772-2008
Director of Herbert Library Paul M. Logsdon 772-2182
Director of the Taggart Law Library Nancy A. Armstrong 772-2692
Director of Admissions Deborah Miller 772-2464
Director of Admissions (Law) Linda K. English 772-2211
Director of Alumni Affairs and Campaign Manager Ann E. Donnelly Hamilton 772-2728
Director of Athletics Thomas E. Simmons 772-2450
Interim Director of Career Services Justin F. Courtney 772-2145
Director of Communications and Marketing Carol S. Flax 772-2047
Director of Communication Skills Center Melanie Caw Woods 772-2186
Director of Community Relations Chris Burns-DiBiasio 772-2000
Director of Counseling Center Michael D. Schafer 772-2190
Director of Engineering Corporate and Alumni Relations Laurie Laird 772-2421
Director of Financial Aid Services Melanie Weaver 772-2271
Director of Honors Program Patrick Croskey 772-2197
Director of Human Resources Tonya Paul 772-2013
Associate Vice President and Director of Information Technology George E. Gulbis 772-3100
Director of Institutional Research Omer Minhas 772-2529
Director of International Admissions Deanna Shine 772-3518
Director of McIntosh Center David L. Dellifield 772-2400
Director of Multicultural Development Clyde W. Pickett 772-3145
Director of Residence Life Justin F. Courtney 772-2401
Director of Summer Session Juliet K. Hurtig 772-2032/Tammy Bash 772-2024
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University at a Glance

Accreditation and Affiliations
Ohio Northern University, or its appropriate college or department, holds membership in or is accredited by the following organizations:

UNIVERSITY Accredited by
The Higher Learning Commission and a member of the North Central Association: www.ncahigherlearningcommission.org; (312) 263-0456

Membership in
American Association for Higher Education
American Association of Collegiate Registrars and Admissions Officers
American Association of University Women
American Council on Education
The Association for Practical and Professional Ethics
Association of American Colleges and Universities
Association of College and University Housing Officer International
The Association of Governing Boards of Universities and Colleges
Association of Independent Colleges and Universities of Ohio
The College Board
Council for Advancement and Support of Education
Council of Independent Colleges
Great Lakes Association of College and University Housing Officers
The Ohio College Association
National Association of Campus Activities
The National Association of Schools and Colleges of the United Methodist Church
National Collegiate Athletic Association
Ohio Athletic Conference
Ohio Foundation of Independent Colleges

GETTY COLLEGE OF ARTS AND SCIENCES

Accredited by
American Chemical Society
Association of Technology, Management, and Applied Engineering
Commission on Accreditation of Allied Health Education Programs
Commission on Accreditation of Athletic Training Education
Commission on Collegiate Nursing Education
National Accrediting Agency for Clinical Laboratory Science
National Association of Schools of Music
National Council for Accreditation of Teacher Education
Ohio Board of Nursing
Ohio Department of Education

Membership in
American Association for Higher Education and Accreditation
American Association of Colleges of Nursing
American Historical Association
American Institute of Biological Sciences
American Mathematical Society
American Physical Society
American Political Science Association
Associated Collegiate Press
Association for Theatre in Higher Education

Dicke College of Business Administration
Association for Women in Mathematics
Association of Departments of Foreign Languages
Association of Technology, Management, and Applied Engineering
Association of Writers and Writing Programs
College Art Association
College English Association of Ohio (CEAO)
College Media Advisors
Council of Colleges of Arts and Sciences
Council on Undergraduate Research
Foundation in Art: Theory and Education
Mathematical Association of America
Modern Language Association of America
National Association for Sports and Physical Education
National Association of Schools of Music
National Communication Association
National Council of Teachers of English
Ohio Academy of Science
Ohio Biological Survey
Ohio Council of Teachers of English Language Arts
Ohio Newspaper Association
Ohio Scientific, Education, and Research Association
Public Relations Society of America
South Eastern Theatre Conference
United States Institute of Theatre Technology

T. J. SMULL COLLEGE OF ENGINEERING
Four engineering programs— in civil, computer, electrical, and mechanical engineering are accredited by the Engineering Accreditation Commission (EAC) of ABET and the computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; (410) 347-7700

Membership in
The American Society for Engineering Education
Association for Computing Machinery

Recognized by
The Ohio Board of Registration for Professional Engineers and Surveyors

RAABE COLLEGE OF PHARMACY
Accredited by
The Accreditation Council for Pharmacy Education

Approved by
The Ohio State Board of Pharmacy

Membership in
The American Association of Colleges of Pharmacy
Council of Ohio Colleges of Pharmacy

PETTIT COLLEGE OF LAW
Accredited by
The American Bar Association, Section of Legal Education and Admissions to the Bar, 321 N. Clark St., 21st Floor Chicago, IL 60610; (312) 988-6738

Membership in
The Association of American Law Schools
The National Association of College and University Attorneys
DICKE COLLEGE OF BUSINESS ADMINISTRATION

Accredited by
AACSB International - The Association to Advance Collegiate Schools of Business

HETERICK MEMORIAL LIBRARY
American Library Association
OHIONET, OCLC, Inc., OhioLink

CENTER FOR TEACHER EDUCATION
Accredited by
The National Council for Accreditation of Teacher Education (NCATE)
Approved by
The Chancellor of the Ohio Board of Regents

Membership in
American Association of Colleges for Teacher Education
Association of Independent Liberal Arts Colleges of Teacher Education (AILACTE)
Ohio Association of Colleges for Teacher Education
Ohio Association of Private Colleges of Teacher Education

Academic Year
Undergraduate Colleges - Two Semesters
Aug. 22 — Dec. 16
Jan. 11 — May 11
Summer Sessions
May 29 — Aug. 3

College of Law — Two Semesters and January Term
Aug. 29 — Dec. 9
January Term
Jan. 4 — Jan. 20
Jan. 30 — May 20
Summer Session
May 29 — July 25

Admissions Programs
Early Action and Regular Decision Admissions
Advanced Placement
Transfer Students
Special, Audit, and Transient Students

Student Population (Fall 2010)
Men 1814
Women 1756
Total 3570

Degrees
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science
Bachelor of Science in Clinical Laboratory Science
Bachelor of Science in Nursing
Bachelor of Science in Business Administration
Bachelor of Science in Civil Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Doctor of Pharmacy
Juris Doctor
LL.M.-Democratic Governance and Rule of Law

MAJORS
Getty College of Arts and Sciences
Advertising Design
Applied Mathematics
Art Education
Athletic Training
Biochemistry
Biology
Chemistry
Clinical Laboratory Science
Communication Studies
Construction Management
Creative Writing
Criminal Justice
Education-Early Childhood
Education-Middle Childhood
Electronic Media and Broadcasting
Environmental and Field Biology
Exercise Physiology
Clinical/Research
Corporate Fitness/Personal Training

Dicke College of Business Administration
Accounting
Finance
International Business and Economics
Management
Marketing
Pharmaceutical Business

T. J. Smull College of Engineering
Civil Engineering
Computer Science
Mechanical Engineering

Raabe College of Pharmacy
Pharmacy

Preprofessional Curricula
Pre-art Therapy
Pre-dentistry
Prelaw
Pre-medicine
Pre-occupational Therapy
Pre-physical Therapy
Pre-physics Assistant
Pre-seminary
Pre-veterinary

SPECIAL PROGRAMS
Arts-Business/Pharmacy
Computer Science Co-op Program (Professional Practice)
Engineering Co-op Programs (Professional Practice)
Field Experience Programs
Honors Program
Post Baccalaureate Certificate in Clinical Laboratory Science
Study Abroad
Teacher Licensure (Early Childhood, Middle Childhood, Adolescent - Young Adult, Multi-Age)
Technology Co-op Program
University Calendar, 2011-12
Undergraduate Colleges

Fall Semester 2011-12
August
1 Last day of payment of fees (Mon.)
8 Last day to complete requirements for admission or readmission
20-21 New student orientation
20 Residence halls open, new students, 9 a.m.
21 Resident halls open, returning students
22 Late registration for new, re-entry, and continuing students (Mon.)
22 Classes begin 8 a.m. (Mon.)
31 Last day to add a class or section (Wed.)

September
5 Labor Day
13 Beginning of “W” period for withdrawals
17 Family day
30 Homecoming

October
3-4 Fall recess
5 Classes resume

November
4 Last day to withdraw
7-18 Registration for spring semester
11 Last day to remove “I” (Incomplete)
23-27 Thanksgiving recess
28 Classes resume

December
12-16 Final exams

Spring Semester 2011-12
December
19 Last day for payment of Spring Semester fees
21 Last day to complete requirements for admission or readmission

January
10 Residence halls open, 9 a.m.
11 Late registration of new, re-entry and continuing students
11 Classes begin 8 a.m.
16 Martin Luther King Jr. Day (no classes)
23 Last day to add a class or section

February
2 Beginning of “W” period for withdrawals

March
5-11 Spring recess
12 Classes resume
30 Last day to withdraw “W” from a class

April
5-9 Easter recess
13 Last day to remove “I” (incomplete) marks
16-27 Registration for fall semester
28 Honors Day (Sat.)

May
7-11 Final Exams
13 Commencement

June
1-3 Alumni Weekend

Summer Session 2012
First Session .................................. May 29 to June 29
Second Session ................................ July 2 to Aug. 3

Bear Tracks 101 (Advising & Scheduling) 2012 dates to be announced.

The 2012-13 Academic Calendar is available at www.onu.edu/administration/registrar_officer

General Information

Mission and Purpose Statement
Ohio Northern University, a United Methodist-related institution of higher learning, seeks to educate and graduate students accomplished in scholastic achievement, prepared for a useful life and meaningful career and inspired with a desire to contribute to the good of humankind consistent with Judeo-Christian ideals.

Ohio Northern’s purpose is to help students develop into self-reliant, mature men and women open to dealing with the contemporary world, actively involved in their learning, capable of clear and logical thinking and sensitive to the higher values of truth, beauty and goodness. In keeping with these goals, students will study diverse ideas and influences and develop technology skills appropriate to the needs of an ever-changing world. The University’s academic program includes mutually supportive liberal and professional education components and integrates practice with theory and provides students with opportunities for research, internships, co-op and international study and work.

Vision Statement
Ohio Northern University will be a leading, private, student-centered institution of increasing regional and national prominence. We will be a diverse, dynamic and unique learning community offering rigorous professional programs in partnership with the arts and the sciences to prepare individuals for lifelong challenges.

The University’s Foundations
Ohio Northern University is a student-centered, service-oriented, values-based institution of higher learning committed to the rigorous pursuit of academic excellence through inquiry and achievement.

Student-Centered - Ohio Northern is proud to be a place where the learning, development and welfare of students is the first priority. We are committed to providing the support that will ensure that students are always the university’s principal concern.

Service-Oriented - Ohio Northern is committed to providing service and outreach to its many communities by offering helping, learning, consulting, and leadership opportunities to its constituents. We seek to prepare and inspire our students to lead useful lives and meaningful careers that serve the common good.

Values-Based - Ohio Northern, as a United Methodist Church-related institution, is committed to being a university where values matter and to providing an ecumenical and interfaith environment that nurtures the spiritual growth and development of its constituents.

The University’s Commitments
Ohio Northern University is committed to excellence, innovation, advanced technology, diversity and its community.

Excellence - Ohio Northern seeks to achieve the highest level of performance in all its endeavors and believes that a process for continuous improvement provides a mechanism to sustain this commitment.

Innovation - Ohio Northern, while a strong advocate of its current programs and activities, encourages the development of new initiatives and opportunities, the discovery of new sources of support and commitment, and the development of alternative delivery systems for educational services.
Ohio Northern University recognizes the importance of technology in contemporary education and instruction and seeks to maintain an advanced technological environment that meets the ever-changing needs of its constituents.

Diversity - Ohio Northern’s motto is *Ex diversitate vires,* (“out of diversity, strength”) and it seeks to provide experiences and programs that prepare graduates to live in an inclusive world characterized by difference.

Community - Ohio Northern values the talents of its diverse human resources and strives to provide an environment in which they can thrive, grow and excel.

Organization of the University
Ohio Northern University is organized into five colleges: arts and sciences, engineering, pharmacy, law, and business administration, and offers the appropriate degrees on the undergraduate and first professional degree level.

The Getty College of Arts and Sciences is organized into 16 departments. Each department has a chair that is directly responsible to the dean of the college. Within the fine arts there are three departments: art and design, music, and communication and theatre arts. Humanities programs are included within the departments of English, modern languages, history, politics and justice, and philosophy and religion. Mathematics and natural sciences programs are offered by five departments: biological and allied health sciences, chemistry and biochemistry, mathematics and statistics, nursing, and physics and astronomy. Social science programs are offered by the departments of history, politics and justice, and psychology and sociology. General health-related or sport sciences programs are offered by the department of human performance and sport sciences. The department of technological studies offers programs in manufacturing technology, construction management, and technology education.

The Center for Teacher Education offers 18 teacher licensure programs approved by the state of Ohio and the National Council for the Association of Teacher Education (NCATE).

Ohio Northern emphasizes a liberal education. Graduates in all departments of the Getty College of Arts and Sciences satisfy in full the requirements for the appropriate bachelor’s degree. Students qualifying for teacher licensure in early childhood, middle childhood, or adolescent/young adult education must satisfy the appropriate arts and sciences college requirements.

Students in the colleges of engineering, pharmacy, and business administration must satisfy certain arts and sciences course requirements and may elect further courses offered by the College of Arts and Sciences.

The T. J. Smull College of Engineering is organized into the departments of civil engineering, electrical & computer engineering and computer science, and mechanical engineering. The engineering programs have a freshman core curriculum which affords time for undecided students to declare a major. A five-year optional co-op program is available to all students who maintain at least a 2.50 cumulative grade point average. All graduates of the College of Engineering satisfy in full the requirements for the degree of Bachelor of Science in Civil, Computer, Electrical, or Mechanical Engineering. Bachelor of Science in engineering education, or Bachelor of Science in computer science.

The Rudolph H. Raabe College of Pharmacy is organized into the departments of pharmacy practice, and pharmaceutical and biomedical sciences. The Raabe College of Pharmacy also has an office of experiential education. The basic program in pharmacy is the Doctor of Pharmacy (Pharm.D.) degree curriculum, a six-year program.

The James F. Dicke College of Business Administration offers the degree of Bachelor of Science in Business Administration with majors in accounting, finance, international business and economics; management; marketing; and pharmaceutical business.

The Pettit College of Law awards the Juris Doctor degree after successful completion of a three-year course of study. An earned baccalaureate degree from an accredited institution is required for admission into the J.D. program. The College of Law also awards the Master of Legal Letters (LL.M.) in Democratic Governance and Rule of Law and the Master of Legal Letters (LL.M.) in Judicial Science.

Brief History of the University
In August 1871, near the end of President Ulysses S. Grant’s first administration, Henry Solomon Lehr founded a school that was to become in time Ohio Northern University. Its first name was Northwestern Ohio Normal School until its incorporation in 1885 when the name was changed to Ohio Normal University. In the same year the department of law was established. The year before, in 1884, the department of pharmacy was founded. The first catalog listed a course in surveying and by 1882 the department of engineering was formed.

Lehr initially designed his school to prepare teachers for public schools, which was a purpose of normal schools in the 19th century. Another 19th century cultural experience Lehr followed was the creation of student literary societies, which, according to a University historian, “happily wedded social and intellectual pursuits and neatly filled a gap in the architecture of the institution.” In these societies students found “an outlet for oratorical and literary talents and a fitting haven for the urge to identify with like-minded fellows.” In the early history of the University the “Franklins” and “Philomathaeans” created the social activities as well as the political atmosphere of student life.

In August 1899, almost 28 years after its founding, the University was sold to the Central Ohio Conference of the Methodist Episcopal Church, and in 1901 Dr. Leroy Belt, a Methodist minister, was named its second president with Lehr remaining as vice president until his retirement the next year. In 1903 engineering students led by Thomas Smull agitated to have “Normal” dropped from the university’s name and the Board of Trustees reacted sympathetically, changing the name to Ohio Northern University, thereby retaining the ONU initials.

Dr. Belt was succeeded in 1905 by Dr. Albert Edwin Smith whose strong and wilful leadership guided Northern’s destiny for the next quarter century. Smith resembled William Jennings Bryan in physical appearance and even emulated in style and manner the populist senator and presidential candidate. Dr. Robert Williams was Northern’s fourth president from the beginning of the depression in 1930 to the middle of World War II before he stepped aside for Dr. Robert McClure, who remained in office through the post-war boom years until 1949.

His successor was Dr. F. Bringle McIntosh who presided as Northern’s sixth president for 16 years and oversaw the accreditation of several colleges as well as the development of the west campus, including residence halls and the center that bears his name. Dr. Samuel Lewis Meyer, Northern’s seventh president and first layman to hold office since Henry Solomon Lehr, served from 1965 to 1977, during which seven buildings were added to campus.

The eighth president, Dr. Ray B. Loescher, assumed office on Aug. 1, 1977, and served until July 31, 1979. In December 1979, Dr. DeBow Freed became Northern’s ninth president and served from 1979 to 1999, a time in which improvements were made to campus buildings, aesthetics and infrastructure as well as the construction of the Freed Center for the Performing Arts. On Sept. 1, 1999, Dr. Kendall L. Baker became the university’s tenth president and served until June 30, 2011. The eleventh president, Dr. Daniel DiBiasio, assumed office on Aug. 1, 2011.

The Campus and Facilities
Ohio Northern University is located in Ada, a town of about 5,000 residents situated in northwestern Ohio. State Route 235 goes past the campus and intersects with State Route 309, two miles to the south, U.S. Route 30, four miles to the north, and Interstate 75, eight miles to the north.

The 285-acre campus fronts on South Main Street (State Route 235) and extends to the west.

Lehr Memorial Building (1915) contains the offices of the controller and registrar on the first floor. The offices of the president, vice president for academic affairs, vice president for financial affairs, vice president for advancement and institutional research are on the second floor. On the third floor are the offices of Development and Communications and Marketing.

Hill Memorial Building (1915) contains classrooms and offices for the department of history, politics, and justice, and the department of psychology and sociology.

Dukes Memorial Building (1901-02), Freeman Annex (1995) and Cometet Addition (2003) contains offices and classrooms for the department of English, department of modern languages, and Center for Teacher Education. The office of the dean of the College of Arts and Sciences is also in Dukes Memorial.
James F. Dicke Hall (2003) is the state-of-the-art home for The James F. Dicke College of Business Administration. In addition to high technology classrooms and break-out rooms, the building houses an entrepreneurship program. The Atrium features a 160-foot long, two-story lobby with real-time stock ticker display. The Dicke Forum accommodates formal meetings and events with the latest in communications technology.

The DeBow and Catherine Fried Center for the Performing Arts (1991) consists of a performance center and an educational complex. The performance center features the 550-seat Eleanor Biggs Theatre/Concert Hall, the 120-seat Stambaugh Studio Theatre, and state-of-the-art production support facilities. The Albert and Harriet Smith Educational Complex is home to the department of communication and theatre arts and houses classrooms, faculty offices, a desktop publishing computer laboratory, and television and radio production facilities, including WONB, the University’s 3,000 watt FM radio station.

Presser Hall (1929) includes the 156-seat Snyder Recital Hall, a rehearsal room for band, choir, orchestra, and other ensembles, teaching studios, an electronic piano lab, an electronic synthesizer lab, classrooms, choral and instrumental music libraries, and faculty offices. A two-story addition (1998) increases the number of practice rooms and features an additional large hall, the Foley Rehearsal Hall, as well as additional faculty studio offices.

Taft Memorial Building (1929) houses the department of technological studies.

The Tilton Hall of Law (1973) contains classrooms, seminar rooms, the moot court rooms, faculty offices, and administrative offices. Recent renovations include installing technology presentation podiums in some classrooms, plasma televisions in the classrooms, and wireless technology throughout the building and library. Learning spaces have been upgraded to incorporate current legal technology in a functional modern environment. The Jay P. Taggart Memorial Law Library and Eugene Hanson Annex are also located in this building. The library contains more than 430,000 volumes, is open 113 hours per week, provides over 300 seats, individual study carrels, study rooms, special collections and conference rooms. Every seat is wired for electricity and internet connectivity. A portion of the law library was renovated as the Hanson Reading Room (2008). A renovation and addition (1998) updated the main entrance, added and remodeled courtrooms and classrooms, and added space for library materials and services, technical services, study area, and library and faculty offices.

The Heterick Memorial Library (1968), the main university library, provides individual study carrels, study rooms, special collections and a conference room. Space is provided for the Communication Skills Center on the second floor. A third floor was added and extensive remodeling was completed in 2000. In 2005, the Spar/Wintzer Music Media Center opened on the first floor.

McIntosh Center (1959) provides a center for student activities, both social and extracurricular, for the university community and for public organizations. The student dining room plus the White Bear Inn provides meals and snacks for students and the general public. The building includes a centralized mail room and informal lounge. The university bookstore and offices of the vice president for student affairs are located on the first floor of McIntosh Center, the second floor has the offices of career services.


The Science Complex consists of six buildings. In the center is the Meyer Hall of Science (1970) where classrooms, laboratories, and offices for the departments of biological and allied health sciences, chemistry and biochemistry and physics and astronomy are located. To the west of the Meyer Hall of Science is the Biggs Engineering Building (1971) where classrooms, laboratories, and offices for the departments of civil engineering, electrical & computer engineering and computer science, and mechanical engineering are located. The office of the dean of the College of Engineering is on the second floor. The computer center is also located in the engineering building. A two-story renovation and addition to the science and engineering buildings (1997) provides facilities for instruction including a lecture hall, classrooms, laboratories, seminar rooms, service areas and offices. To the east of the Meyer Hall of Science is the Robertson-Evans Pharmacy Building (1966) where classrooms, laboratories, and offices for the department of pharmacy practice and the department of pharmaceutical and biomedical sciences are located. The office of the dean is located on the first floor. Pierstorf Addition (1995) includes a pharmacy museum, computer lab, and student lounge. Opened in 2006, the Hakes-Pierstorf Family Pharmacy Education Center offers state-of-the-art classroom, laboratory and office space for pharmacy students and faculty. Completing the science complex is the Mathile Center for the Natural Sciences. Opening in 2009, the Mathile Center connects to Meyer Hall and the Robertson-Evans Pharmacy Building. This student-centered research and learning facility blends hands-on teaching excellence with advanced technology in a functional modern environment. The building houses the departments of nursing and mathematics and statistics. Opened in 2010, the Astronomy Research Center, located just west of Wander baseball field, has three permanently-mounted telescopes, a roll-off roof and high-tech charge-coupled device equipment to connect the telescopes with computers and monitors.

The ONU Sports Center was created in 1991 with the renovation of parts of the King-Horn Convocation and Physical Education Center (1974) and the addition of a field house complex and connecting addition. An addition and renovation was also completed in 1996. The Sports Center accommodates intercollegiate athletics, physical education and recreational activities, as well as commencements, special events, and assembly programs. King-Horn’s main floor seats 3,200 for basketball and 5,000 for convocations. A six-lane swimming pool, wrestling room, gymnastics room, dance room, two handball courts, elevated jogging track, multipurpose lounge, and offices and classrooms for the department of human performance and sport sciences are among the facilities in King-Horn Center. The field house features a 200-meter indoor running track, cross courts for multipurpose use, two weight training rooms, a fitness laboratory, and modern sports medicine and training areas.

Ohio Northern University completed construction of an eight-lane, 400-meter outdoor track (1991). The track is encircled by mound-style seating with additional bleacher seating for 1,000.

ONU also constructed a 2.5-mile outdoor jogging/walking path around the perimeter of campus (1991). The path is eight feet wide and can also be used for biking.

Lehr-Kennedy House (1902), once the retirement home of Ohio Northern’s first president, contains the offices of the Director of Multicultural Development and several offices for multicultural student organizations.

Wesley Center Complex (1971) is composed of the English Chapel with seating for 475 plus multi-use areas and a small prayer room for campus ministry, outreach and multi-faith worship, and the Burgett Wing (2002) housing the department of philosophy and religion.

Wilson Art Center and Elzay Gallery (1976) contains classrooms, studios, and offices for the department of art and design. The art gallery is connected to the classroom-studio building by a loggia and is used to display student and faculty exhibitions as well as the work of artists in invited shows. An addition (1995) includes a sculpture studio, ceramics studio, a lounge, and a graphic design studio.

The Alumni House, at 515 W. Lima Ave., is located in the former president’s house. This updated facility provides not only offices for the office of alumni affairs, but also a place to greet alumni returning to campus.

The Dicke House (2000) is home for the University’s President.

The Deming-Combe boulevard entrance to campus, located at Main Street and College Avenue, was completed in 1996.

The Dial-Roberson Stadium (2004) is an outdoor events stadium with training rooms and offices as well as modern facilities for ONU’s football fans to enjoy the Polar Bears.
The Inn at Ohio Northern University (2008) is a full-service, 73-bed hotel offering deluxe guestrooms plus one- and two-room suites. In addition, the hotel has more than 3,000 square feet of flexible meeting space, including a 14-seat executive boardroom.

Baker Commons, named in honor of Dr. Kendall L. Baker, President Emeritus, and Mrs. Toby Baker, is located primarily in the southwest quadrant of the campus and includes the Dicke House, Stadium View Apartments, Klondike’s Den, Polar Place, Dial-Roberson Stadium, the Remington Walk, Northern Commons and the Affinity Village.

Admission to the University

Ohio Northern University selects its student body from among those students possessing characteristics congruent with the institution’s objectives, stated earlier. Generally, a student must be prepared to use the resources for the institution to achieve personal and educational goals.

A high school student applying for admission should have demonstrated academic aptitude in his/her high school program. Prior to matriculation, students must demonstrate completion of an accredited high school program or its equivalent. While specific admission requirements vary among the four undergraduate colleges within the university, all colleges require a minimum of four units of English, two mathematics units (algebra and geometry), and other units from among the natural sciences, social sciences, history, or language for a total of 16 units. Applications for admission should be accompanied by a $30.00 application fee, scores from the American College Testing Program (ACT) or Scholastic Assessment Test (SAT), official high school transcript sent from the high school, minimum 250-word personal statement and 1 high school teacher/counselor recommendation form or letter (required for first-time freshmen only).

Application for admission to Ohio Northern University may be made at the end of the junior year or early in the senior year of high school. First-time freshmen applying to The College of Pharmacy must submit all application materials by Nov. 1st. All other first-time freshmen applicants must submit a completed application file by Dec. 1st to be considered for Early Action 2 (admission decisions to be mailed by late Dec.) or Feb 1st to be considered for Regular Decision (admission decision to be mailed by early March). The ACT or SAT should be taken no later than December testing date of the senior year. Prospective students taking the SAT should include the writing portion when sending scores to ONU. Students taking the ACT are encouraged to take the writing option as well. Applicants will be reviewed once the file is complete and notified by the dates listed above.

*Advanced Placement (AP) The university grants credit for College Entrance Examination Board Advanced Placement Tests to those high school students achieving at least the minimum score established by the department in which credit is being sought. Test results should be sent to the university registrar. Final decision rests with the chairperson of the department.

*College-Level Examination Program (CLEP) The university grants credit under the College-Level Examination Program of the College Entrance Examination Board for students to earn college credit by subject level examination prior to enrollment at ONU.

*International Baccalaureate (IB) Ohio Northern University recognizes the International Baccalaureate (IB) Program and will grant transfer credit, up to a total of 30 semester hours, for scores of 5 or above on individual IB Higher level examinations.

A combined maximum of 30 semester hours of work can be accepted from IB, AP, CLEP and institutionally administered examinations.

*Further information is available on the web at www.onu.edu/registrar.

Post Secondary Options Credit Students entering Ohio Northern University with college credit (option A or B) from the Ohio Post Secondary Options Program must have transcripts sent directly from the issuing institution to Ohio Northern. Credits to be transferred must be graded C (2.00) or higher. Ohio Northern is a participating university in the PSO Program. Contact the Admissions Office for additional information.

Transfer Applicants Transfer students in good standing academically and socially from accredited colleges and universities may be admitted with advance standing. Credits to be transferred must be graded C (2.00) or higher and must apply toward the student’s intended course of study. Concealment of previous attendance at a college or university is cause for cancellation of admission and registration. Ohio Northern welcomes transfer students from junior colleges, community colleges, and other accredited institutions to pursue majors in the undergraduate colleges.

Transcripts from each post-secondary institution previously attended, sent directly from the issuing institution to Ohio Northern are required, as well as a final high school transcript.

Students who have completed the associate of arts or equivalent degree from an accredited institution, who have an accumulative grade point average of at least 2.00, normally will be able to complete work toward graduation from the Getty College of Arts and Sciences with the bachelor of arts degree in two academic years, if courses in the first two years of work conform to the usual pattern in their chosen major or field. The student will assume a normal course load of 12 to 19 academic semester hours. If a student wishes to obtain teacher licensure, it is possible that one or more additional academic semesters of study will be required.

Transfer credit can be accepted from institutions lacking regional accreditation but having accreditation by an agency recognized by the Council for Higher Education Accreditation (CHEA). It is the applicant/student’s responsibility to provide the required documentation necessary for determination of the acceptability of the work for transfer credit at ONU. Credit may be accepted only upon the recommendation of the specific ONU department and/or college in which the coursework is appropriate. Before credit is awarded, previous coursework may be subject to validation by examination if recommended by the appropriate ONU college or department.

Re-Entry Students Any student who is not enrolled for one semester or more (except summer session) must apply for readmission with the admissions office at least two weeks prior to the beginning of the semester he or she wishes to return. Re-admission will be subject to approval of the dean of the college of application for re-entry, the vice president for student affairs, and the office of the controller. A student who has not been enrolled at ONU for one year or longer will, upon re-entry, be under the graduation requirements as specified in the catalog issued in the academic year of re-entry.

Home Schooled Admissions Home schooled students seeking admission to Ohio Northern need to complete the current "Application for Undergraduate Admission." Applications for admission should be accompanied by a $30.00 application fee; the results of a national standardized college admittance test, such as ACT or SAT, which are deemed satisfactory in determining the competency of the home school high school curriculum; a transcript/portfolio of high school work (9-12th grades) with courses completed (or in progress) and levels of achievement (i.e. grades including a cumulative GPA or another acceptable/standard measurement of academic success); transcripts of any college-level or post-secondary courses taken (Granting of any credit is based on transfer credit requirements outlined in the university catalog); minimum 250-word personal statement and/or submit their own essay regarding their desire to attend ONU; a listing of out-of-class activities including any extracurricular experiences, community and church involvement, travel, employment, and other interests/hobbies; and one recommendation (required for first-time freshmen only).

The transcript must be signed by the instructor(s), dated, and meet the normal requirements as a college preparatory curriculum (as outlined in the University Catalog and Application Viewbook). In place of an accredited high school diploma or GED results, the home-schooled students will submit evidence of the annual approval of their program as required within their home state.

Personal references and a personal interview are optional but strongly encouraged. An on-campus visit is recommended. The Admissions
accommodation will be honored unless they impose an undue hardship on the college to which the student was admitted. Requests for reasonable accommodations by students admitted to Ohio Northern University who require accommodation shall be honored if received in advance. Confidentiality is maintained as to disabilities that may require accommodation. Disabled students may contact the Disability Services Office. Admission to the Pettit College of Law: Prospective law students should request separate law college admissions materials. Applicants for the ONU College of Law must take the Law School Admissions Test (LSAT) and graduate from an accredited four-year college or university. Ohio Northern undergraduates may be admitted to the College of Law under either the regular or automatic admissions programs. Applicants from the undergraduate colleges will be admitted to the Pettit College of Law if they: 1. Maintain an undergraduate grade point average of at least 3.40; 2. Score in at least the 75th percentile of the LSAT or higher; 3. Pass character and fitness review by the Admissions Committee of the College of Law; and 4. Pursuant to ABA Admissions Standard 501, are deemed by the law school admissions committee to appear capable of satisfactorily completing its program and being admitted to the bar. Students with questions about either the regular or automatic admissions program are encouraged to consult the prelaw advisor in their respective departments or the College of Law admissions office. Special, Audit, Transient, and Postgraduate Students Admission is available under certain conditions for special non-degree seeking students and for auditors. Transient students are admitted upon the approval of the home institution and certification of good standing. Individuals with previously earned bachelor or higher degrees who wish to pursue further undergraduate study are admitted as postgraduate students upon receipt of a transcript or certificate of graduation from the granting institution. Application materials and other information will be forwarded promptly upon request. Write to: The Office of Admissions, Ohio Northern University, Ada, OH 45810. Disabilities Policy No qualified person shall, on the basis of disability, be denied admission to Ohio Northern University or be subjected to discrimination in recruitment or admission by Ohio Northern University; or be excluded from participation in or denied the benefits of any program or activity of Ohio Northern University. A qualified disabled person is a disabled person who meets the academic and technical (i.e., non-academic admissions criteria essential to participation in a program or activity) standards requisite to admission to Ohio Northern University or participation in its programs and activities. Ohio Northern University does not make pre-admission inquiries as to whether an applicant for admission is disabled. However, Ohio Northern University may, in connection with its voluntary efforts to overcome the effects of limited participation in the University’s programs by disabled persons, invite applicants, on a voluntary basis, to indicate whether and to what extent they are disabled. After admission, Ohio Northern University may make inquiries on a confidential basis as to disabilities that may require accommodation. Disabled students admitted to Ohio Northern University who require accommodation of a disability should request such accommodation in writing from the dean of the college to which the student was admitted. Requests for reasonable accommodation will be honored unless they impose an undue hardship on Ohio Northern University. No individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities privileges, advantages, or accommodations of any place of public accommodation owned or leased by Ohio Northern University.

Student Right-To-Know Act

In accordance with guidelines for the Student Right-to-Know Act, Ohio Northern University had a four-year average graduation rate of 71% for first-year students entering between 2003 and 2006 (does not include Pharmacy, Law, and 5th year Engineering students).

International Students

Students residing in other countries should apply at least nine months before their intended date of enrollment. The application process should be completed by June 1 and include the application itself and supporting documents such as certified secondary school records, records of examination, and proof of financial responsibility. Financial aid for international students is limited.

All classes at the university are conducted in English except those taught in the department of modern languages. Therefore, it is essential that all students be prepared to understand rapid, idiomatic English as spoken in lectures and group discussions, to read English with ease, and to express their thoughts clearly in spoken and written English. All students whose native language is not English must submit evidence of competence in the English language at a level which will provide the English language skills necessary for success at the university. Evidence of competence can be satisfied by a minimum score of 550 (213 computer/78 Internet) in the Test of English as a Foreign Language (TOEFL); or a minimum score of 6.0 on the International English Language Testing System (IELTS); or a minimum score of at least 75% on the Michigan Language Examination (MLAB); or satisfactory completion of ESL 112 offered by the ESL Language Centers, or at another accredited educational institution which has been approved by the appropriate Ohio Northern college dean. International students are encouraged to submit scores from their ACT or SAT examinations, if available.

Ohio Northern University has established an academic year long Bridging Program for International Students. Please refer to page 22 for program description.

International students for whom English is not their native language must complete the College Composition course sequence (ENGL 1411 and 1421 or ENGL 1511 and 1521 depending on placement score from ONU writing exam) offered by the English Department. See catalog course descriptions for prerequisites; requirements may vary by college.

To comply with financial responsibility requirements, international students must purchase additional health insurance available through the university.

Students and faculty represent many countries of the world. International students participate in the World Student Organization, which sponsors an International Festival in the spring of each year.

Ohio Northern University is authorized under federal law to enroll non-immigrant alien students. For further information, contact the office of academic affairs.
Expenses

Students enrolled for the 2011-12 academic year

Tuition & General Fee Per Semester:

<table>
<thead>
<tr>
<th></th>
<th>Arts &amp; Sciences and Business Administration</th>
<th>Engineering</th>
<th>Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Full-time student</td>
<td>$17,070</td>
<td>$18,233</td>
<td>$19,188</td>
</tr>
<tr>
<td>• Part-time student (less than 12 hrs.) per hour</td>
<td>$1,443</td>
<td>$1,519</td>
<td>$1,599</td>
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<tr>
<td>• Academic overload fee (per hour)</td>
<td>$1,082</td>
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Technology Fee Per Semester

<table>
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<tr>
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<th>Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Full-time Student</td>
<td>$120</td>
<td>$120</td>
<td>$120</td>
</tr>
<tr>
<td>• Part-time Student (less than 12 hrs.)</td>
<td>$45</td>
<td>$45</td>
<td>$45</td>
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</tbody>
</table>

Room

<table>
<thead>
<tr>
<th></th>
<th>Arts &amp; Sciences and Business Administration</th>
<th>Engineering</th>
<th>Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Residence hall per semester, double or triple occupancy</td>
<td>$2,282</td>
<td>$2,282</td>
<td>$2,282</td>
</tr>
<tr>
<td>• Residence hall per semester, (airconditioned)</td>
<td>$2,480</td>
<td>$2,480</td>
<td>$2,480</td>
</tr>
<tr>
<td>• Airconditioned Suite</td>
<td>$2,855</td>
<td>$2,855</td>
<td>$2,855</td>
</tr>
<tr>
<td>• Two bedroom-two resident campus apartment</td>
<td>$3,802</td>
<td>$3,802</td>
<td>$3,802</td>
</tr>
<tr>
<td>• Two bedroom-three resident campus apartment</td>
<td>$3,254</td>
<td>$3,254</td>
<td>$3,254</td>
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</table>

Board

<table>
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<tr>
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<th>Arts &amp; Sciences and Business Administration</th>
<th>Engineering</th>
<th>Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carte blanche plan, per semester, 26 meals per week $250 dining points</td>
<td>$2,442</td>
<td>$2,442</td>
<td>$2,442</td>
</tr>
<tr>
<td>Greek Affinity Village plan, per semester, 8 meals per week $250 dining points</td>
<td>$1,737</td>
<td>$1,737</td>
<td>$1,737</td>
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</table>

Total Per Semester, Full-time student

Based on full tuition, technology fee, double occupancy room & carte blanche plan

<table>
<thead>
<tr>
<th></th>
<th>Arts &amp; Sciences and Business Administration</th>
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<th>Pharmacy</th>
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<tr>
<td>$21,914</td>
<td>$23,077</td>
<td>$24,032</td>
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</table>

Total Per Academic Year, Full-time student

Based on full tuition, technology fee, double occupancy room & carte blanche plan

<table>
<thead>
<tr>
<th></th>
<th>Arts &amp; Sciences and Business Administration</th>
<th>Engineering</th>
<th>Pharmacy</th>
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<tr>
<td>$43,828</td>
<td>$46,154</td>
<td>$48,064</td>
<td></td>
</tr>
</tbody>
</table>

Semester Due Dates for Fee Payment 2011-12

Fall – August 1, 2011 • Spring – December 19, 2011

Doctor of Pharmacy Nontraditional Program 2011-12

Tuition: $390 per semester hour
Technology Fee Per Semester: $45 (part-time)

Admitted students to the nontraditional doctor of pharmacy program must meet the following criteria:

1. Hold a baccalaureate degree in pharmacy from an accredited U.S. college of pharmacy.
2. Have a minimum of two years of practical experience as a pharmacist.
3. Hold a current, valid pharmacist license.
4. Have no disciplinary actions taken against the pharmacist’s license.

RN/BSN Nursing Completion Program 2011-12

Tuition: $413 per semester hour
Technology Fee Per Term: $60

Applicants seeking admission to the RN-BSN Completion Program must meet the following criteria:

1. Associate degree or equivalent degree from a regionally accredited institution.
2. Minimum GPA 2.50
3. Current and unrestricted Ohio RN license
4. Completion of a writing sample
5. Meet the health requirements of the clinical agencies

Each applicant must submit an RN-BSN application, ONU Financial Aid Form, Informational Form, Computer Account Agreement and $30.00 application fee. All academic transcripts must be submitted to ONU directly from the institution.

Bachelor of Science in Clinical Laboratory Science (BSCLS) 2011-12

West Central Ohio Clinical Laboratory Science Program
(includes professional liability insurance, administrative costs)

Tuition: $3,408 per semester, last 3 semesters
Lab Fees: $325 per year
Technology Fee Per Semester: $120 (full-time), $45 (part-time)

Payment

The university makes available to parents and students a variety of plans which can be used to make fee payments. Please contact the controller’s office for additional information on these plans.

Regular Billing Schedule For students selecting courses during the advance registration period, bills will be sent through the TouchNet Ebill System. Students will receive an e-mail at their ONU address when a bill is available for viewing. Full payment of all charges due is required to complete registration. Failure to do so will result in the cancellation of the registration. Any arrangements for loans or financial aid should be made well in advance of each semester so that all fees are paid by the date they are due.

For students registering at the beginning of the semester, full payment is required as a part of the registration process.

MasterCard/Discover/American Express Payment of fees may be made by American Express, MasterCard, or Discover. A convenience fee of 2.75% will apply.

Conditions

Tuition and fees cover use of the library, laboratories, Health Center, Sports Center, and McIntosh Center; cultural activities; co-curricular programs; admission to athletic events and most other events on campus; the student newspaper, literary magazine, and yearbook if full-time during the two semesters of the academic year. All university students, except married students and students living with parents or other close relatives,
will be required to live in University housing which includes all residence halls, fraternity and sorority houses. When housing demands exceed capacity, the obligation for living in residence halls will be waived by using a priority system. (See Campus Student Life Section of this catalog.)

All residents in the residence halls are obligated to a meal contract for food service in the student dining hall located in McIntosh Center. Any application to waive this service must be made each semester to the director of residence life.

All expenses associated with off-campus study, such as travel including field trips, clothes, and meals at unusual times, will be borne by the students. Box lunches may be obtained for meals which cannot be taken on campus for boarding contract students.

Other Charges
Auditing Fee, per semester hour (when permitted) $15.00
Administrative/Activity Fee, per semester hour $44.00.
Applicable only to ONU employees and eligible dependents, tuition exchange students, international exchange students, and others who receive remission of tuition.

Placement Examination No charge for administration of placement examinations required by a department or college for determining entry level in sequential courses. If credit is established by the examination, a credit fee, as indicated below, will be required.

Course Credit by Institutional Examination Administration fee, per course $25.00
Payable before the examination is administered. Applied to credit fee if credit is earned.
Credit fee Fees must be paid before credit is entered on student’s permanent record in Registrar’s Office. 50% of credit hour charges assessed part-time student.
All full-time, degree-seeking students will be permitted to take one course (up to 5 hrs.) by examination at no charge.

Academic Overload Fees Maximum hours which can be taken per semester without overload charge:
  Undergraduate 19 hours
  For each semester hour over maximum, 75% of semester hour charges assessed part-time students will be billed. Exemption: Activities courses not including physical education service courses, taken as electives.

Applied Music Lessons For Music Majors and Musical Theatre Majors
Extra fee per semester $125.00
For music minors and non-music majors For each semester hour $225.00
Recital Charge: $250.00

Late Registration Fee The late registration fee is assessed if course registration is not completed at the established time each semester. $100.00

Late Payment Fee If fees are not paid in full when due, a $25.00 charge is assessed. If fees are then not paid by the first day of class, a charge of 1 1/2% of the unpaid will be assessed. Thereafter, interest at 1 1/5% per month (18% annual) will be charged on any unpaid balance at the end of each month.

Interest Charges On Unpaid Balance If fees are not paid in full when due a $25.00 charge is assessed. If fees are then not paid by the first day of class, a charge of 1 1/2% of the unpaid balance will be made. Thereafter, interest at 1 1/2% per month (18% annual rate) will be charged on any unpaid account balance at the end of each month.

Application Fee, non-refundable, payable with application for admission $30.00

Advance Deposit Upon receiving an offer of admission to Ohio Northern, an advance deposit is required by May 1st from all students. The amount of deposit is $200.

If a student applying for admission for fall semester is unable to attend and if the University has received written notice by May 1st, 100% will be refunded; after May 1st, no refund.

For all other semesters, 50% of the advance deposit is refunded if written notice is received 30 days prior to the start of the semester.

All international students will be required to make a deposit with the University for funds in an amount not less than one semester’s tuition, fees, room and board for the college in which the student will be enrolled.

Clinical Laboratory Science Students
Fourth year Only
Microscope rental rates: approximately $245.00 per school year (price includes delivery and pick-up charges)
$200.00 refundable security deposit
$50.00 theft insurance
All lease agreements made through and fees paid to Dayton Microscope and Supply, Inc. before the first day of class in June. Additional information on the leasing is available through the WCOCLS Program Office in the Department of Biological and Allied Health Sciences.

Transcript Fee
- There is no charge for ONU transcripts, with the limitation of three free transcripts issued per day.
- Transcripts are processed within two working days, depending upon the time within a term, after receipt of the request. Transcripts are sent via regular U.S. mail.
- For special handling: more than three in one day or priority processing, there is a charge of $20 per transcript.

Placement Service Up to 10 mailings of credentials without charge,
Each mailing above 10: $3.00
Lost/stolen/damaged ID Card Fee $25.00
Returned Check Fee $25.00

Residence Halls
- Improper check-out $100.00
- Room key replacement $100.00
- Room lock replacement $50.00
- Late application fee (off-campus request, housing request) $50.00

Motor Vehicles
On-Campus Parking Permit
- Full Year $60.00
- Per Semester $40.00

Schedule of Fines
- Improper parking $15.00
- Driving or parking on grass $30.00
- Driving on sidewalks $30.00
- Reckless operation of a motor vehicle $35.00
- Parking without parking permit — first offense $60.00
- Stop sign $15.00
- Parking in fire lanes $35.00
- Falsification of information $30.00
- Parking longer than posted time $15.00
- Parking in restricted area $30.00
- Parking in handicapped space $50.00

(Any may not be appealed.)
Motor vehicle regulations are designed to protect the safety and welfare of the campus community and promote good order. Violations are issued by Security Officers. Cited violators may appeal to an Appeals Committee within three working days of the violation.

Other Deposits
- Marching Band Uniform Maintenance Fee $50.00
- Instrument Deposit (refundable to student account) $50.00
- Chemistry Fee $30.00

Summer Session 2012

College Fees, per credit hour
- Colleges of Arts & Sciences and Business Administration $969
- College of Engineering $1,103
- College of Pharmacy $1,145

Note: Engineering co-op program students will be charged tuition fees according to their current tuition track.
Students are entitled to a pro-rata refund calculation through the 60% point of each term. A 100% refund is granted on or before the first day of each session. After that, the percentage is based on the number of days in attendance for the session.

Refund of room and board on a pro rata basis.

Charges for Damages to University Property

Students will be billed for any damages to university equipment or property. The charges include the estimated cost of replacement parts or materials, labor for repair or replacements, and overhead expenses associated with the clean-up, repair, or replacement.

Payment of University Accounts

Students should pay all financial obligations to the university promptly. Registration for a succeeding semester and issuance of a diploma or transcript is dependent upon the student paying all financial obligations to the university.

Student Identification Cards

The first student ID card is issued to registered students without charge. Replacement fees will be charged for lost, stolen, or damaged ID cards. The ID card allows free admission to athletic events, reduced admission to theatre productions, and the artist series. This card is also required for library checkout, meal contract registration, and resale of textbooks at the university bookstore. ID cards are also required for some labs and entrance to residence halls and King Horn.

Refunds

If a student withdraws from the university, or is suspended for disciplinary reasons, refunds of tuition will be made on the basis shown below. Withdrawal date is the date the withdrawal slip is processed through the office of the registrar. NOT the date the student may cease going to class.

Students attending Ohio Northern University are entitled to a pro-rata refund calculation through the 60% point of the semester. Tuition, room, and board charges will be included in the designated refund percentage. Financial aid adjustments will be calculated based upon mandated Federal refund calculations. 100% refund is granted on or before the first day of class each semester. After that, the percentage is based on the number of days in attendance for the semester. There is no refund after the first 60% of the semester has been completed.

Also, keep in mind, students who drop from full-time to less than full-time during the first 60% of the semester will have adjustments made to their financial aid and tuition.

Financial Aid

Students who withdraw during a term will be subject to adjustments in their financial assistance. The adjustment of financial aid depends on the policies of the organization from which the aid came. If the particular agency or foundation has no policy for adjustment due to withdrawal, the adjustment will be made on the basis of Ohio Northern University’s refund policy.

The adjustments in charges for a student withdrawal may result in an outstanding balance on the student’s account which will be due and payable at the time of withdrawal.

Adjustments in loans from prior semesters are generally not made; however, students may wish to pay off any loans when they withdraw.

Federal Perkins Loan and Health Professions Student Loan borrowers will be expected to provide the exit interview information as requested through University Accounting Service, our billing agency, at www.uasexit.com.

Earnings from campus employment for the time worked up to the date of withdrawal will be paid to the student on the next scheduled date of pay.

All adjustments in financial assistance will be made by the director of financial aid.

Review and Appeal

Review and appeal boards, composed of students, faculty, and administrators, are available for review of certain charges. For example, motor vehicle violation charges can be appealed in writing through the university security office to the Traffic Violation Appeals Committee. Appeals for other charges must be filed with the dean of student services.

THE UNIVERSITY RESERVES THE RIGHT TO MAKE NECESSARY ADJUSTMENTS IN ANY CHARGE TO STUDENTS AFTER DUE NOTICE.

Scholarships and Financial Aid

Each student’s education at Ohio Northern University is partially subsidized by the university’s endowment, by the annual giving of alumni, by the United Methodist Church, and by other interested persons and organizations.

Prospective students should confer with their high school counselors for information about financial assistance available from local civic groups, fraternal orders, churches, business organizations, and the loan plans of their states.

Ohio Northern offers scholarships to encourage superior students to select this university. Students with limited financial resources are also assisted by the university with grants-in-aid and with loan and work opportunities.

The university participates in the Federal Perkins Loan Program, the Federal College Work-Study Program, which provides part-time jobs on campus for students, and the Federal Supplemental Education Opportunity Grant Program. The Health Professions Program provides loans on a limited basis for students in the College of Pharmacy.

The parents of each applicant for student aid should complete the Free Application for Federal Student Aid (FAFSA). This application is available online at www.fafsa.ed.gov or from the Ohio Northern office of financial aid. Parents and/or students are encouraged to submit the form to the Federal Student Aid Programs as early as possible.

Please note: All financial assistance programs are awarded assuming full-time enrollment and a nine-month academic school year. Funds provided are divided into two equal awards for semesters. If a student attends for less than a full nine months, his/her aid is reduced accordingly. (Example - a $6,000 scholarship will provide $3,000 per semester, but the student must be in attendance for two semesters to receive the full amount.)

Additionally, if a student attends three semesters in the same academic year only two terms of assistance are available. Funds from outside agencies (federal, state or other private organizations) generally are provided on an annual basis and divided by two terms. Example-a $6,000 annual award of $3,000 per semester cannot become an $9,000 award because the annual amount budgeted for the award is $6,000. Therefore, in most cases, the summer term is unfunded.

Satisfactory Progress Standards for Financial Aid

Students attending Ohio Northern University are required to complete their academic programs in a total time frame equal to no more than 150% of the normal time that it takes to complete their degree. Further information relative to the satisfactory progress standards and exceptions or appeals are referred to on the ONU Financial Aid website under policies.

Gift Aid

Federal Pell Grant The FAFSA should be filed for this federal grant (the maximum award is $5550 for 2011-12). Based upon the FAFSA information, students will receive an ONU Award Notice indicating their Pell eligibility.

Federal Supplemental Education Opportunity Grant (SEOG) The FAFSA should be filed for this federal grant which requires a high need and Federal Pell eligibility to qualify; the grant amount is determined by the aid office.

Ohio College Opportunity Grant Awarded to Ohio residents based upon need. Students must file the Free Application for Federal Student Aid no later than October 1 of the award year and attend an Ohio Private College or University. The Expected Family Contribution (EFC) will be the index number for awarding the Ohio College Opportunity Grant. The funding for this grant is subject to the budget of the state of Ohio.
Ohio Northern University Scholarships

Scholarships provided by Ohio Northern University recognize outstanding achievement by high school students. Financial need is not a requirement. To receive a scholarship, students must generally rank in the upper 10% of their high school class, have a high composite ACT score or a high combined SAT score, high GPA and strong participation in extracurricular activities.

The Deans Scholarship, Business Leadership Scholarship, Presidential Scholarship, Presidential Recognition Scholarship, Trustee, Trustee Recognition, Academic Honor Scholarship, Honor Scholarship, Distinguished Achievement Award and Meritorious Service Award are renewable each year provided the student maintains a 3.00 GPA after each year of study through graduation or the fourth year for Pharm D. students, as well as other standards of satisfactory academic progress. Students enrolled in the College of Pharmacy are renewed with the same requirements listed above through the end of their P-4 year.

A prospective student must apply for the scholarship by completing an application for admission. Students are automatically considered for scholarships (if minimally qualified) upon initial review of the application for admission.

Returning students who have not been awarded a scholarship upon enrollment must have a minimum of 3.50 cumulative GPA at the end of Spring term to be considered for a scholarship.

ONU Equity Award

Students are eligible for these awards on the basis of exceptional financial need. The Free Application for Federal Student Aid must be filed to assist in determining financial need.

To retain the award after the first year, the student must continue to show exceptional need and must show continuing academic progress. The ONU Equity Award cannot exceed financial need.

United Methodist Ministerial Deduction

An application (from ONU’s aid office) should be submitted for students who are unmarried, legal dependents of United Methodist Ordained Elders in full connection, in good standing, and under full-time appointment by the Annual Conference. Eligible students must be seeking their first baccalaureate degree. A tuition reduction is available to those students who qualify. The reduction applies for four academic years and does not apply for summer school. This award also applies to children of retired or deceased United Methodist ministers with the same credentials.

ONU Sibling Grant

An application (from ONU’s aid office) should be submitted for a student who is the second (or third, etc.) unmarried, legally dependent child of the family attending ONU at the same time. This $1,000 (first-time freshman entering 2007-08 and after; $300 for eligible students enrolled prior to 2007-08) per year grant will apply as long as there is at least one other sibling who does not receive this grant attending at the same time. (Not applicable to children of Methodist ministers.)

ONU Matching Grant for Churches

A student would receive a University Matching Grant when a church gives between $500 and $1000 per year. The match would be on a dollar-for-dollar basis up to, but not exceeding, established financial need. The application deadline is May 1st of each year.

ONU Alumni Award

Awarded to legally dependent (defined by IRS) sons or daughters of ONU graduates. Starting at $3,000 per year for full-time undergraduate students working toward their first degree. (Only first-time freshman entering in 2006-07 and after are eligible to apply for the Alumni Award). Financial need is not a factor.

ONU Dimension Award

This award is provided to qualified students from diverse backgrounds who demonstrate an extra dimension offered to the general student body. Awards range start at $5,000 and are coordinated with other available funds. A separate application for the Dimension Award is required. (Only first-time freshman or new transfer students are eligible to apply). Financial need is not a factor. The application deadline is March 1st of each year.

ONU Out Of State Recognition Award

Awarded to all accepted new and transfer undergraduate students whose permanent residence is outside of the state of Ohio. This award starts at $2,000 (for first-time freshman and new transfer students entering in 2011-12 and beyond). Financial need is not a factor.

Student Loans

The first three loans all feature federal interest subsidy and loan principal deferment. The government pays the interest on the loan until the student no longer attends college at least half time. Loan repayment and interest accrual does not generally begin until the grace period elapses. These loans can also be deferred again for graduate school.

Federal Perkins Loan

A FAFSA must be on file showing a need for this 5% loan. The controller will send a promissory note along with a billing statement. ONU is the lender for this federal program and the grace period for new borrowers is nine months.

Health Professions Loan

The FAFSA must be on file, with financial need being established as a dependent student, to be eligible for this 5% federal student loan. The loan is for the health-related field (pharmacy) and ONU is the lender. The grace period is 12 months. An application must be completed through the financial aid office.

Federal Subsidized Stafford Loan

This federal program allows freshmen to borrow up to $3,500 per year, sophomores, up to $4,500 per year, and juniors and seniors, up to $5,500 per year. Graduate students may borrow up to $8,500 per year. The aid office will determine eligibility; the student should maintain a 2.00 cumulative GPA and progress in terms of class level. For undergraduate students, the interest rate is set at a fixed rate of 3.4% for 2011-12. For graduate students the rate will be fixed at 6.8% for 2011-12. The grace period is six months. The application for the Stafford loan is located at www.studentloans.gov.

Federal Unsubsidized Stafford Loan

Available to students who were either limited or determined to be ineligible for the Federal Subsidized Stafford Loan. The amounts per grade level are the same as for the Federal Subsidized Stafford Loan; however, the student is responsible for interest charges while in school. Interest may be paid by the student or deferred and capitalized. The interest rate is a fixed 6.8%. Additionally all undergraduate dependent students are eligible to borrow $2000 of unsubsidized Stafford loans beyond the subsidized Stafford limits established.

Federal Unsubsidized Stafford Loan

The terms for this loan are the same as for dependent students. The amounts are up to $4000 for freshmen and sophomores; $5000 for juniors; seniors and fifth-year students. Graduate students can use up to $12,000 per year.

Federal Parent PLUS Loan

A parent may borrow this loan for their undergraduate dependent student to assist in covering the cost of their education. These loans have an 7.9% fixed interest rate. The amount borrowed can be up to the cost of education minus financial aid per year. Repayment usually begins 30 days after the last disbursement but deferment while a student is enrolled is available. Family income is not a criterion in obtaining parental loans. A good credit history is required. The application for the Parent PLUS loan is located at www.studentloans.gov.

Private Student Loan

A resource for credit-worthy students to help with their educational costs. A credit-worthy cosigner is usually required. The maximum amount the borrower is eligible to receive is the cost of education minus all other financial aid. This loan is available through a variety of lenders. The interest rate varies and is based on credit. The origination fee is determined by each lender with some offering loans with 0% fees. For some private loans the repayment of principal and interest begins after
Campus Student Life

Policies

Policies relating to student life are available in the Student Handbook. Students are expected to conform to those requirements.

Housing

As a residential campus, all university students are expected to reside in University housing, which includes all residence halls, affinity housing, apartments, and Greek housing on and off campus.

Priority for apartments and affinity housing is granted based on credit hour status. There are two, three and four bedroom units and each apartment has its own kitchen and living room. The university may alter these arrangements to accommodate housing needs. One apartment complex is reserved for non-traditional and married students and another is primarily for law and graduate students.

The university has a total of 22 residential buildings. All residence hall rooms are furnished with window treatments, beds, mattresses, desks, book shelves, clothes closets, ONU cable television hookup, and wireless or high speed computer connection capability. Coinless washers and dryers, recreation equipment and cleaning materials are available. Many living spaces include fitness centers.

The following criteria are used to evaluate requests for students to be released from the residence hall requirement as designated by the University Housing policy: 1) 3 academic years in University housing; 2) 23 years of age; 3) commuting from the primary residence of a parent, grandparent, or sibling, within 30 driving miles of campus; 4) an earned undergraduate degree; 5) served in the armed forces and qualified for veterans’ benefits; and 6) married students.

Once a housing commitment has been made, residents are not permitted to move from the residence halls, apartments or affinity housing to off-campus housing or Greek housing at any time during the academic year.

Because of the need for maximum security during break periods, access to halls is limited. All residence halls and affinity housing are closed between terms with the exception of apartment housing.

The Office of Residence Life will attempt to house all students in single, double, triple or quad occupancy spaces. However, when housing demand exceeds capacity, other living arrangements may be used. These arrangements may include the tripling of double occupancy rooms, University owned houses and/or the conversion of floor lounges to quad suites.

Requests for particular roommates should be submitted mutually by both parties. There is no guarantee that all requests will be honored. New students will receive room assignments via email after the summer orientations have been completed.

The room selection process for returning students begins in spring term. Assignments will be available online.

University Food Service

All students living in university residence halls and affinity housing must purchase a dining plan. Other students may purchase meals in the dining room either single or by the semester. Some students living in fraternity houses eat in their respective houses. The White Bear Inn restaurant is in McIntosh Center and is open to everyone. Northern On Main provides dining options and a convenience store is located at the Affinity Commons Building. The University Dining Service operates these facilities and hosts all banquets held on campus. The dining services are designed to provide variety, quality, and a pleasurable dining experience for all who participate.

Student Employment Program

The Student Employment Program allows students to work on campus to offset educational expenses. Jobs are primarily awarded on the basis of financial need through the Federal Work Study Program, although skills and experience may be a consideration. A 15-hour week is the work limitation and paychecks are issued directly to students every two weeks.

Student Health Service

The University Physician and a Nurse Practitioner or Physician Assistant hold regular office hours Monday through Friday in the Student Health Service building. A registered nurse is on duty Monday-Thursday 7:30 a.m. - 11:00 p.m., Friday 7:30 a.m. - 4:00 p.m., on Sunday 3:00 p.m. - 11:00 p.m. and on call weekends. During summer semester a registered nurse is on duty Monday-Friday. The University is not responsible for providing health care during vacation periods.

The University recommends that all students make full use of the Health Service. However, this is not required and a student may go to a doctor of his or her own choice at his or her own expense. All medical records are confidential, and only at the student’s written request will the University supply information to another doctor.

All students entering the university are required to submit a complete medical history, including a current immunization record.

Students who suffer from allergies may receive their allergy injections at the Health Service if they supply the serum and specific directions from their doctor or allergist.

Student Health Insurance – All students who attend Ohio Northern University are required to have health insurance coverage. The university has made a student medical plan available that provides health care benefits at a low cost. Coverage is in effect from August 2011 – August 2012. Keep in mind, enrollment IS AUTOMATIC for all students unless a waiver is completed, signed and returned to the Controller’s Office by the due date. After the due date, the charge will remain and will become the responsibility of the student.

Counseling

The University provides counseling services for all enrolled students. Spouses of students are also eligible for couples counseling. The Counseling Center is staffed by licensed mental health professionals who are available M-F throughout the school year, including summer session. The Counseling Center staff adheres to a professional code of ethics in providing confidential services.

Students can receive help from the Counseling Center staff in order to better understand and resolve their difficulties. Some commonly presented concerns include loneliness, depression, homesickness, substance abuse, feelings of inadequacy, anxiety, roommate conflicts, relationship problems, loss or grief, and stress situations. The staff makes every effort to create an atmosphere where personal concerns of any type can be examined and discussed freely and confidentially.

The Counseling Center provides career and educational counseling. Interest inventories and other tests may be used to help students make meaningful decisions about their career paths. The staff also provides assistance to students struggling with academic difficulties such as study habits, time management, procrastination, and test taking.

Any student interested in making an appointment can contact the Counseling Center directly; no referral is necessary.

Undergraduate Career Services

The Office of Career Services helps students as they make the transition from college to graduate/professional school and/or the world of work. Although not an employment agency, the office serves as a liaison between students, alumni, and potential employers by making job referrals, distributing vacancy notices, and conducting an on-campus recruiting program. Other services and programs include an academic course called Career Search Strategies, job fairs, individual consultation, seminars, and classroom presentations. Current resource information, as well as employment announcements and graduate school scholarship information, are maintained online through the office’s webpage. By using the services of this office, students will gain a better understanding of the job market and the methods used to conduct a successful job search, as well as strategies geared to result in acceptance to preferred graduate/professional school. A separate career services office is maintained by the College of Law.
Office of Multicultural Development

The primary mission and objective of the Office of Multicultural Development is to foster an environment conducive to the matriculation, retention, and graduation of diverse students at Ohio Northern University. In addition to discussing the recruitment and retention of minority students, the staff is intensely committed to an action-oriented approach to building a campus community that fosters academic excellence, diversity, equity, and cultural pluralism. Special emphasis is placed on promoting student retention by sponsoring programs that address the needs of students on a personal, academic, social and cultural level. Equally critical is the role staff plays in promoting an environment favorable for academic success where appreciation, respect and understanding of cultural diversity are encouraged.

The Office sponsors a number of programs and services that are designed to cultivate scholarship, social and intellectual engagement, and cultural awareness. Program efforts include, but are not limited to:
- Opening the Way Multicultural Reception
- Harambe Festival
- Ethnic Heritage Month Celebrations
- New Dimensions in Diversity Film Series
- New Dimensions Lecture Series
- Cultural Conversation Hour Series

The entire Ohio Northern family is encouraged to actively engage in our endeavors to reach the goal and mission of a truly diverse University Community.

Religious Life Program

As a church-affiliated university, Ohio Northern recognizes the importance of religious belief and faith in the life and education of its students. Opportunities are available for students and faculty to examine, develop, and practice their religious convictions in formal and informal settings. The non-academic emphasis is the concern of the Office of the University Chaplain and the Religious Affairs Committee, composed of students and faculty.

In the midst of west campus is Wesley Center, which consists of the English Chapel and the Burgett Pavilion. English Chapel houses the chapel sanctuary, meeting room, prayer chapel, and multi-faith room. The Burgett Pavilion houses the academic department of philosophy and religion (which includes a conference room and an area for the administrative assistant), office of the University Chaplain, office for the chaplain’s administrative assistant, office for chapel staff, and a lounge. The chaplain is available to students seeking spiritual and personal counsel, and friendly conversation.

The religious life program attempts to reveal the contemporary validity of religious faith for successful living. The spirit of the activities is ecumenical and interfaith. An emphasis is placed on spiritual nurture and the ethics that develop in a maturing faith. Opportunities are available through 20 student groups to reach out and put faith into spiritual and social practice. Each student is free to choose the extent of his or her participation.

Chapel is held each Thursday at 11 a.m. Attendance is voluntary and is encouraged by scheduling it during an open hour.

Congregations in the village of Ada and in surrounding communities always welcome students. In Ada, those churches include: the First United Methodist Church, the First Presbyterian Church, St. Mark Lutheran Church, Our Lady of Lourdes Roman Catholic Church, the Church of Christ Disciples, the First Baptist Church, and the Grace Gospel Church. Temple Beth Israel-Shaare Zedek is located in Lima. There is a mosque in Toledo. Friday prayer service for Muslims is held on campus.

RELIGIOUS ORGANIZATIONS

A wide variety of religious organizations provides opportunities for worship, fellowship, outreach, and service both on and off campus.

Chapel Staff
2 Ada Friends Coordinators
2 Program Coordinators
1 Technology Coordinator
1 Volunteers in Mission Coordinator

Ada Friends
A mentorship program similar to Big Brothers/Big Sisters.

Christian Pharmacy Fellowship International
A worldwide, interdenominational ministry of individuals working in all areas of pharmaceutical service and practice.

Christian Legal Society
A nationwide organization of lawyers, law students and others in the legal field who seek to serve Jesus Christ.

Fellowship of Christian Athletes
A group that is open to anyone (no need to be an athlete) to enjoy a great time of friendship, fellowship and gathering into the Word of God.

Fusion
Works alongside Campus Crusade for Christ with the goal of providing a welcoming environment to Christians and non-Christians alike.

Gospel Ensemble
A vocal outreach team that travels to churches singing primarily contemporary gospel music, much of it is sung a cappella.

Habitat for Humanity
Habitat’s mission is to eliminate substandard housing worldwide by building decent, inexpensive, adequate homes for families who need them.

Kappa Phi
A Christian women’s service organization.

Muslim Student Association
Students whose purpose is to promote unity and inter-religious dialogue and understanding.

Newman Club
A student-run organization that serves the ONU Catholic community.

Northern Chimes
A bell choir outreach team that spreads God’s word through their music and Bible verses.

Northern Christian Fellowship (NCF)
A body of passionate followers of Jesus Christ that uses small groups, discipleship pairs and a large group meeting on Sunday evenings.

ONU Pro-Life
An ecumenical Christian organization that works to educate students, faculty and staff at ONU of the truth concerning abortion.

People of Worship
An outreach team that sings contemporary praise and worship music.

Pre-Seminary Students
Students who are considering entering seminary or a church vocation.

Sigma Theta Epsilon
A Christian women’s service organization.

Son’s Rays
A vocal outreach team who brings the message of Jesus Christ through song and testimony.

Technology Team
A team that provides audio and visual support for chapel programs.

Ultimate Faith Outreach
An outreach team that leads retreats for youth groups.

Volunteers In Mission
Plans spring break mission trips.

Wesley Players
A Christian theatre outreach team that performs short plays.

Worship Design Team
A group responsible for planning and evaluating special chapel experiences.
Special Events
Throughout the year, the university and various student committees bring to the campus a variety of cultural and entertaining programs. The Cultural Affairs and Special Events Committee administers the Artist Series, which sponsors performances by professional performing artists as well as a series of foreign movies. The department of music presents a faculty recital series; band, choral and ensemble concerts; and student recitals. The College of Law sponsors a lecture series.

Theatre productions, athletic events, concerts, Greek events plus club and organization activities provide a wide range of special events.

Alcohol Consumption
The University affirms its historic belief that the consumption of alcoholic beverages is not beneficial to the academic environment of the University. Alcoholic beverages are permitted to be possessed or consumed by individuals in private areas on campus as long as the laws of the Village of Ada and the State of Ohio are followed. Anyone who possesses or consumes alcoholic beverages must be 21 and must obey all other University rules and regulations and applicable government laws pertaining to the use of alcohol. The sale or dispensing of alcohol in private areas is prohibited.

In keeping with the above for purposes of this policy only, the following are defined as private areas:

- Student rooms in upper class student halls, apartments and fraternity houses where at least one roommate is 21 years of age, with the door to the hallway closed. Unless one of the roommates is 21, alcohol cannot be present in a room in which an underage student resides. If a student resides in an apartment or suite, alcohol must be kept in the bedroom of the student who is 21 rather than in the common area or kitchen.
- Alcohol is not permitted in first year housing (Northern House, 5 University Parkway, Maglott, Founders, Park and Stambaugh).
- Underage students in the presence of alcohol are in violation of the alcohol policy (unless student is a permanent resident of that private area).
- Drinking games of any type are prohibited on Ohio Northern’s campus.

Visitation Policy
Guest hours for members of the opposite gender, in various living units of the university, including fraternities and sororities, may be arranged through administrative action with due regard for the rights of all students and for the high standards characteristic of this university.

Student Activities
The Student Planning Committee develops and implements social, cultural, and recreational programs throughout the school year, primarily in McIntosh Center, for the university community. Ohio Northern University has over 170 approved student organizations of a wide variety of interests.

Leadership
Leadership development training workshops are held throughout the year to further strengthen the leadership skills of students elected or appointed as campus organizational leaders.

Annually, Omicron Delta Kappa, national leadership honorary, sponsors the President’s Leadership Dessert. This formally recognizes the leadership accomplishments of undergraduate students. The DeBow Freed Awards for Outstanding Leadership as a Student, as well as The Alice-Kay Hilderbrand Student Organization of the Year Awards, are announced at this event.

Other services include maintaining a Leadership Library of resources and training materials.

HONORARY SOCIETIES
Alpha Epsilon Rho, national honor society for students in radio, television, cable and film studies. Recognizes and honors both academic achievement and audio and video production creativity.

Alpha Kappa Delta, the international sociology honor society, founded in 1920, is a “non-secret, democratic, international society of scholars dedicated to the ideal of Anthropon Katamanthanein Diakonesian" or “To investigate humanity for the purpose of service.”

Alpha Lambda Delta, national scholastic society for freshman students who have attained an accumulative average of 3.50 or above during the first semester.

Alpha Mu Alpha, national honorary to promote the advancement of excellence in the field of marketing and to recognize and reward scholastic attainment in marketing subjects.

Alpha Phi Sigma, an honor society which recognizes and promotes high scholarship among students actively engaged in collegiate preparation for professional services, keeps abreast of advances in scientific research, and elevates ethical standards of the criminal justice professions. Majors, minors, or equivalent in criminal justice who have completed one-third of the units required for graduation and who have a cumulative GPA of 3.00 or better are eligible for membership.

Beta Alpha Psi, international honorary for financial information students that encourages and recognizes scholastic and professional excellence in the business information field. Eligible student members are junior or senior accounting, finance, and information systems majors who rank high academically.

Beta Beta Beta, a national honorary society for students of the biological sciences affiliated with the American Association for the Advancement of Science, seeks to encourage scholarly attainment in this field by requiring its membership for those who achieve superior academic records and indicate special aptitude for the subject of biology.

Beta Gamma Sigma, the national scholastic honor society in the field of business administration recognized by AACSB International—The Association to Advance Collegiate Schools of Business. To be eligible for membership, a student at the junior level must rank in the upper seven percent of that class and a senior must rank in the upper ten percent of that class.

Delta Omicron, international music fraternity for music majors, founded in 1909 to create and foster fellowship through music, to develop character and leadership, and to encourage excellence in scholarship and performance.

Delta Phi Alpha, the national German honors society, seeks to recognize excellence in the study of German and to provide an incentive for higher scholarship. The Society aims to promote the study of the German language, literature and civilization and endeavors to emphasize those aspects of German life and culture which are of universal value.
Epsilon Pi Tau, an international honorary for professions in technology dedicated to the advancement of understanding, appreciation, and awareness of technology as both an enduring and influential human endeavor and an integral element of culture. Juniors and seniors majoring in the department of technology with accumulative grade point averages in the upper 25 percent may be selected to membership.

Gamma Theta Upsilon, an international honorary society founded in 1928, designed to encourage, advance, and strengthen the study of geography as a cultural and practical discipline.

Kappa Delta Pi, honorary society in education, encouraging high professional, intellectual and personal growth, and recognizing outstanding contributions to education; juniors and seniors.

Kappa Kappa Psi, national honorary band fraternity for male student members of the university band program.

Kappa Mu Epsilon, national mathematics honor society, recognizing scholastic achievement of undergraduate students in mathematics.

Kappa Pi, national honorary in art, eligibility to membership based primarily on achievement in the field of art.

Lambda Pi Eta, a communications studies honorary designed to recognize, foster, and reward outstanding scholastic achievement.

Mortar Board, national honor society for students, selected during their junior year for outstanding scholarship, service, and leadership.

Ohio Northern University Honor Society of Nursing, the mission of the Honor Society of Nursing is to support the learning, knowledge and professional development of nurses committed to making a difference in health worldwide. Membership is by invitation to baccalaureate and graduate nursing students who demonstrate excellence in scholarship and to nurse leaders exhibiting exceptional achievements in nursing.

Omicron Delta Epsilon, an international honorary society in economics, recognizing scholastic attainment in economics and honoring outstanding achievements in economics; for upperclass men and women.

Omicron Delta Kappa, all-campus national honorary society for all-around campus leaders, founded in 1914.

Order of Omega, a national greek leadership honorary.

Phi Alpha Theta, a national honorary society in recognition of superior achievement in the study of history.

Phi Beta Delta, national honor society for international scholars, founded in 1986, is dedicated to recognizing scholarly achievement of international students, U.S. students who have studied abroad, and faculty and staff who are involved in international activities.

Phi Epsilon Kappa, national professional fraternity for students pursuing careers in health, physical education, recreation or safety, recognizing outstanding scholarship, service and achievement of upper class students.

Phi Eta Sigma, national scholastic society for freshman students who have attained an accumulative grade point average of 3.50 or above during the first semester.

Phi Kappa Phi, a national scholastic honorary society for junior and senior students in all academic fields. Seniors in the top eighth of the class may be elected to a number not exceeding one tenth of the class. Students in the highest five percent of the class may be elected in the final term of the junior year.

Phi Lambda Sigma, national pharmacy leadership society; undergraduate students of pharmacy who have demonstrated dedication, service, and leadership in the advancement of pharmacy.

Phi Sigma Tau, the national philosophy honorary awarding distinction to students of high scholastic achievement and seeking to popularize interest in philosophy among the general collegiate public.

Pi Delta Phi, national honorary society in French, recognizing outstanding scholarship in French language and literature and promoting knowledge of France and its culture; juniors and seniors.

Pi Sigma Alpha, national political science honorary, honoring student achievement and encouraging interest in politics and political science.

Psi Chi, the national honor society in psychology, founded in 1929 for the purpose of encouraging, stimulating, and maintaining excellence in scholarship and advancing the science of psychology. Membership in the society is selective and based on high academic performance.

Rho Chi Society, national pharmacy honor society; undergraduate students of pharmacy who are in the upper 20 percent of their class, who have attained a scholastic average of at least “B”, and who have completed 70 percent of the scholastic work applicable towards the Pharm.D. degree, including at least 68 hours completed after enrollment in the College of Pharmacy.

Sigma Delta Pi, national honorary society in Spanish for upperclassmen who rank high academically.

Sigma Iota Epsilon, the national honorary and professional fraternity for management. Its purpose is to encourage and recognize scholastic excellence and to promote cooperation between the academic and practical aspects of management.

Sigma Pi Sigma, the national physics honor society founded in 1921, honors outstanding scholarship in physics, encourages interest in physics among students at all levels, and promotes an attitude of service of its members to students, colleagues and the public.

Sigma Tau Delta national english honorary endeavors to advance the study of the chief literary masterpieces, encourage worthwhile reading, promote the mastery of written expression, and foster a spirit of fellowship among students specializing in the English language and literature.

Sigma Xi, the scientific research society. Founded in 1886 as an honor society for scientists and engineers, Sigma Xi is an international, multidisciplinary research society whose programs and activities encourage appreciation and support of original work in science and technology, foster interaction among science, technology, and society, and honor scientific research accomplishments.

Studia Socialia Americanae, national honor society in social studies. Founded at ONU in 2005. Recognizes academic achievement among students who are pursuing state licensure in social studies as well as academic and professional achievement among educators who hold state licensure in social studies.

Tau Beta Pi, national engineering honorary society. Members at the junior rank must be within the upper 12.5 percent of their class when initiated into the society while the senior student may be within the upper 20 percent of his/her class when initiated.

Tau Beta Sigma, national honorary band fraternity for female student members of the university band program.

Theta Alpha Kappa, the national honorary for students of Religious Studies and/or Theology. Founded in 1976, it recognizes students of high attainment in these fields who also have achieved outstanding grades across the curriculum.

Theta Alpha Phi, a national honorary theatre fraternity, which recognizes superior achievement and high personal standards of character and leadership as demonstrated in sustained active participation in the Ohio Northern theatre programs; for students of sophomore or higher rank.

Upsilon Pi Epsilon, international honorary society for computing disciplines, encouraging and recognizing outstanding talent and high scholarship in the field.
Communication and Theatre Arts Activities

Communication Studies
Students have a variety of opportunities to participate in conferences as presenters or attendees. Additionally, there are speakers and workshops that are offered and internships and practicum experiences that provide students with hands-on opportunities in their field of study. Lambda Pi Eta, the national communication honors society occasionally features social and academic activities as well.

Radio/Television-Electronic Media and Broadcasting
Ohio Northern University is home to WONB, 94.9 FM, a 3,000 watt non-commercial broadcast station. Professionally managed and student operated, WONB is a part of the Department of Communication and Theatre Arts. WONB provides student opportunities in music programming, news, public affairs and sports announcing, production and programming. The Freed Center for the Performing Arts also houses ONU Cable TV, Ohio Northern’s campus cable system and local origination channel. ONU Cable provides more than 70 channels of educational and entertainment programming. Local campus programming is produced by Electronic Media and Broadcasting majors and scheduled over ONU3-TV.

The Electronic Media and Broadcasting program utilizes a modern facility with the latest equipment including audio and video production studios and editing suites; a master control room and TV production studio; and remote production equipment. Students in production classes work with Final Cut Pro; AVID; Adobe Premiere; and, Audition software.

Dance
The dance program at Ohio Northern University offers a wide range of dance skills to students from master classes with guest artists to performing on the main stage at the Freed Center for the Performing Arts. Participation in the ONU Dance Company provides student dancers the experience of working with professional dance companies.

Public Relations Student Society of America
The Ohio Northern University chapter of the Public Relations Student Society of America is a professional organization that provides networking, workshops, public relations campaign exposure, internships, community and university service projects, and awards and recognition to students. The PRSSA chapter operates a nationally affiliated student run public relations firm. The ONU PRSSA chapter is sponsored by the Central Ohio chapter of the Public Relations Society of America in Columbus.

Theatre
The Department of Communication and Theatre Arts provides many theatrical activities and experiences in the Freed Center for the Performing Arts, which contains a 551-seat mainstage theatre and a studio theatre with flexible seating up to 136. All interested university students may audition for mainstage or studio productions, or they may wish to become involved in technical or front house work.

Student Publications
The Northern, the yearbook, contains a record of student activities for the year. The Northern Review is a weekly newspaper published throughout the regular year by the students of the university. Positions on the staff of the newspaper and yearbook are open to all students.

The Student Handbook, which is posted on the ONU web site, is a compilation of rules and information pertaining to student life on campus. Fraternity/Sorority Guide, published annually by the Inter-fraternity Council and Panhellenic Council. Delirium is the student-produced web magazine of the English Department's Professional Writing program.

Polaris is a creative magazine published each semester by and for Ohio Northern students.

The Ohio Northern University Law Review is a professional legal periodical. Published each semester, it is subscribed to by the practicing bar, bench, government officials, and legal scholars throughout the U.S. as well as six different countries. In addition to student comments, the Review publishes articles by noted authors from within the legal community. 
Athletics

The purpose of the program of intercollegiate athletics at Ohio Northern is to provide the following important educational experiences:

1. To support and broaden modern education.
2. To expose and educate students in legitimate methods of good sportsmanship, in the meaning of wholesome competition, and in the will to win.
3. To serve as a laboratory for the professional approach of those interested in health, physical education, coaching, athletic training, exercise physiology, and sport management as a career.
4. To supply wholesome recreation for the participants and other students.
5. To provide a focus for the interest of students, faculty, administration, and alumni.

The intercollegiate athletics program at Ohio Northern is advised by the Committee on Athletics of the University faculty.

Intercollegiate Competition for Men. Ohio Northern participates in intercollegiate football, basketball, baseball, tennis, golf, wrestling, swimming and diving, cross country, indoor and outdoor track, and soccer. It is a member of the Ohio Athletic Conference and the NCAA Division III.

Intercollegiate Competition for Women. Women at Ohio Northern compete in volleyball, basketball, swimming and diving, tennis, indoor and outdoor track, cross-country, soccer, golf and softball (fast pitch). Ohio Northern belongs to the NCAA Division III and Ohio Athletic Conference and follows their rules and regulations.

Intramural Competition. Ohio Northern’s intramural program is open to all students and encourages participation in physical activities for recreational purposes. The program consists of touch football (men and women), volleyball (men, women and coed), basketball (men and women), softball (men and coed), ultimate frisbee and indoor/outdoor soccer (coed).

Club Sports. Ohio Northern’s club sports program is open to all students who meet membership requirements. Club sports encourage students to be actively involved in creating their own recreational and competitive sport experiences. Current club sports include men and women’s water polo, men and women’s rugby, women’s soccer, fencing, lacrosse, men and women’s ultimate Frisbee and men’s volleyball. All club sports have a faculty advisor, and students wishing to form a sport’s club can do so under the guidance and help of ONU’s student senate and the Assistant Director of Athletics for club sports.

The Educational Program of the University

Academic Calendar

The Ohio Northern calendar divides the academic year (nine months) into two semesters of approximately equal length, designated as fall and spring for the undergraduate colleges. A summer session of approximately 8 weeks is divided into terms of four weeks. Fall semester ends before Christmas; spring semester begins in January and ends in early May. The College of Law is on a different semester calendar.

University Organization

Ohio Northern University is composed of five colleges.

The Getty College of Arts and Sciences is organized into sixteen departments each providing one or more majors as a basis for degree programs leading to the Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Bachelor of Science in Clinical Laboratory Science, or Bachelor of Science in Nursing degrees.

The T.J. Smull College of Engineering has three departments which offer Bachelor of Science degree programs with accredited curricula in civil, computer, electrical, mechanical engineering, and computer science. This college also offers a Bachelor of Science in engineering education.

The Raabe College of Pharmacy offers the Doctor of Pharmacy (Pharm. D.) degree as a six year program for high school graduates.

The Pettit College of Law awards the Juris Doctor degree after successful completion of a three-year course of study. An earned baccalaureate degree from an accredited institution is required for admission into the J.D. program. The College of Law also awards the Master of Legal Letters (LL.M.) in Democratic Governance and Rule of Law.

The Dicke College of Business Administration curricula require a four-year course of study leading to the degree of Bachelor of Science in Business Administration with majors offered in accounting; finance; international business and economics; management; marketing; and pharmaceutical business.

University General Learning Objectives

As a result of their general education experience, Ohio Northern University students will be able to:

Beginning in 2011-12, all entering first-time freshman students will participate in ONU’s new general education plan. This general education plan is based on learning outcomes that specify the abilities that ONU expects each student to cultivate through general education. Beginning with matriculation and continuing through their educational experiences at ONU, our students will demonstrate:

1. Effective communication (both written and non-written)
2. Critical and creative thinking
3. Scientific and quantitative literacy
4. An understanding of diverse cultures and their effects on human interaction
5. Integration of concepts across disciplines
6. Informed and ethical responses to personal, civic, and global needs
7. Informed responses to aesthetics in art or nature

Evidence of attainment of these outcomes will appear in artifacts produced through individual academic work, collaborative academic work, or co-curricular activities. The artifacts must be graded by the course instructor and may take many forms, including items such as a paper, an examination essay, an oral presentation, etc. These artifacts will be stored in an electronic portfolio. Faculty members will assess the artifacts with a rubric designed specifically for each outcome. A rubric is a performance-based assessment tool that evaluates student performance with regards to specific criteria. The assessment will be reviewed by the University Assessment Committee to further strengthen and document the effectiveness of our general education plan.

All courses at ONU are eligible to participate in the general education plan. Each student at ONU is required to complete the following four courses with a grade of C or better as part of the general education plan:

1. Transitions Experience (1000 level): Offered within the student’s college, this course demonstrates ties between general education and the student’s major and facilitates the student’s transition from high school to college life.
2. Writing Seminar (1000 level): Introduction to college-level writing skills, including critical reading, the formulation of arguments, researching and incorporating outside sources, and writing essays.
3. Extra-disciplinary Seminar (2000 level): This course expands a student’s experience beyond the major by exploring a common theme from other perspectives. Each instructor will develop a unique course that reflects the common theme.
4. Capstone (4000 level): The capstone is a high-impact educational activity that a student completes at or near the end of a student’s academic program.

Any course that the General Education Committee tags for at least one general education learning outcome is part of the general education curriculum. Those courses that have agreed to participate are known as “tagged”. A tag is defined as an indication of a general education learning outcome that a course satisfies. Students can search for the tag information on particular courses through their Luminis account or via the registrar’s website (Schedule/Catalog search).

A checksheet that summarizes the artifact requirements for general education follows. Note that each student’s portfolio must contain 20 artifacts, as specified on the checksheet. If a student fails a course, the artifact(s) associated with that course do not meet the general education program requirements. If a student has transfer credit work, there is the possibility that the student will receive a waiver in proportion to the hours transferred. For every six semester hours transferred to the degree requirements, the student receives one waiver for an artifact. However, all students must earn at least one artifact for each outcome and complete the extra-disciplinary and capstone coursework at ONU in order to meet the university general education requirements.
Academic faculty advisors will work with the students each semester to select appropriate courses to meet the degree requirements and to fulfill the general education requirements. Further information regarding general education, artifacts, and the usage of the electronic portfolio will be provided within the student’s transition course in Fall 2011. The full general education plan is available from the Academic Affairs website under the topic of General Education.

1a. Effective Communication – Writing
   • Writing Seminar
   • Senior Capstone

1b. Effective Communication – Non-writing
   • ______________________________
   • ______________________________
   • ______________________________

2. Critical, Creative Thinking
   • Transitions Experience
   • Extra-Disciplinary Seminar
   • Senior Capstone

3. Scientific and Quantitative Literacy
   • ______________________________

4. Diversity, Human Interaction
   • ______________________________

5. Integration of Disciplines
   • ______________________________

6. Informed, Ethical Responses
   • ______________________________

7. Aesthetics
   • ______________________________

Two Additional Artifacts
   • ______________________________ Outcome #:_____ Grade: _____
   • ______________________________ Grade*:______
   • ______________________________ Waived**
   • ______________________________ Grade*:______
   • ______________________________ Waived**

*Must earn a grade of a C or better.
**Students with transfer work that counts towards the degree may earn a waiver in proportion to the hours transferred.

The International Study Opportunity

The international dimension of the university’s educational program seeks to develop in students an interest, understanding, and appreciation of other peoples and a cultivation of a spirit of world citizenship within the university community. International experiences are encouraged through various academic and nonacademic opportunities. On-campus academic and cocurricular programs bring together the experience and expertise of faculty and students alike in a variety of activities which broaden the international perspective of those who participate. Off-campus opportunities include study abroad, occasional work experiences abroad, and other types of student travel exchanges. Recent programs abroad include summer study tours to Europe, Japan, Korea, and Latin America, a co-op experience abroad in engineering, summer internships abroad in business, theatre performances abroad, and individually designed summer abroad experiences for modern language students. The engineering co-op program provides opportunity for actual work experiences in an industrial engineering company abroad. Student teaching abroad is available by application through limited international sites.

The university is a member of the Institute for International Education, the NAFAA Association of International Educators, the Indiana Consortium for International Programs (ICIP), Council on International Educational Exchange, the University Studies Abroad Consortium (USAC), the International Studies Abroad (ISA) consortium, and the World Affairs Council of Greater Cincinnati. The university has cooperative exchange agreements with Queen Margaret College, Edinburgh, Scotland; Glasgow Caledonian University, Glasgow, Scotland; University of Wales Lampeter in Lampeter, Wales; the University of Ulster, Northern Ireland; the University of Science and Technology, Lille, France; Robert Schuman University, Strasbourg, France; the University of Aarhus, Aarhus, Denmark; the University of Joensuu in Joensuu, Finland; Helsinki School of Economics in Mikkeli, Finland; Am- hem Business School in the Netherlands; Brandenburg Technical University, Cottbus, Germany; University of Iceland, Reykjavik, Iceland; University of Debrecen, Debrecen, Hungary; Instituto Tecnologico y de Estudios Superiores de Monterrey, Campus Queretaro in Queretaro, Mexico; Universidad Antonio de Nebrija, Madrid, Spain; Kansai Gaidai University, Hirakata City, Japan; Ritsumeikan University, Kyoto, Japan; Hanyang University, Seoul, Korea; Da-Yeh University, Changhua, Taiwan; Ming Chuan University, Taipei, Taiwan; and the Plekhanov Economic Academy, Moscow, Russia. Additional study abroad opportunities are provided through the university’s affiliation with GlobalLinks (AustralLearn/AsiaLearn/EuroLearn) and the Semester at Sea program.

The university also has program agreements with Studio Art Centers International, Florence, Italy, Burren College of Art in Ireland, Middlesex University, London and University of the Arts, London. The university has a friendship pact and an exchange agreement with Dankook University in Seoul, Korea.

The Byron L. Hawbecker Travel Fellowship is available for students in the College of Arts and Sciences pursuing study abroad.

Washington Center Program

Ohio Northern University is affiliated with the Washington Center in Washington, D.C. The Washington Center arranges a variety of student internships with federal agencies, legislative offices, private organizations, and non-profit organizations on behalf of students from the four undergraduate colleges. The Washington Center also offers internship abroad opportunities as well as short-term seminars where students can receive academic credit. A limited number of Washington Center scholarships are available for students. More information is available from the undergraduate deans or the academic affairs office.

Academic Programs Between Colleges

Majors and Minors Between Colleges

A student may complete a secondary academic program and minors by satisfactorily completing the required major and major related or minor requirements of the two departments plus college requirements of his or her college of registration only. Students pursuing a degree in the college of engineering or the college of pharmacy must be registered in one of those colleges as their primary degree program but may pursue majors or minors only in other colleges. Exceptions to this general policy are that the dual degree program of electrical engineering and computer science is permitted, and all engineering majors except for computer engineering can pursue a computer science minor.

Dual Degree Programs

Students may elect to earn an additional distinct degree from the university. The student must complete a minimum of 30 semester hours beyond the total credit hour requirements for the degree with the lesser number of hours required. Students not meeting this requirement for more than one degree must choose which degree they wish to receive. This choice may not subsequently be changed.

A student following a dual degree program pursues both degrees simultaneously, with permission of the college of registration, and under the supervision of an advisor from each of the colleges involved. For students pursuing a degree in either the College of Engineering or the College of Pharmacy, the college of primary registration must be one of these two colleges and the tuition charged will be the Pharmacy or Engineering College rate as appropriate.

Students in the College of Engineering are not permitted to have a dual major in computer engineering and computer science.

A student completing a dual degree program must meet all of the requirements established for each degree. Certification of completion of these requirements is made by the college granting a degree.

The university does not guarantee that program additions (e.g., dual degrees, double majors, minors and options) can be completed within the normal time to complete one degree and/or without encumbering additional overload hour fees.
Prelaw Program
Ohio Northern University has developed a unique prelaw program which offers an excellent opportunity for superior students who are preparing for a career in law. The program is open to all students enrolled in any academic department of the Colleges of Arts and Sciences, Business Administration, Engineering, or Pharmacy.

Students in the prelaw program select a major and complete the necessary requirements as do other students. The University Prelaw Advising Committee, with representatives from each of the undergraduate colleges, the law college, and undergraduate career services, advises students to include in their studies specific courses that encourage and develop (1) reading comprehension and written expression, (2) critical understanding of the human institutions and values with which the law deals, and (3) critical and analytical thinking. The committee also supervises a prelaw orientation course, a Law School Admissions Test (LSAT) preparatory workshop, and a mentoring program involving prelaw students with local attorneys. Members of the committee advise students on related matters such as applying for admission to law schools.

Students in the prelaw program will gain automatic admission to the Ohio Northern University College of Law if they (1) maintain an undergraduate grade point average of at least 3.40/4.00; (2) score in at least the 75th percentile on the LSAT; (3) pass the character and fitness review by the Admissions Committee of the College of Law, and (4) pursuant to ABA Admissions Standard 501, are deemed by the law school Admissions Committee to appear capable of satisfactorily completing its program and being admitted to the bar. To take advantage of an automatic admission, a student must enroll in the College of Law in the fall semester immediately following the date that the student received an undergraduate degree from Ohio Northern.

Additional information is available through the offices of the deans.

Library
Heterick Memorial Library (1968) provides information resources and services to support course offerings and foster independent study. An open stack arrangement allows easy access to nearly all of the material in the collections. The centrally located facility is named for Dr. Robert Hyn-ton Heterick and Frances Felker Heterick.

In addition to books and periodicals, the library provides microforms, state documents, sound recordings, videotapes, slides, and computer software. Facilities include individual study carrels, study rooms, a conference room, microform reading and printing devices, copy services, and aud iovisual equipment. Numerous power and network connections are available.

Computer services include a cluster of 32 computers, all of which are connected to the campus local area network. The Spar/Winlriter Music Media Lab provides computer facilities for music students. Some 300 wired power and network connections are scattered throughout the building for laptop users. Wireless network access is also available. The library also maintains POLAR, the university’s on-line catalog, as well as offering over 200 computerized services, more than 9000 electronic journals, and a growing number of electronic books over the campus network.

Local area networks are supplemented by efficient interlibrary loan services, including OhioLINK, a statewide resource-sharing network.

Librarians are available to help students and faculty identify appropriate sources of information and to use the catalog and other bibliographic materials. Instructional lectures are offered to classes and groups upon request.

Information Technology
The university is among the leaders in offering creative and efficient application of information technology in support of teaching, learning, administrative and student services. Information technologies are integrated into all aspects of university life; enhanced classroom, laboratory, research and living experiences, recreation and communications.

The university provides a heterogeneous environment of computer equipment integrated by local area networks. The campus network is attached to the Internet through a high-speed fiber-optic connection. The campus network is accessible in every residence hall room and apartment. In addition, wireless networks are installed in academic buildings, libraries and residence facilities. Computer labs are available to students in most academic areas.

Access to the digital campus is via Luminis, a web platform that aggregates and integrates services like e-mail, student records, academic calendar, faculty and student chat sessions, and course information.

The College of Arts and Sciences provides access to many computer laboratories featuring a variety of makes and models. For example, the department of communication arts, located in the Freed Center, provides a laboratory of 16 Apple iMac computers in support of instruction in communications. Popular word processing and page layout programs are available. The art and design department has 10 Apple iMac computers in support of instructional graphic design.

The English department has desktop computers in Dukes building for classroom and laboratory use. All machines are connected to the Internet and use the Windows operating system along with publishing and word processing applications for use in and out of class. The Meyer Hall of Science houses multiple PC laboratories featuring computers to support instruction in the sciences and mathematics. A mixed cluster of Macintosh, Intel, and Sun computers are used in chemists, mathematics, and engineering. The computer laboratory for mathematics education. The Social Sciences Division has an instructional laboratory with Windows computers in Hill 114. A variety of software is available including: Sniffy the Virtual Rat, Arcview GIS, SPSS version 9, and SYSTAT. The department of technological studies has four computer laboratories located in Taft Memorial. The Micro-computer Applications Lab is used for a variety of courses including CAC applications, information processing, multimedia design, and basic computer applications with spreadsheets, databases, word-processing, etc. The Virtual Simulation Lab is used for advanced CAD applications, digital manufacturing applications and analysis using primarily Delmia and CATIA software. The third lab in Taft 202 contains applications associated primarily with the graphic communications industry including desktop publishing, OCR and image scanning, digital photography manipulation and editing, and laser engraving. The Automation Laboratory in Taft 107 contains computers that are interfaced with Programmable Logic Controllers, CNC turning and milling centers, robots, and other advanced manufacturing control devices. The Center for Teacher Education has 15 Dell computers and 5 Apple Power Macintosh computers in Dukes 301. Also available are a digital camera, color scanners, and QuickCam, document camera, Laser video disc player, Pro Image Plus 3000 Poster Maker, Ultima 65 Laminator, Ellison Machine, Smart Board and Projector, Turning Point with 25 clickers and Airliner Wireless Notebook. The Center has a second computer laboratory in Dukes 354 which includes 14 Dell laptop computers, a laser printer and a color scanner.

The College of Engineering, located in the Biggs Engineering Building and the Science Annex, provides several PC laboratories equipped with over 100 personal computers. Many popular Windows applications and numerous professional engineering software applications are available. The building is wireless compatible, enabling wireless internet connectivity. Twelve Unix workstations support instruction in computational fluid dynamics and finite element analysis. Laboratory computers support computer applications and design, control systems, heat transfer, and fluid mechanics. The college operates a scanning electron microscope which is used mainly in the materials courses but is also used by the physics and astronomy department.

The College of Pharmacy and the Drug Information Center, located in the Robertson-Evans Pharmacy Building, provide modern laboratories with networked computers and software dedicated to health care data base searching. The College of Law, located in the Robertson Hall, has a legal research center of computers for student use. Access is provided by pass word to LEXIS/NEXIS and Westlaw, and a variety of other law and law-related internet subscription services are available to all users. Every seat in every classroom, seminar room, and the moot court room has access to a power outlet to accommodate laptop computers. All library carrels and tables have network and power outlets. Wireless connectivity is available throughout the entire law college building.

The College of Business Administration is located in James F. Dicke Hall. This beautiful facility contains classrooms, faculty offices, and administrative offices all equipped with the latest instructional technology. In addition to more than 200 network connections, the building offers 100 percent wireless coverage on the 802.11g standard. The building is linked to the campus fiber optic backbone via gigabit Ethernet. All computers are installed with Microsoft Windows and Office.

Classrooms are equipped with state-of-the-art instructional technology. Students have available for their use a computer classroom, a computer lab, computer workstations and kiosks. In addition, the college provides course-related access to real-time financial information, including stock quotes, through Reuters BridgeStation service.

Students have access to a range of support services including high-speed email, web publishing, CD-ROM creation capability, desktop publishing, and videoconferencing capability. In addition students have access to a digital video camera and several digital still cameras.

The College of Business Administration is a Microsoft Authorized Testing Center. The Microsoft Office certification program is designed to assess proficiency and improve skills. Certification testing is available for
Microsoft Access, Excel, Outlook, PowerPoint and Word. The college is also licensed to test for and award the IC² Internet and Computing Core Certification.

The Heterick Memorial Library and the Taggart Law Library employ computer technology to better serve the university community. Both libraries are members of OhioLINK, a resource sharing consortium of Ohio academic libraries which allows patrons to locate and borrow materials from other member libraries electronically.

Distance learning and web-based learning instruction is provided using Blackboard CE (WebCT), a program that facilitates the creation of distance learning educational environments.

**Communication Skills Center**
Clear expression of ideas, both oral and written, is a standard Ohio Northern endorses for its students. To help meet and maintain that standard, the university provides the services of its Communication Skills Center. It is designed to strengthen the student’s work in basic writing and oral communication courses and to reinforce those communication skills throughout the student’s entire academic career.

Individual assistance is provided to help students master writing skills and develop skills in organizing and delivering oral presentations. Mock interviews are available for students entering the job market. In addition, the Communication Skills Center offers reference materials, written and oral communication models, and recording facilities. The Communication Skills Center, located conveniently on the second floor of Heterick Memorial Library, is staffed by communication professionals and student speech tutors.

**Honors Program**

**Mission Statement** The Ohio Northern University Honors Program, consistent with the University’s Mission Statement, has been established to stimulate highly qualified students who are capable of meeting academic challenges and who choose to do so. Students are encouraged to develop their full intellectual potential within a continuing community of scholarly excellence that offers exciting and enhanced varieties of academic experiences.

**Objectives** Honors Program experiences are designed to nurture students’ curiosity, their written and oral communication skills, and their leadership capabilities as well as to provide an opportunity for students to be more actively involved in their education.

**Admission** Upon acceptance at Ohio Northern, students with an ACT composite of 29 or higher (or equivalent SAT score) may apply to enter the Honors Program. Enrolled students who complete their first academic semester with a GPA of 3.50 or higher also may apply if space is available. Completion of the requirements of the Honors Program are the same regardless of time of entry.

An application to the Honors Program will include an essay that supports acceptance into the Program. Acceptance into the Honors Program is highly competitive.

**Program Requirements** The Honors Program consists of the Honors Transitions Experience and three additional Honors Seminars (10 credit hours total); two “contract” courses at the 3000-level or above (each course at least 3 credits); and a final Honors Capstone Enhancement. The Honors Seminars may be used to replace University General Education, college, major, or other requirements, as determined by University/department/collge faculties.

To remain active in the Honors Program, students must have a cumulative GPA of 3.00 or better at the end of their second semester and a cumulative GPA of 3.20 or better at the end of their fourth semester at ONU. A student whose cumulative GPA is below 3.30 at the end of a sixth semester of enrollment will not be permitted to complete the Honors Program.

Students in the Honors Program are required to attend at least three Honors Capstone Enhancement public presentations each academic year.

**Program Specifics** Honors Seminars have an enrollment limit of 15. Students not in the Honors Program may enroll in an Honors Seminar on a space available basis upon approval of the instructor. However, only Honors Program students may enroll in the Honors Transitions Experience. With the approval of the Honors Program Committee, an Honors Seminar requirement can be fulfilled by contract.

Honors Seminars and the Honors Capstone Enhancement are graded on the A-F scale.

As stated above, to satisfy the program requirements, two existing courses at the 3000-level or higher must be completed with contracts. Contracts do not provide more credit hours for a course, but rather represent an agreement on the part of the student to complete work in greater depth. Contract proposals are initiated by the student with guidance from the instructor, and a copy of the final contract is placed on file for review by the Honors Program Committee no later than the second week of the term of enrollment. With the approval of the Honors Program Committee, Contract Course requirements may also be fulfilled via Honors Experiential Contract courses or Honors Research Contract courses. The course instructor certifies completion of the contract at the time of reporting final grades.

The Honors Capstone Enhancement builds on the department/collge capstone. A Capstone Enhancement plan must be approved by the department/collge and the Honors Program Committee. Each student must give an announced, public presentation of the completed Honors Capstone Enhancement.

**Program Recognition** as an Honors Program graduate requires satisfactory completion of the program requirements stated above. At Commencement, the Honors student will be recognized as an ONU Honors Program graduate. Diplomas and transcripts will identify completion of the Honors Program.

**Program Administration** An Honors Program Committee with membership to include faculty from each of the undergraduate colleges and students in the Honors Program provides oversight to the Honors Program.

**Subject - ONU Honors Program (HONR)**

**1001 - Honors Transitions Experience**
1 Credit
Facilitates the transition from high school to honors-level work through in-depth explorations of the general education and major-related themes discussed in the various college-specific Transitions Experience classes. Graded S/U.

**1231 - Honors Writing Seminar**
3 Credits
Introduction to college-level writing skills, including critical reading of challenging texts, advanced argumentation, researching and incorporating outside sources, and writing essays. Meets university first-year writing requirement.

**2001 - Honors Extradisciplinary Seminar**
3 Credits
Topics include but are not limited to: Minds and Computers; Encountering the Other; Innovation, Creativity, and the Entrepreneurial Mindset. Meets university extra-disciplinary seminar requirement. This course may be repeated 2 times.

**2011 - Honors General Education Seminar**
3 Credits
Topics include but are not limited to: Asian Studies, Corporate Culture, The Study of Human Language, Disease and Society, Energy Systems, Animatronics, Cryptography, and The Big Ideas in Physics. Will be tagged to meet a University General Education Outcome. This course may be repeated 2 times.

**2021 - Honors Cultural Understanding Seminar**
3 Credits
Topics include but are not limited to: Theories of Human Nature, Prophets in the Ancient Near East, and Sub-Saharan West African Cultures as Portrayed in Film. Will be tagged to meet the “understanding of diverse cultures” University General Education Outcome. This course may be repeated 1 time.

**2041 - Honors Great Works Seminar**
3 Credits
Reading and writing about significant works of literature. Topics include but are not limited to: Pushing the Boundaries-Exploration and Pioneering in the New World, The American Novel, Medieval Roots-Tolkien’s Lord of the Rings, Film Adaptation, and Medicine in Literature.

**2261 - Honors Nonverbal Communication Seminar**
3 Credits
The multiple facets of communication that involve things other than actual words. How people communicate using the eyes, touch, the environment, time, space, color, smell and other nonverbal codes.
2401 - Honors Professional Ethics Seminar
3 Credits
Major ethical theories and their application to professions and topics that arise in the professional setting. The role of institutions in ethical theory, the nature of professions, and responsibilities to clients and the public.

3011 - Honors Advanced Seminar
3 Credits
Topics include but are not limited to: History of American Popular Culture, The Witch Hunt 1450-1700. This course may be repeated 1 time.

3801 - Honors Experiential Contract
1 to 3 Credits
Work done under supervision of ONU Faculty in conjunction with or following up on experiential learning, including but not limited to: study abroad, internships, co-ops, practicums, and service. This course may be repeated 1 time. Graded S/U.

3851 - Honors Research Contract
1 to 3 Credits
Research work done under supervision of ONU Faculty. Including but not limited to research done in conjunction with laboratory classes, or following up on research experience for undergraduates. This course may be repeated 1 time. Graded S/U.

3991 - Honors Capstone Enhancement Research
1 to 3 Credits
Research for the Honors Capstone Enhancement. May be repeated for credit up to a total of 6 hours. This course may be repeated 1 time. Graded S/U.

4001 - Honors Capstone Enhancement
1 Credit
Final version of the Honors Capstone Enhancement and oral presentation.

ROTC (Reserve Officer Training Corps)

Air Force ROTC
The Air Force Reserve Officers Training Corps (AFROTC) program, offered by the Department of Aerospace Studies on the Bowling Green State University campus, provides college-level education to prepare interested men and women for commissioning as second lieutenants in the United States Air Force. The program emphasizes the development of each student’s sense of personal integrity, honor, individual responsibility and potential as a leader and manager.

The AFROTC program consists of a General Military Course (GMC) offered to freshmen and sophomores; and a Professional Officer Course (POC) offered to selected juniors and seniors. Admission to the GMC is open to most U.S. citizens, male and female, over the age of 14. The student must be enrolled full-time in the university and registered for a minimum of 12 academic hours. The student spends one hour per week in AFROTC courses. Uniforms and AFROTC textbooks are provided without cost while the student is enrolled in the GMC. Enrollment of foreign students is governed by Air Force regulations.

Admission to the POC is on a competitive basis for those students who successfully complete the GMC. At a minimum, requirements for selection to the POC include successful completion of a four-week summer field training camp and an Air Force medical examination. The student must be of high moral character and demonstrate outstanding leadership potential. The student spends three hours per week in AFROTC courses. While enrolled in the POC, students receive up to $450-$550 per academic month (tax-free) in stipend as well as uniforms. Enrollment of foreign students is governed by Air Force regulations.

For both GMC and POC, students are required to attend weekly physical training (three times per week) and leadership lab (2 hours per week). AFROTC leadership training activities are a part of each course and offer opportunities for practical leadership and teambuilding training and experience in a supervised environment. Students may also be eligible for different types of AFROTC scholarships. If available, scholarships may provide up to full college tuition, required fees, textbooks, and a monthly stipend.

Students who successfully complete the AFROTC program and graduates from the University are commissioned as second lieutenants in the active duty U.S. Air Force. Commitment incurred is normally four years; however, students designated for pilot or navigator training will serve a longer commitment, based on the current Air Force requirements.

For additional information, contact AFROTC, Bowling Green State University, 419/372-2176. DET620@bignet.bgsu.edu

Army ROTC
Army ROTC is offered to students at Bowling Green State University (BGSU).

Students interested in attending Army ROTC courses at BGSU should Contact the Recruiting Operations Officer at 419-372-9968 or go to: http://www.bgsu.edu/departments/mils

Students wishing to enroll in the BGSU Army ROTC courses should plan on attending classes in Bowling Green on Thursdays from 3 to 5:30 p.m. Students should enroll through ONU’s course request system.

For more information, contact BGSU ROTC at 419-372-2476 or the Recruiting Operations Officer at 419-372-9968, email armyrotc@bgsu.edu

ESL Bridging Program for International Students

The Bridging Program for International Students is an academic year-long sequence of study which allows students with TOEFL scores between 54-78 (iBT) or 480-550 (paper-based) to begin taking selected college courses for credit while also taking required English language courses. While the sequence of study allows a student to enter ONU and the English language courses in mid-semester, that student would not have the option to take other selected courses for credit until the beginning of the following semester. (The last day to enroll mid-semester is Monday of week 8). When Bridging Program students satisfy ONU’s English language proficiency requirement, they may enter into full-time study in their academic majors.

Subject - ESL Program (ESL)

1101 - Reading and Vocabulary 1
1 to 3 Credits
Integrated reading and vocabulary skill development for academic purposes. (formerly incorporated in ESL 100) Offered fall semester. Corequisite(s): ESL 1251.

1111 - Reading and Vocabulary 2
1 to 3 Credits
Integrated reading and vocabulary skill development for academic purposes. (formerly incorporated in ESL 100 and ESL 101) Offered fall semester. Corequisite(s): ESL 1261.

1121 - Reading and Vocabulary 3
1 to 3 Credits
Integrated reading and vocabulary skill development for academic purposes. (formerly incorporated in ESL 101 and ESL 102) Offered spring semester. Corequisite(s): ESL 1271.

1131 - Reading and Vocabulary 4
1 to 3 Credits
Integrated reading and vocabulary skill development for academic purposes. (formerly incorporated in ESL 102) Offered spring semester. Corequisite(s): ESL 1281.

1201 - Listening and Speaking 1
1 to 6 Credits
Integrated listening and speaking skill development for academic purposes. (formerly incorporated in ESL 100) Offered fall semester. Corequisite(s): ESL 1251.

1211 - Listening and Speaking 2
1 to 6 Credits
Integrated listening and speaking skill development for academic purposes. (formerly incorporated in ESL 100 and ESL 101) Offered fall semester. Corequisite(s): ESL 1261.
than 19 hours must have the dean's signature. Law students with less than
fall semester the day before classes begin.

mer orientations. New students or re-entry students may also register for
failure to satisfy fee payment requirements will be permitted only during
enable reinstatement in the term for which charges have not been paid.
registration, the assessment of the late registration fee, and removal of
name from class lists for the term. Delinquent payment of charges will not

Auditors
A student who wishes to attend a class but who does not wish to
receive a grade or credit for the course can register as an auditor only
during the first seven business days of the term. An auditor does not
participate in class evaluations. Studio courses, activities courses, and
laboratory courses cannot be audited. In lecture/laboratory courses only
the lecture can be audited.

Registration Procedure
Registration is completed during the periods assigned and published
by the University Registrar. During each term, registration is conducted
for the following term. All continuing students are expected to register
within the designated period. The student is responsible for the complet-
tion of prerequisites for courses for which enrolled and for securing the
approvals needed as indicated in the University Catalog. Unless other-
wise specified, a grade of "D" or better will satisfy a course prerequisite.
The student is expected to complete registration in the prescribed man-
er and to complete payment fees by the required date to validate his/
her registration. Failure to do so can result in the cancellation of the
registration, the assessment of the late registration fee, and removal of
name from class lists for the term. Delinquent payment of charges will not
enable reinstatement in the term for which charges have not been paid.
Reregistration of a student whose registration was cancelled because of
failure to satisfy fee payment requirements will be permitted only during
the late registration period for the term.

Each student is assigned an advisor to assist in curriculum and reg-
istration matters. The advisor's signature is required for registration and
substantial changes in schedules. Undergraduate students requesting more
than 19 hours must have the dean's signature. Law students with less than
12 hours or more than 18 must have appropriate prior approval.

Outstanding financial obligations to the University must be paid or
satisfactory arrangements made prior to the completion of registration for a
subsequent term.

New students may register for fall semester at any one of the sum-
mer orientations. New students or re-entry students may also register for
fall semester the day before classes begin.

The Office of the Registrar will permit another person to register or to
change the schedule for a student only under extraordinary circumstances
upon recommendation of the student's college dean.

A student may not attend more than one class session unless offi-
cially registered for the class in the Office of the Registrar.

Change in Academic Program
To change a major, minor, concentration, or option the student must
have a “Declaration of Major” form completed indicating the change(s) and
signed by the chair of the department where the new major, minor, concen-
tration, or option is housed. The change of major form must be processed
in the Office of the Registrar to be official.

Change in Course or Withdrawal
The student is responsible for the courses and sections for which he or
she is officially enrolled.

Late registration, addition of courses, change of sections, change from
credit to audit or audit to credit will be permitted during the first seven busi-
ness days of a semester or equivalent in the summer term.

Dropping Courses from Schedule or
Withdrawal from the University
Courses dropped within the first three weeks of a semester will not
appear on official reports; courses officially dropped after the third week of
the semester will be marked as "W" (official withdrawal).

Courses may be dropped after the end of the twelfth week of a se-
semester to the beginning of final examination week with approval of the
dean of the college of registration but will be approved only for reason of
unusual circumstances beyond the control of the student. The instructor of
the course will be notified promptly of withdrawals approved after the end
of the ninth week of a semester and the beginning of finals. The instructor
may make inquiry to the dean of the college of registration concerning the
circumstances and will be provided the rationale with sensitivity for the stu-
dent’s right to privacy.

Courses may be dropped or a complete withdrawal processed after
the beginning of the final examinations or thereafter with approval of the
instructor of the course, the dean of the college offering the course, and
the dean of the college of the student's registration. In the event that there
is disagreement with the withdrawal by any of these persons, and the dis-
agreement cannot be resolved, the vice president for academic affairs will
provide a decision and inform all parties directly involved. The vice presi-
dent for academic affairs will report to the Committee on Academic Affairs
all withdrawals after the beginning of the final examination week which
were not approved by the dean of the college of the student’s registration,
dean of the college offering the course, and the instructor of the course.

For courses scheduled for less than a semester in length, equivalent
periods for registration changes will be established by the University Reg-
istrar.

Changes of schedule (add-drop) and complete withdrawals are official
on the date received in the Office of the Registrar. Courses or sections
dropped or added without proper approvals will result in no credit for the
course added and an “F” for the course dropped.

A student who wishes to withdraw from all courses for which the
student is registered for a semester may do so by initiating an official with-
drawal with the student’s advisor and submitting the withdrawal form to the
following offices for signature — dean of the college of registration (if the
dean’s signature is obtained without the advisor’s signature, it is assumed
that the signature of the advisor is waived), office of residence life if the
student is residing in a University residence hall, and the controller’s office.

After obtaining the proper signatures, the student must process the form
with the Office of the Registrar to be official. Discontinuance of attendance
does not constitute an official withdrawal. Failure to officially withdraw will
result in failure (F or U) for each course scheduled.

Transfer Between Undergraduate Colleges in
the University
A student enrolled in one undergraduate college in the University may
request transfer to another undergraduate college by initiating a change of
college form. The signature of the dean of the college in which the student
is currently enrolled must be obtained as well as the approval of the dean
of the college to which the student is transferring. The student must pro-
vide the dean of the college to which the student is transferring copies of
all documents relating to academic actions at ONU (suspension, probation, dismis-
sal).

In considering internal college transfers, the University recognizes
the need for the student to have the freedom to find the best area of study
within total University offerings.
Dismissal

The Ohio Northern student is expected to maintain certain levels of scholarship. A student may be suspended or dismissed for violation of University rules or for continued low scholarship.

Academic Standing

At the end of each semester or summer session the academic standing of each student (except transient and special high school students) enrolled in the University is determined according to the standards established by the college in which the student is enrolled. Specific college regulations on academic probation are detailed in the sections of this catalog on each college. Academic Probation describes the academic standing of a student who falls below the minimum standard cumulative grade point average, but is eligible to continue.

Continued Academic Probation denotes the academic standing of a student who was on probation or continued probation the previous term enrolled, who does not qualify for good standing, and who is eligible to continue in the University.

Academic Suspension is an action which makes the student ineligible to continue in the University for a specified period of time, ordinarily two semesters. A second academic suspension results in academic dismissal.

Academic Dismissal is an action which makes the student ineligible to continue in the University. Normally, students dismissed are not readmitted.

The academic record of an undergraduate student on academic probation or continued academic probation whose grade point average for the semester is below the minimum standard established for his or her college is reviewed by the appropriate committee in the college, at which time the student may be permitted to continue in the University or may be suspended or dismissed for academic reasons. The student has the right to appeal to writing to his or her college an academic suspension or dismissal.

Veterans or Eligible Dependents

Any student receiving Veterans Educational Benefits under Title 38 USC may remain on academic probation for no more than two consecutive semesters unless the veteran is making progress toward the required grade point average and is allowed to remain in school by the decision of the appropriate academic committee for his or her college.

Grades and Quality Points

The value of credit courses is expressed in semester hours. One hour of credit generally requires one class hour of classroom work a week per term. One hour of credit in laboratory, studio, field or similar experience can require two or more hours per week per term.

Ohio Northern, except the College of Law, uses the four point system in calculating grade point average. Grade meanings and their equivalent point values are: A-Excellent, 4 points; B-Good, 3 points; C-Average, 2 points; D-Passing, 1 point; F-Failure, 0 points.

The College of Law uses a plus and minus letter grade system for students who were on probation or continued academic probation whose grade point average for the semester is below the minimum standard established for his or her college. In the College of Law a plus and minus letter grade system is used: (A+: 4.57; A+: 4.44; A+: 4.33; A: 4.00; A-: 3.67; B+: 3.33; B: 3.00; B-: 2.67; C+: 2.33; C: 2.00; C-: 1.67; D+: 1.33; D: 1.00; D-: 0.67; F: 0.00). In certain clinical courses, the grade of S or U will be given.

The following grades or marks are not computed in calculating grade point averages: I-Incomplete; W-Official Withdrawal; S-Satisfactory, equivalent to a “C” or better; U- Unsatisfactory (no credit earned towards graduation). Marks of I are given only with the dean’s approval for documented reasons generally beyond the student’s control.

Marks of “I” not removed within 12 weeks of the next regular semester in which the student is enrolled will be recorded as “F” or “U.” Extensions of incompatibilities can be approved by the dean of the college of registration for a specific period on the recommendation of the course instructor. In any event, after one year has elapsed from the end of the semester for which the mark of “I” is assigned, the mark of “I” cannot be removed and remains on the permanent record.

The cumulative grade point average is derived by dividing the total number of charged hours for which the student has officially registered into the total number of quality points earned and rounding the resulting number to two decimal places. The semester point average is determined in the same way. A cumulative grade point average of 2.00 is the minimum for graduation. In the undergraduate colleges, except as specifically noted by the College of Pharmacy, if a student repeats a course, except those that may be repeated for credit, only the last grade earned is used in calculating the grade point average and applied toward graduation requirements. However, the original grade remains on the student’s official academic record and transcript. If a student exceeds the credit allowed in a course with a repeat credit limit, the most the credit and grade are “included” in GPA calculation, and beginning with the earliest enrollment, hours and grades in the course(s) are “Excluded” until the student’s credit is at the repeat credit limit. Only the course work taken at Ohio Northern University is used in calculation of grade point average.

The student is responsible for knowing the total maximum credit allowed in courses which may be repeated for credit.

A student who attains a 3.50 or better average on 12 or more graded hours (A, B, C, D, F, S or U) the mark of “I” on the permanent record of a student is upon authorization of the faculty member teaching the course, except for an “F” or “U” recorded by the Registrar for a lapsed “I”.

At the end of each spring semester all undergraduate degree seeking students are ranked numerically based on their cumulative average within their spring semester class by college. Such information may be obtained from the office of the college dean.

Grade Reports

At the end of each semester student grades are available on the Internet. The student may complete a request on the Internet to have a transcript sent to the address of choice for a specific semester.

Under the Privacy Act of 1974 as amended, the educational records of students enrolled in postsecondary institutions cannot be released without the student’s written authorization.

Final Examinations

It is the University policy that a final examination must be given in all courses of instruction. Recognizing that in some courses final examinations are either impractical or unnecessary, exceptions to this policy can be made with the approval of the department chairman and the dean of the college in which the course is offered. Independent study, student teaching, individual lessons, physical education activities courses, performance groups, class piano are exempt from this requirement.

The normal examination period for each section will be based on regular meeting time and days of the class. Some departmental multiple section examinations are scheduled.

All students are expected to be present for final examinations. Absences from final examinations, with the reasons for the absences, must be reported immediately to the faculty member or Director of Residence Life, if the student is unable to contact the instructor individually. Absences other than for reasons of illness or other unavoidable circumstances will result in the final examination grade being calculated as a failure in determining the final course grade.

A student with an “A” in the course may be excused from the final examination by the faculty member.

Class Attendance

The policy of the University is that all students are expected to attend all classes, including examinations. It is realized, of course, that not all students will or can possibly attend all classes. Absences from class fall into three main categories: a) absences because of other class activities; b) absences because of official University functions and activities; and c) absences because of personal reasons.

Regardless of the reasons for absence, it is the student’s responsibility to contact his/her faculty member (preferably before the absence) so that mutual agreement may be reached concerning work to be completed, and how course grade will be determined in light of absences.

Student Academic Conduct

Ohio Northern University students have an obligation to maintain the highest standards of ethical conduct. The University expects its students to conduct themselves in a dignified and honorable manner as mature members of the academic community and assumes that individually and
collectively they will discourage acts of academic dishonesty. The University also expects cooperation among administrators, faculty, staff and students in preventing acts of academic dishonesty, in detecting such acts, reporting them, and identifying those who commit them, and in providing appropriate punishment for offenders.

Minimum standards of academic conduct ensure fairness, honesty, and integrity in the evaluation of student performance. Faculty should be confident that their evaluation methods will not be willfully invalidated by students intending or attempting to misrepresent the skill, achievement, or ability either of themselves or of others. Students, on the other hand, should be confident that a fair comparison of their work with that of other students has not been subverted by unethical conduct.

A complete copy of the Code of Student Academic Conduct may be found in the Student Handbook.

Student Review of Examinations
A student has the right to review and discuss with the faculty member any examination and/or evaluation instrument within a reasonable period of time following the student’s request for review.

Grade Appeals Procedure
A student has the right to appeal a final course grade which the student feels is unfairly or erroneously assigned. The student must first discuss the grade with the faculty member(s) who assigned the grade no later than the fifth/second (if College of Pharmacy module course) class day after the final grade for the course was assigned/posted. If the student is still convinced that the grade is an unfair evaluation of the student’s performance in the course, the student may appeal the grade. The appeal must be made in writing within two class days. A response will be provided to the student within two class days. If the matter has not been resolved by the department chair to the student’s satisfaction, the student must appeal within two days to the dean of the college in which the course is offered. Upon receipt of the written appeal, the dean will inform the Grade Appeals Committee that a grade appeal procedure has been initiated.

The faculty member has the sole responsibility to determine the final grade for the course. The department chairperson, dean or the Grade Appeals Committee may only make recommendations to the faculty member. The complete policy statement on the Grade Appeals Procedure can be found in the Student Handbook. This policy does not apply in the College of Law.

The University Course Numbering System
Each course is identified by a two, three or four letter subject code and a four-digit course number. Some music courses also include an alpha character to designate instrument. This information is used on all official records.

When numbers appear in parentheses following the course title in this catalog, the first number indicates the average number of hours per week of lecture/recitation, the second number the average hours in laboratory per week, and the third number the average hours in clinical per week.

Eligibility for Intercollegiate Athletics
Ohio Northern is a member of the National Collegiate Athletic Association and the Ohio Athletic Conference. Ohio Northern follows the Constitution and Bylaws of the NCAA and OAC in determining the eligibility of students to participate in intercollegiate athletics unless the student is restricted from doing so by the action of the dean of his/her college for academic reasons or by the vice president for student affairs or the director of athletics for disciplinary reasons.

General Academic Regulations
Mid-term examinations are held at the discretion of the faculty member. In the College of Arts and Sciences such examinations must be during the seventh or eighth week of the semester and must be announced by the first day of the semester.

Each student is required to carry at least 12 credit hours per semester to establish one semester of full-time residence work. A student enrolled for less than 12 hours is classified as a part-time student.

Any required course in which a grade of “F” is earned should be taken again in the first semester in which the course is given after the failure occurs.

Transcript Credit and Status
University policy requires that students obtain prior approval by their academic dean for course work attempted at another institution and request that an official transcript of such course work promptly be sent directly from the issuing institution to the Office of the Registrar following completion of the course work.

Credits may be transferred only for courses graded C (2.00) or higher and must apply toward a degree in the course of study the student pursues.

Students who wish to pursue course work at another institution during a summer term or concurrently while enrolled in the University must consult with their advisor and submit a transcript request to the academic dean. In order for the dean to evaluate the request, a catalog description of course(s) must accompany the request. Upon approval by the dean, the student and the Office of the Registrar will receive a copy of the completed form to verify approval. Failure to obtain prior approval can result in non-acceptance of credits by transfer to Ohio Northern University.

Students wishing to pursue courses at another institution during a regular term must consult with their advisor and obtain approval by the academic dean for transient status by the end of the last term enrolled. Such status may not be for a period of more than one academic year. Students who do not pursue a previously approved program or who do not return for the term listed on the transient application will be expected to seek readmission as a transfer student.

Transient status requests must be accompanied by a list of approved courses and name and address of the institution to be attended. This list must include course equivalencies and credits to be awarded.

Students permitted to complete their last requirements for graduation off-campus must apply for a terminal transient status. If the terminal transient status is approved, students must contact the Office of the Registrar concerning graduation. It is understood that terminal transient status is granted only under extraordinary circumstances.

Students who are not enrolled at Ohio Northern University for one or more regular terms are expected to apply for readmission by the application deadline date. Those who have been enrolled at another institution without a prior approval during a regular term will be considered for admission as transfer students.

These procedures will apply to all colleges in the University.

Credit by Special Institutional or Required Placement Examination
Examinations are employed both to provide assistance in placing students at the appropriate level in certain areas of study and to provide an opportunity for students to obtain credit for previously learned skills.

In certain subject areas, students are required to take a placement examination. There is no charge to take that examination or for placement. The student who is seeking a degree at ONU can use the test results of those examinations to obtain credit. In that case, the student is required to pay an administrative or credit fee. For one course (up to five credits), only an administrative fee is charged; there is no credit fee. For all subsequent courses, there is a per credit hour fee charged (the administrative fee is included in the credit charge).

In certain subject areas, a full-time undergraduate student who is seeking a degree at ONU can request a Special Examination for Credit. There is an administrative fee charged which must be paid before the examination can be taken. The student may wish to use the test results of those examinations to obtain credit. In that case, the student may be required to pay an additional credit fee. For one course (up to five credits), there is no credit fee. For all subsequent courses, there is a per credit fee charged (the administrative fee is included in the credit charge).

Examinations are employed both to provide assistance in placing students at the appropriate level in certain areas of study and to provide an opportunity for students to obtain credit for previously learned skills. In certain subject areas, students are required to take a placement examination. There is no charge to take that examination or for placement. The student who is seeking a degree at ONU can use the test results of those examinations to obtain credit. In that case, the student is required to pay an administrative or credit fee. For one course (up to five credits), only an administrative fee is charged; there is no credit fee. For all subsequent courses, there is a per credit hour fee charged (the administrative fee is included in the credit charge).

The examination is evaluated as either “S” (satisfactory) or “U” (unsatisfactory). Only satisfactory examinations are recorded on the student record. Results of examinations do not affect the student’s cumulative grade point average. Satisfactory examination results will be recorded as either “PL” or “XM.” “PL” indicates the examination satisfies the appropriate graduation and/or prerequisite requirements of the course(s) with no hours earned towards graduation. “XM” indicates that credit hours are earned for the specified course(s).

Permission for a special examination requires formal application using a form obtained from the Office of the Registrar. The application must be approved by (1) the student’s academic advisor; (2) the academic dean of the student’s college of registration, and (3) the chair of the department.
in which the course is offered. Such examination shall not be approved for courses which the student has previously audited, completed or failed at this or another institution nor for courses which are prerequisite to any course for which the student has earned credit nor for courses for which the student has previously attempted credit by examination unsuccessfully.

After all required approvals have been obtained, in the order required on the form, and appropriate fees paid, an examiner is assigned by the department chair. The student shall arrange for the examination with the examiner. The examination must be approved, given, evaluated, and the results reported to the Office of the Registrar prior to the end of the "W" period of the semester in which the examination is administered.

Payment of an "administration fee" is required in the controller's office prior to taking a special examination. The "credit hour fee" is 50% of the tuition charge per credit hour as charged to part-time students as listed in the university catalog at the time of the payment of the fee. The "administration fee" is applied toward the "credit hour fee." One course, maximum of five hours, is not assessed the "credit hour fee."

Credit earned by examination after having achieved senior (SR) or P6 status is not applicable toward graduation. A maximum total of thirty (30) hours of credit earned by special examination, externally administered or ONU special examination, can be recorded and applied toward a baccalaureate degree.

Post-baccalaureate students in the Doctor of Pharmacy program who plan to seek credit by examination for one or more rotations because of professional experience must complete the examination(s) prior to their initial enrollment in PHPR 6501 - Advanced Practice Rotations.

Student Responsibility
Faculty members, academic advisors and deans are available to help students understand and meet academic requirements for a degree, but students themselves are responsible for meeting them. Degrees are not conferred until all requirements are fulfilled. Thus it is essential that students be familiar with requirements and confer frequently with their advisors.

Participation in Student Outcomes Assessment
Ohio Northern regularly conducts campus-based studies of student attitudes, student achievement, student satisfaction, and personal, professional and career development. These studies are grouped under the heading of student outcomes assessment and are conducted by the Office of Institutional Research, individual colleges, and academic programs. Data collection and analysis procedures employed ensure the confidentiality and privacy of individual participants and results are only provided in aggregate form. Participation in student outcome assessment assists Ohio Northern University in the continuous improvement of academic programming and student development.

Awarding of Degrees
A student receives the appropriate degree after applying for graduation and completing the required curriculum as outlined in the five colleges of the university.

Graduation requirements, including but not limited to: general education, secondary academic program, minor(s), concentration(s), and option(s), are specified in the university catalog issued in the academic year of the student's most recent admission or readmission as a degree seeking student. When a student changes colleges the ONU the new college will determine the catalog to be in effect for the student.

A student can complete a secondary academic program and/or minor(s) and/or concentrations and/or option(s) added to the university's curriculum in catalogs subsequent to his/her admission as a degree seeking student.

A student can make an irrevocable request in writing to change the catalog used to determine his/her graduation requirements to a more current catalog. Such a change requires the approval of the student's academic department and college dean.

In order to qualify for graduation, an undergraduate student is required to submit a formal application for graduation to the Office of the Registrar. Applications for graduation should be submitted two semesters in advance of the anticipated term of graduation but must be submitted before the completion of the advance registration period for the semester of planned graduation.

Any transfer work needed to complete requirements for graduation at the end of either fall or spring semesters must be received by the Office of the Registrar by the Friday of final examinations week of the appropriate term. For graduation at the end of the summer session, records of transfer work must be received by the Office of the Registrar by the Friday of the last week of classes in the summer term.

A student is required to have a minimum of a 2.00 cumulative average in addition to meeting other requirements before qualifying for the appropriate degree.

Commencement is held once a year at the conclusion of spring semester in separate ceremonies. Spring semester graduates must participate in commencement. All participants must have completed all graduation requirements and wear the traditional cap and gown. Graduates from the previous summer and fall terms are invited to participate in the spring commencement and must notify the Office of the Registrar at least one month in advance of their plan to participate in the commencement. The University confers degrees at the end of the semester after completion by the student of all graduation requirements.

In order to be eligible for a degree from Ohio Northern University, the student must register for and successfully complete a minimum of 30 semester hours of course work at Ohio Northern University. The last 30 semester hours for the degree must be completed at Ohio Northern University (ONU on-line courses, co-ops, internships, etc. are included).

To receive a degree a student must meet all requirements which the faculty of the college may determine and receive the approval of the university faculty for the awarding of the degree. Substitutions in college requirements for graduation may be approved by the appropriate academic department or college dean's office.

Secondary academic program majors, minors, concentrations and options for which the student has applied and for which he or she is eligible are awarded at the time of awarding of the degree.

Graduation with Distinction
The university recognizes, confers at graduation, and records on the diploma three classes of senior honors: cum laude, awarded to under-graduate and first professional degree students with a cumulative grade point average of at least 3.5; magna cum laude, awarded to students with a cumulative point average of at least 3.7; and summa cum laude, awarded to students with an accumulated grade point average of at least 3.9. A student must complete at least 30 hours of graded courses at Ohio Northern to qualify for graduation with distinction.

Transcripts of Academic Record
In order to protect the privacy of the student, the university issues official transcripts of academic record only on written request of the student or by "Request a Printed Official Transcript" using the ONU web portal. Written transcript requests should be sent to the Office of the Registrar. Two to five working days should be allowed for processing transcript requests. Special handling will be granted upon request with prepayment of the appropriate fee.

Ohio Northern University has published regulations designed to protect the privacy of students by the university. Copies of the university policy may be obtained from the offices of the university registrar and the dean of student services or on the Web at www.onu.edu/registrar/ferpa.htm.

Graduate Placement
The university assists in placing its graduates in appropriate positions. Seniors and alumni may register with the director of career services. There is no charge for this service.

Seniors planning to continue their education are advised to research their potential graduate programs to ascertain the graduate entrance examination required. ONU offers registration materials on the GRE, GMAT, LSAT, PRAXIS and the MCAT. Several of these exams are also administered on campus.

Summer Session
The summer session includes courses for regular college students, academically talented high school students who have completed their junior year, and adults who may wish to study for professional advancement or cultural enjoyment. In addition to regular course offerings, several specialized workshops are also scheduled during the summer.
THE GETTY COLLEGE OF
Arts and Sciences

Catherine Albrecht, Dean

Accredited by
American Chemical Society (ACS)
Association of Technology, Management, and Applied Engineering (ATMAE)
Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Commission on Accreditation of Athletic Training Education (CAATE)
Commission on Collegiate Nursing Education (CCNE)
National Accrediting Agency for Clinical Laboratory Science (NAACLS)
National Association of Schools of Music (NASMD)
National Council for Accreditation of Teacher Education (NCATE)
Ohio Board of Nursing (OBN)
Ohio Department of Education (ODE)

Membership in
American Association for Higher Education and Accreditation (AAHEA)
American Association of Colleges of Nursing (AACN)
American Historical Association (AHA)
American Institute of Biological Sciences (AIBS)
American Mathematical Society
American Physical Society (APS)
American Political Science Association (APSA)
Association for Theatre in Higher Education (ATHE)
Association for Women in Mathematics
Associated Collegiate Press (ACP)
Association of Departments of Foreign Languages (ADFL)
Association of Technology, Management, and Applied Engineering (ATMAE)
Association of Writers and Writing Programs (AWP)
College Art Association (CAA)
College English Association of Ohio (CEAO)
College Media Advisers (CMA)
Council of Colleges of Arts and Sciences (CCAS)
Council on Undergraduate Research (CUR)
Foundation in Art, Theory and Education (FATE)
Mathematical Association of America (MAA)
Modern Language Association of America (MLA)
National Association for Sport and Physical Education (NASPE)
National Association of Schools of Music (NASM)
National Communication Association (NCA)
National Council of Teachers of English (NCTE)
Ohio Academy of Science (OAS)
Ohio Biological Survey (OBS)
Ohio Council of Teachers of English Language Arts (OCTELA)
Ohio Newspaper Association (ONA)
Ohio Scientific, Education, and Research Association (OSERA)
Public Relations Society of America (PRSA)
South Eastern Theatre Conference (SETC)
United States Institute of Theatre Technology (USITT)

Academic Divisions and (Departments)
Education and Professional Studies (Education, Human Performance and Sport Sciences, Technological Studies)
Fine Arts (Art and Design, Communications and Theatre Arts, Music)
Humanities (English, History, Politics and Justice, Modern Languages, Philosophy and Religion)
Mathematics and Natural Sciences (Biological and Allied Health Sciences, Chemistry and Biochemistry, Mathematics and Statistics, Nursing, Physics and Astronomy)
Social Sciences (History, Politics and Justice, Psychology and Sociology)

Endowed Chairs
The Eleanor H. and Robert W. Biggs Chair in Chemistry was established in 1992. The 2010-11 recipient is Dr. Teyye Celius.

The Eleanor H. and Robert W. Biggs Chair in the Arts was established in 1992. The 2010-11 recipient is Professor Williams Rowe.

The Eleanor H. and Robert W. Biggs Chair in Sciences was established in 1992. The 2010-11 recipient is Dr. Robert Verb.

The Wilfred E. Binkley Chair of History and Political Science, inaugurated in 1971, has been made possible by a grant from the Scaife Foundation of Pittsburgh. The 2010-11 recipient is Dr. John Lomax.

The Irene Casteel Chair in Education, Professional and Social Sciences, was established in 1992 and funded by a bequest from Irene Casteel in 1998. The 2010-11 recipient is Dr. Ronald Kieffer.

The Mary Reichelelderfer Chair in Mathematical Sciences was established in 1983 with funds from the estate of Mary K. Werkman. The recipient for 2010-11 is Dr. Sandra Schroeder.

The Sara A. Ridenour Chair of Humanities was established in 1983 from funds provided by her daughter. The recipient for 2010-11 is Dr. Errol Katayama.

The Kernan Robson Chair of Government, inaugurated in 1972, has been made possible by a trust established by the late Kernan Robson. The 2010-11 recipient is Dr. Robert Alexander.

Mission Statement
The Getty College of Arts and Sciences provides a broad-based education that fosters innovative problem-solving skills and teaches students to become independent thinkers and life-long learners. Students interact in small class environments directly with faculty dedicated to excellence in teaching and scholarship. Rigorous programs of study in the liberal and fine arts, sciences, and pre-professional programs provide strong theoretical foundations. Practical experiences in unique and state of the art facilities ensure that students are competitive and well prepared for graduate programs, professional studies, and employment.

Admission Standards
Candidates seeking admission to the College of Arts and Sciences are required to meet the general requirements for admission to the University. The College of Arts and Sciences accepts high school graduates and non-graduates who have 16 acceptable units. Twelve of these units are as follows: 4 units in English; 2 units in mathematics; 6 units in history, social studies, languages or natural sciences, or any combination thereof. Candidates are encouraged to take a foreign language while in high school. Acceptable scores on the American College Test or the College Entrance Examination Board tests are expected of all candidates.

General Education Course Framework
The purpose of the Ohio Northern University General Education program is to cultivate undergraduate student abilities as specified by General Education Learning Outcomes. General Education is defined as the courses that a student takes to achieve a well-rounded education. A learning outcome is defined as a fundamental ability that a student develops through completion of his or her ONU educational experience. Undergraduate students must, in addition to all other graduation requirements, complete the university general education program to graduate from Ohio Northern University.

Transitions Experience (TREX 1001 level)
This course facilitates the student’s transition from high school to college life. Students can receive credit only once for a transitions experience. Other attributes of the Transitions Experience are:

1. Mandatory for all undergraduate students during their first semester of study;
The Senior Capstone Experience
Students graduating from the College of Arts and Sciences complete a Senior Capstone Experience, integrating many concepts from their major course of study into a final project or activity. The exact nature of the capstone experience depends upon the specific departmental major, and the requirement may be fulfilled by a variety of senior-level events such as seminars, research projects/papers, recitals, exhibitions, or practicums.

The capstone is a high-impact educational activity that a student completes at or near the end of a student’s academic program. Other attributes of the capstone requirement are:
1. Mandatory for all undergraduate students;
2. Addresses, at minimum, Effective Communication and Critical and Creative Thinking General Education Learning Outcomes;
3. The student shall place qualifying artifacts that this course generates in his or her electronic portfolio;
4. Student engages in a substantial project determined by the department or college;
5. Normally two terms in length. The timing and location of capstone activities are flexible;
6. The capstone may be interdisciplinary;
7. The Capstone may satisfy other requirements of degree programs that the colleges establish.

Degree Requirements
An approved Honors Seminar may fulfill a requirement listed below for any degree offered by the College of Arts and Sciences. For specific information, see the Office of the Dean.

General Education
All students in the College must complete the following University General Education Learning Outcomes:
1. Informed and ethical responses to personal, civic, and global needs
2. Integration of concepts across disciplines
3. Informed responses to aesthetics in art or nature
4. Effective communication
5. Scientific and quantitative literacy
6. An understanding of diverse cultures and their effects on human interaction
7. Critical and creative thinking

To complete the outcomes, students may take courses inside or outside of their major areas of study, but at least 50 percent of the artifacts generated to demonstrate that students have met the General Education Learning Outcomes must be produced in courses outside of the major.

The College of Arts and Sciences offers a variety of majors under the framework of six different degrees: BA, BS, BSCLS, BFA, BSN, and BM.

Basic Requirements
All students in the College of Arts and Sciences, regardless of major or degree, must complete the following requirements:
• Transitions Experience
• Writing Seminar
• Extra-Disciplinary Seminar
• Senior Capstone Experience

Distribution Requirements
To ensure that Arts and Sciences undergraduate students achieve the breadth of a liberal arts education, all students must take courses in the following disciplinary areas. These courses may be tagged for one or more General Education Learning Outcomes. The distribution requirements may be met by Extra-disciplinary Seminars as well as by courses in the major.

- Humanities: Three courses taken from different disciplines in Philosophy, Religion, History, or Literature
- Fine Arts: One course (Four consecutive hours of a single, continuing activity course in Music, Dance, or Theatre may fulfill the Fine Arts distribution requirement)
- Communication Arts: One course
- Mathematics or Statistics: One course
- Natural Sciences: One course
- Social Sciences: One course
- Health and Wellness: One course

Bachelor of Arts
The following are the prescribed general education courses required of all students enrolled in a Bachelor of Arts degree program. This degree is available to students in most of the majors within the College of Arts and Sciences (see “Completing a Major” on page 30).

Basic Requirements (see page 29)
Distribution Requirements (see page 29)

Additional Requirements for the BA degree
Foreign Language: First-year competency (two semesters)
One additional course in the Humanities outside of the major
One additional course in Fine Arts outside of the major
One additional course in the Social Sciences outside of the major

ARTS AND SCIENCES
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Bachelor of Music

The following are the prescribed general education courses required of all students enrolled in a Bachelor of Music degree program. This degree is available to students majoring in music education or performance.

Basic Requirements (see page 29)

Distribution Requirements (see page 29)

Additional Requirements for the BA degree

Bachelor of Science

The following are the prescribed general education courses required of all students enrolled in a Bachelor of Science degree program. This degree is available to students in many of the majors within the College of Arts and Sciences (see “Completing a Major” on page 30). Specific requirements for the B.S. in Clinical Laboratory Science and B.S. in Nursing are listed under the Department of Biological and Allied Health Sciences and Department of Nursing respectively.

Basic Requirements (see page 29)

Distribution Requirements (see page 29)

Additional Requirements

Three additional courses in Natural Sciences OR Mathematics outside the major with at least one course in Natural Sciences and one course in Mathematics.

Bachelor of Fine Arts

The following are the prescribed general education courses required of all students enrolled in a Bachelor of Fine Arts degree program. This degree is available to students majoring in advertising design, graphic design, studio arts, international theatre production and musical theatre. All teacher licensure students seeking the Bachelor of Fine Arts degree must take at least one computer literacy course and one mathematics course.

Basic Requirements (see page 29)

Distribution Requirements (see page 29)

Additional Requirements

One additional course in the Fine Arts outside the major

Physical Education Service Courses

(All Degrees)

Students will be required to take one health and wellness course. A student is not restricted to the required one credit hour of physical education. In addition to the one required Health and Wellness course, a student may receive a maximum of two additional physical education credits that may be applied toward graduation by participating in intercollegiate athletics or by taking other courses within the physical education service program.

In order to receive physical education credit for participation in intercollegiate athletics, a student/athlete must complete the entire season in good standing. An unsatisfactory grade will be assigned if a student/athlete: a) quits the team b) is dismissed from the team or c) participates in less than 50 percent of the season. Participation in intercollegiate athletics constitutes one hour of physical education credit per sport to a maximum of three sports. Only one credit of intercollegiate participation in each sport may be counted toward graduation.

Completing a Major

The degree candidate is required to complete in a logical sequence a major of at least 30 semester hours. Students may be listed as majoring in general studies during their freshman and sophomore years, but they must select a distinct major with an appropriate degree by the start of their junior year of study. Students who have a particular interest in science may be listed as majoring in general science to insure an appropriate course selection in preparation for an eventual major in one of the basic or professional science programs. General science students should select a distinct major with an appropriate degree by the start of their sophomore year.

Candidates for a bachelor’s degree who expect to teach in the public school are required to satisfy professional education requirements. In some majors, areas of concentration requiring at least 18 semester hours are provided allowing the student to focus on a specific area within a major.

Students pursuing a dual major or secondary academic program in two departments within the College of Arts and Sciences are required to meet each department’s requirements for the major in that discipline.

The following major fields are offered for the bachelor’s degree in the College of Arts and Sciences:

Major (Concentration)       Degree
Advertising Design           BA, BFA
Applied Mathematics           BA, BS
Art Education                BA
Athletic Training             BA, BS
Biochemistry                  BS
Biography                     BS
Chemistry                     BS
Clinical Laboratory Science  BSCLS
Communication Studies         BA
Construction Management       BS
Creative Writing              BA
Criminal Justice             BA
Education-Early Childhood    BA, BS
Education-Middle Childhood   BA, BS
Electronic Media and Broadcasting  BA
Environmental and Field Biology  BS
Exercise Physiology           BA, BS
(Clinical/Research)           BA
(Forensic Science/Personal Training)  BS
Forensic Biology              BS
French                        BA
German                        BA
Graphic Design                BA, BFA
Health Education              BA, BS
History                       BA
International Theatre Production BA
Journalism                     BA
Language Arts Education       BA
Literature                     BA
Manufacturing Technology      BS
(Applied Robotics)            BA
(Manufacturing Management)    BA
Mathematical Statistics       BA, BS
Mathematics                   BA, BS
Molecular Biology             BS
Music                         BA
(Music History and Literature) BA
(Music Theory and Composition) BA
(Applied Studies)             BA
Music Education               BM
Musical Theatre                BFA
Nursing                       BSN
Performance                   BM
Philosophy                    BA
Physical Education             BS
Physics                       BS
(Physics)                     BS
(Applied Physics)             BS
(Astronomy)
Two additional 3001/4001 level business courses approved by the BIZ 3621

One of the following courses:
BIZ 2131
BIZ 2121
BIZ 2111

Business Option

The Bachelor of Music, Bachelor of Science in Clinical Laboratory Science and Bachelor of Science in Nursing Degree Programs

The Bachelor of Music, Bachelor of Science in Clinical Laboratory Science and Bachelor of Science in Nursing Degree Programs

A candidate for the Bachelor of Music degree may major in music education or performance (see p. 112). A candidate for the Bachelor of Science in Clinical Laboratory Science degree must complete the clinical year as well as other prescribed requirements (see p. 43). A candidate for the Bachelor of Science in Nursing degree must complete the Service Learning component as well as the Clinical Capstone (see p. 118).

Minors

A formal program of academic minors is available in several of the subject matter areas. Consult the chair of the department in question for specific procedural instructions. Minors require a minimum of 18 semester hours of approved courses, including some work above the 2001 level. Minors are for students who wish to pursue organized study in a discipline without completing a major.

Options

A specific program of academic options is available in conjunction with several of the majors in the college. Included are options in criminal justice (forensic), forensic science, and pre art therapy. The courses involved are listed under the department of the primary major. Business-related options are also available to all students in the College of Arts and Sciences. They are as follows:

Accounting Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 2111</td>
<td>Financial Accounting Foundation for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BIZ 2121</td>
<td>Managerial Accounting Tools for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>ACCT 3011/3021</td>
<td>Intermediate Accounting 1 &amp; 2</td>
<td>6 hrs</td>
</tr>
<tr>
<td>ACCT 3141/3151</td>
<td>Intermediate Managerial Accounting 1 &amp; 2</td>
<td>6 hrs</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18 hrs</td>
</tr>
</tbody>
</table>

Business Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 2111</td>
<td>Financial Accounting Foundations for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BIZ 2121</td>
<td>Managerial Accounting Tools for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BIZ 2131</td>
<td>Legal Environ. for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9 hrs</td>
</tr>
<tr>
<td>BIZ 2331</td>
<td>Behavioral Mgmt. for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BIZ 2511</td>
<td>Marketing for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>BIZ 3621</td>
<td>Financial Analysis for Bus. Plan.</td>
<td>3 hrs</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>15 hrs</td>
</tr>
</tbody>
</table>

An option requires a minimum of 18 semester hours in coursework related to a specified department or discipline, but its original conception and continued integrity as a dynamic program may come from a source external to that department or discipline. Students should consult the chair of their major department for specific procedural instructions on all options.

Dual Degree Programs

Information concerning dual degree programs involving the College of Arts and Sciences appears on page 19 of this catalog. Students may receive further details in the Office of the Dean of the college.

Teacher Education

Ohio Northern University is vitally concerned with preparing effective teachers. The Center for Teacher Education is nationally accredited by the National Council for Accreditation of Teacher Education (NCATE). Programs are offered within the degree requirements in many departments. Undergraduate students preparing to teach are expected to make formal application for admission into the teacher education program during the sophomore year. The exact semester of application depends on the licensure area. To be accepted, the student must have an overall cumulative grade point average of at least 2.50 with no grade less than “C” in specific professional education and basic requirement courses, achieve passing scores on PRAXIS I, and meet other program requirements. The Center establishes additional policies for admission into the teacher education program and considers all applications for admission to the program.

Students with degrees from other accredited universities may pursue teacher licensure by completing the required professional education courses and content area courses required for their licensure area and passing appropriate state licensure exams and regulations.

Preprofessional Programs

Medical Sciences Programs

A Medical Sciences Advisory Committee oversees the advising of students in the areas of the medical sciences (pre-medicine, pre-dentistry, pre-veterinary medicine, etc.). The general objectives of the committee are to counsel students preparing for a career in the medical sciences, to serve as a source of information concerning preprofessional education in the medical sciences, and to serve as a source of recommendations to professional schools in the medical sciences.

Committee members serve as academic advisors and are available to provide guidance and information to help students pursue their professional goals during their undergraduate careers.

The first year program usually includes biology, chemistry, English, and mathematics. After the first year, with the exceptions of organic chemistry and physics, the program is a function of the student’s choice of departmental major and the specific requirements of the professional program being pursued. For further information, contact Chair, Medical Sciences Advisory Committee.

Pre-physical Therapy

The curriculum prepares students for entry into post-baccalaureate programs in physical therapy. Required courses include one year of biology, one year of general chemistry, one year of physics and one year of mathematics courses at the level of pre-calculus and above. Courses in psychology are required in addition to various recommended electives considered necessary for application to graduate programs.

Pre-occupational Therapy

The curriculum prepares students for entry into post-baccalaureate programs in occupational therapy. The program requires coursework in the following areas: biological sciences (biology, physiology, and human anatomy each with a laboratory component), behavioral sciences, written/verbal communication, physics, chemistry, biostatistics, medical terminology, and computer literacy.
Pre-Physician Assistant

The pre-physician assistant program will prepare the student for entry into most master level physician assistant programs. The basic program, offered by the Department of Biological and Allied Health Sciences, includes one year of biology, one year of general chemistry, and one year of mathematics emphasizing biostatistics. Course requirements in biochemistry and organic chemistry will vary according to individual program requirements. Additional courses taken in the Biological and Allied Health Sciences department include: physiology, human anatomy, developmental anatomy, basic emergency response, genetics, microbiology, immunology, as well as other biology courses and other required courses to fulfill the requirements for a Bachelor of Science degree in Biology. The curriculum also includes courses in nutrition, philosophy, and psychology. For further information, contact Pre-Physician Assistant Coordinator, Department of Biological and Allied Health Sciences.

Pre-seminary

A faculty member in the Department of Philosophy and Religion serves as advisor to preseminary students in planning a preprofessional program. The recommendations of the American Association of Theological Schools are followed in counseling the student. A major in the Department of Philosophy and Religion or in another appropriate department may be selected.

Prelaw

Students in the prelaw program select a major and complete the necessary requirements as do other students. The program is open to all students enrolled in any academic department of the Colleges of Arts and Sciences, Engineering, Pharmacy or Business Administration. For additional information, see page 20.

Pre-art Therapy

The curriculum prepares students to develop a professional portfolio that demonstrates mastery of skill and knowledge necessary to enter graduate school (Masters in art therapy). The option allows students the flexibility to minor in psychology.

General Regulations

1. A student usually may not register for more than 19 hours of academic work unless he/she achieved a grade point average of 3.00 or better in the preceding semester, in which case the dean may grant permission for extra hours. See page 9 for overload charges beyond 19 credit hours. A normal program consists of 12 to 19 scheduled hours including physical education.
2. All new students in the College of Arts and Sciences are required to take a Transitions Experience course in their first term of enrollment. For students transferring to Ohio Northern University’s College of Arts and Sciences from another institution, students who transfer in less than 30 semester hours will be required to take a Transitions Experience course.
3. A student indicates a choice of major field by filling out a declaration of major form available in the office of the department chair or dean.
4. No course for which a student has received a “D” is generally acceptable toward a major, secondary academic program, minor, option, or area of concentration. A department chair may allow one “D” toward the academic program at his/her discretion.
5. Juniors and seniors are expected to schedule a majority of their courses from the 3001 and 4001 level.
6. With the permission of the instructor and the department chair, any course prerequisite may be waived.
7. Except where noted, credit hours earned in repeated courses may be counted only one time among the total hours required for graduation.
8. The Writing Seminar should be completed by all freshmen during their first year on campus. The Writing Seminar is required of all transfer students who have not completed a transferable writing course at the prior institution.

S/U Grade Option

Students in the College of Arts and Sciences are given the opportunity to register for one course per semester on a S/U (Satisfactory/Unsatisfactory) options basis, with the following stipulations:
1. The student must have sophomore, junior, senior or post-grad standing.
2. The requested course cannot count toward fulfillment of major, secondary academic program, minor, concentration or option requirements.
3. The requested course cannot be a 1001 level general education course.
4. The grade of “S” is to be equated with A, B, C. The grade of “U” is equated with D or F.
5. Students cannot change the grading system after the second week of class.

Classification of Students

For purpose of classification the minimum requirement for sophomore standing is 30 semester hours of academic work; for junior standing, 60 semester hours; for senior standing, 90 semester hours.

Academic Standing

A grade point average of 2.00 is required for graduation. If a student’s cumulative grade point average falls below 2.00, the student is placed on academic probation. The student can return to good academic standing by raising his/her cumulative grade point average to 2.00 or above.

For students enrolled prior to the Fall of the 2008-09 Academic Year:
If the cumulative grade point average of a freshman falls below 1.60, that student cannot participate in competitive activities of individuals, teams or other groups officially designated as representing the University. A sophomore must maintain at least a 1.80 cumulative grade point average to participate in the aforementioned activities. Juniors and seniors who are on academic probation are not eligible to participate in these activities.

Students entering or readmitted to Ohio Northern University in the Fall 2008 or later:
1. who have earned fewer than 37 credit hours must maintain at least a 1.80 cumulative grade point average to participate in competitive activities of individuals, team, or other groups officially designated as representing the University.
2. who have earned 37 or more credit hours must maintain at least a 2.00 cumulative grade point average to participate in competitive activities of individuals, teams, or other groups officially designated as representing the University.

Any student on probation whose semester grade point average for the following semester is below a 2.00 will have his/her record reviewed by the Committee on Academic Qualifications (CAQ) of the college. The committee may then recommend to the dean that the student be subject to academic actions which may include suspension or dismissal. Students on probation are expected to comply with all special requirements established by the dean’s office. Failure to do so may result in administrative cancellation of the student’s registration. Any student with a term gpa of 1.00 or lower may be placed on probation or suspended.

If probation is continued for an indefinite period of time, after which the student may apply for readmission. If readmission is granted, the Committee on Academic Qualifications may establish certain conditions of academic performance for the student to remain enrolled in the College of Arts and Sciences. Continued poor performance by a readmitted student will lead to dismissal.
If action is taken to dismiss a student, it is to be regarded as a terminal action, and the student is not eligible to apply for readmission to the College of Arts and Sciences at any time thereafter. A complete list of CAQ Academic Action Guidelines is available for review in the dean’s office of the College of Arts and Sciences.

**Graduation**

To graduate with a Bachelor of Arts, a Bachelor of Fine Arts or a Bachelor of Science degree, a student is required to complete a minimum of 120 semester hours which includes the appropriate general education courses, complete an approved major, and have a cumulative point average of at least 2.00. Some majors require more than 120 semester hours to complete.

The minimum residency requirement for all students is the last two semesters and the completion of at least 30 semester hours with at least 60 quality points elected mostly from 3001 and 4001 level courses.

To graduate with a Bachelor of Science in Clinical Laboratory Science, a student must successfully complete one year of clinical training at the approved program subsequent to completing prescribed preclinical coursework.

To graduate with a Bachelor of Science in Nursing, a student must obtain a minimum of a C grade in ALL Nursing Core Courses and successfully complete ALL clinical rotations to meet eligibility requirements for a Professional Pre-licensure Nursing Education Program (ORC Rule 4723-5-13).

To graduate with a Bachelor of Music degree in music education or performance, the student is required to complete a minimum of 120 semester hours which includes the appropriate general education courses, complete an approved major, and have a cumulative point average of at least 2.00. The music education major must also complete all course work and observation hours required by the state of Ohio for teacher licensure.

**COLLEGE OF ARTS AND SCIENCES COURSES**

**Subject - Transitions Experience (TREX)**

1001 - Transitions Experience

3 Credits

Designed to facilitate students’ transition from high school to university by introducing the skills and habits of mind necessary for success at this level. Individual sections will be designed around topics that deal with various disciplines. Students will develop critical and creative thinking skills and make connections between their major and the general education program.

**Subject - General Arts and Sciences (AASG)**

0961 - Study Skills

1 Credit

To increase study efficiency by emphasizing improvement in motivation, concentration and memory. Attention is also given to selected study skills including time-management, listening, note-taking, reading comprehension and testing. CREDIT EARNED DOES NOT SATISFY GRADUATION REQUIREMENTS FOR ANY PROGRAM OFFERED AT THE UNIVERSITY. Formerly AASG 010.

0971 - Intro to College Reading

2 Credits

Designed to increase reading proficiency by focusing on comprehension, vocabulary, reading speed, and study skills. Reading ACT score of 18 or below OR enrollment in AASG 0991 required. CREDIT EARNED DOES NOT SATISFY GRADUATION REQUIREMENTS FOR ANY PROGRAM OFFERED AT THE UNIVERSITY. Formerly AASG 005.

0991 - Intro to College Writing

3 Credits

Intensive instruction and practice in college-level writing. English ACT score of 16 or below required. Student must pass writing proficiency to progress to ENGL 1221. CREDIT EARNED DOES NOT SATISFY GRADUATION REQUIREMENTS FOR ANY PROGRAM OFFERED AT THE UNIVERSITY. Formerly ENGL 105. This course must be taken with AASG 0971.

1951 - Publication Activities Pract

1 Credit

Participation in design, photography, writing and producing the Ohio Northern University yearbook. Graded S/U. Formerly AASG 110. This course is repeatable for a total of 12 hours.

3001 - Career Search Strategies

1 Credit

An experiential environment facilitating learning skills that enable development and implementation of personalized and successful intern, professional employment and graduate/professional school search strategies. Not open to freshman.

**DEPARTMENT OF AEROSPACE STUDIES**

**Subject - Aerospace Studies (AERO)**

A TOTAL OF FOUR CREDITS EARNED IN AIR FORCE ROTC MAY COUNT TOWARD THE 120 SEMESTER HOURS NEEDED FOR GRADUATION IN THE COLLEGE OF ARTS AND SCIENCES

1110 - Air Force Organization 1

2 Credits

Organization of the United States Air Force. Focus on missions involving airlift forces, strategic forces, tactical forces as well as overseas forces. Development and employment of weapons systems and logistic support functions. Leadership laboratory activities. Offered fall semester. This course is not repeatable.

1120 - Air Force Organization 2

2 Credits

Organization of the United States Air Force. Focus on U.S. Defense policies, military balance between U.S. and eastern European forces as well as capabilities of Army, Navy and Reserve/Guard forces. Officership/professionalism and introduction to flight. Leadership laboratory activities. Offered in Spring.

2110 - Air Force History 1

2 Credits

Development of air power from the first lighter-than-air vehicles through the establishment of the Department of the Air Force as an independent military force. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities. Offered fall semester.

2120 - Air Force History 2

2 Credits

Development of air power since the establishment of the independent Air Force to the present. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities. Offered in Spring.

3110 - Air Force Management 1

3 Credits

Integrated management course emphasizing individual as a leader in the Air Force. Human behavior, individual and in groups, historical development of management thought, discussion of classical leadership theory; oral and written communication, military writing and briefing formats. Leadership laboratory activities. Departmental approval required. Offered fall semester.

GENERAL ARTS AND SCIENCES 33
3120 - Air Force Management 2  
3 Credits  
Continuation of AERO 3110. Air Force leadership, planning, organizing, coordinating, directing and controlling functions of management with emphasis on Air Force application, concept of command and staff, junior officer as administrative leader, Air Force personnel system, management of change, managerial strategy in changing environment. Leadership laboratory activities. Offered in Spring.

4110 - American National Security 1  
3 Credits  
Role of the President, the Congress and National Security Council in national security policy making; American defense strategy; alliances; regional security; arms control. Leadership laboratory activities. Departmental approval required. Offered fall semester.

4120 - American National Security 2  
3 Credits  
Air Force Officer as part of national security forces; military law; laws of armed conflict; the military profession; transition to military life; relations with civilian community. Leadership laboratory activities. Offered in Spring.

DEPARTMENT OF ARMY ROTC

Subject - Army ROTC (ARMY)

A TOTAL OF FOUR CREDITS EARNED IN ARMY ROTC MAY COUNT TOWARD THE 120 SEMESTER HOURS NEEDED FOR GRADUATION IN THE COLLEGE OF ARTS AND SCIENCES

1000 - Lifetime Leadership Skills  
2 Credits  
Skills needed to be successful in a wide range of environments to include academic, corporate and military. Subjects include but not limited to time management, memory comprehension, effective and efficient reading and effective note taking. Extensive leadership studies of both corporate and military settings focuses on interpersonal skills, professional ethics and officerhip. No military obligation or prerequisites.

1010 - ROTC and the National Defense Organization  
3 Credits  
Background, programs, benefits and objectives of Army ROTC. Organization and functions of national defense establishment, with emphasis on the role of the U.S. Army. Extensive discussion of the role and responsibility of the Army officer.

2010 - Leadership/Officerhip  
2 Credits  
Theoretical and practical leadership instruction. Examination of several aspects of communication and leadership concepts such as written and oral communication, effective listening, assertiveness, personality, adult development, motivation, and organizational culture and change. Emphasis on developing intellectual curiosity and clarifying practical applications.

2020 - Military Tactics  
2 Credits  
Army tactics, principles of engagement and usage of military maps. Simulation exercises and war games will be utilized in class highlighting military tactics. No military obligation.

3010 - Professionalism/Leadership  
3 Credits  
Professionalism and leadership required of the U.S. Army Officer; application of leadership principles and styles through case studies and role-playing exercises with emphasis on military situations. Participation in leadership labs, physical training program and field training exercises required. Department approval required and completion of one of the following: ROTC basic course at BGSU; ROTC Basic Camp at Fort Knox, KY; prior active duty service; Army Reserve or Army National Guard basic training.

3020 - Small Unit Operations  
3 Credits  
Organization and employment of basic military teams. Squad- and platoon-level tactical operations. Progressive leadership development through application of tactical principles. Participation in leadership labs, physical training program and field training exercises required.

4010 - Unit Management and Officer Development  
3 Credits  
Concepts and fundamentals of Army unit administration, supply and material readiness. Professional officership techniques and military ethics. Management at the small unit level. Organizing, planning, and participating in field training exercises, participation in physical training and leadership labs. Department approval required.

4020 - Military Law & Leadership  
3 Credits  
Organization and concepts of the U.S. Army judicial system including court martial and punitive actions. Fundamentals of the military decision making process. Discussions of various administrative details pertinent to newly commissioned lieutenants. Participation in field training exercises, physical training and leadership labs.

4700 - Studies In Military Science  
1 to 3 Credits  
Offered on demand. Detailed study of selected military subjects. Offered on lecture basis in seminar or independent study depending on students’ needs and nature of material. May be repeated to 6 hours. Instructor approval required. This course is repeatable for a total of 6 hours.

DEPARTMENT OF ART AND DESIGN

Associate Professors Eddings, Rowe (Chair); Assistant Professors Mancuso, Sheets

Mission Statement  
The visual arts program integrates traditional and contemporary approaches to the creation of art and design. The primary goal is to develop students as creative, productive and intellectually curious artists or designers capable of historical insight, critical thinking and technical proficiency in their areas of emphasis. Our program combines professional training and broad study in the liberal arts so that students majoring in art and design receive as comprehensive an understanding of the discipline as possible; become cognizant of historical and cultural knowledge of the past and present; and develop competence in the use of tools, materials and processes in their profession.

Vision Statement  
To be a leading program in the region by setting the standard for educating artists, designers and art educators. To be recognized for an education program that integrates professional and liberal arts education: conceptual development, intellectual capacity, professional skills and artistic expression. To be acknowledged as a contributor to the scholarship within the fields of art, design and art education. To be a leader in the community in fostering and providing art, design and education programs.

Majors, Minors and Degrees Offered  
Advertising Design Major (BA, BFA)  
Art Education Major (BA)  
Graphic Design Major (BA, BFA)  
Studio Arts Major (BA)  
Studio Arts Major 2D Concentration (BFA)  
Studio Arts Major 3D Concentration (BFA)  
Studio Arts Major Pre-Art Therapy Option (BFA)  
Art Minor  
Design Minor
Admission Requirements

Candidates seeking admission are required to meet the general requirements for admission to the University. In addition, during the admission process, all prospective art and design majors must submit a portfolio demonstrating ability in compositional, conceptual and technical skills. Portfolios should consist of at least ten pieces of original work. Students may bring three-dimensional work to an interview, but such work is not accepted via mail.

All students enter the art and design program as BA candidates during the first year of study. The Foundations Program provides students with a basis for critical and creative thinking and a common, broad range of experiences. Students may elect the BFA degree program after passing the sophomore assessment. Continuing ONU students wishing to change their major to art and design should contact the department at 419-772-2160.

Transfer applicants must comply with all university requirements and procedures. In addition, a portfolio review by the department is required for all work completed in studio courses for which the applicant wishes transfer credit. Transfer credit is granted only when faculty assess that the quality of the work in the studio is equivalent to that which would earn a grade of a C (2.00) or better in a comparable course at Ohio Northern. Failure to submit a portfolio results in loss of opportunity to transfer studio credit. A maximum of 33 credit hours in art/design may be transferred to Ohio Northern (only 9 credit hours in art/design may be transferred for a minor). The final two semesters in art/design must be earned at Ohio Northern. Students must also complete the Sophomore Review and Senior Capstone.

Special Programs

Internships

Internships are an integral part of our educational program. They give students the opportunity to affirm career goals and gain experience in a chosen field while making invaluable connections in the profession. All students in the BFA degree programs, regardless of major, are required to participate in the internship program. For art education majors, student teaching is required for graduation and licensure. Studio arts majors must complete an internship, externship or study abroad. In special occasions, domestic study in an approved program also may fulfill this requirement. For design majors, students are required to complete an internship in a graphic or advertising design setting, either during a summer or regular academic term.

Study Abroad

The visual arts program is at the forefront of the university’s efforts to expand its international experiences for students at Ohio Northern. The department already has specific cooperative art exchange agreements with the University of the Arts London (Chelsea College of Art and Design) in England and the University of Ulster in Belfast, Northern Ireland. The University also has agreements with the Studio Art Centers International, Florence, Italy and the Burren School of Art in Co. Clare, Ireland. Numerous other international opportunities are available to students at Ohio Northern including studying in Cuba, South America and Europe. ONU is a member of the University Studies Abroad Consortium (USAC) that provides many study-abroad and internship opportunities.

Community Outreach

The Department of Art and Design is leading educational efforts at Ohio Northern to expand its educational outreach and connections. Translating what students learn in the classroom to real-world art and design solutions is key to our educational mission. The outreach program provides students important opportunities to develop relevant workplace skills and leadership as they work with clients and many other professionals from the community.

Major Course Requirements

Art and design majors with sophomore standing must participate in Sophomore Review. This assessment gauges student learning based on the department’s program objectives. All students graduating from the University participate in a senior capstone experience which allows students to integrate many concepts and theories from their course of study into a final project or activity.

Exhibiting is an important component of the student’s educational experience. Exhibition requirements for majors in the department include the Foundations Honors Exhibit, Junior BA/BFA Exhibit, Works-in-Progress Exhibit, Senior BA/BFA Exhibit (capstone), and the Annual Juried Exhibit. All art and design majors are required to enter work in the juried exhibit held each year. Majors with sophomore standing are responsible for the organization and preparation of this show. As part of the senior thesis experience, all majors are required to submit work to a professional (external) juried exhibit, competition or scholarship.

Advertising Design Major

This interdisciplinary program integrates liberal arts studies and design with marketing courses from the business college. The major provides students broad knowledge of the principles, theories and skills of visual communication. First-year courses focus on liberal arts, visual theories, materials and methods. Courses during the second and third year engage students in the concentration and development within advertising design. The fourth year involves integration with advanced study. Candidates may choose the BFA degree program with a rigorous study in advertising design or the BA degree program with intense study and a major or minor in another discipline.

BA Degree Requirements (73 credit hours)

- ART 1601 First Year A&D Seminar
- ART 1101 Visual Foundations 1
- ART 1111 Visual Foundations 2
- ART 1501 3D Design Foundations
- DSGN 1101 Photography & Communication
- ART xxx1 Print & Paper 1 or 2
- ART xxx1 Painting or Watercolor
- ART 2601 Art History 1
- ART 2611 Art History 2
- DSGN 1201 Intro Visual Communication
- DSGN 1301 Typography
- DSGN 2401 Narrative Structures
- DSGN 3401 Identity & Packaging Design
- DSGN 3501 Persuasive Design
- DSGN 3551 Advertising Design 1
- DSGN 3561 Advertising Design 2
- DSGN 2601 Design Research Methods
- DSGN 3701 Visual Interface Design
- DSGN 4601 Professional Practices in Design
- DSGN 4901 Senior Capstone 1
- DSGN 4911 Senior Capstone 2

Other Required Courses

- CAPR 1301 Intro to Public Relations
- BIZ 2511 Marketing for Business Planning
- MRKT 3521 Consumer Behavior
- MRKT 4601 Integrated Marketing Communication

BFA Degree Requirements (85 credit hours)

- ART 1601 First Year A&D Seminar
- ART 1101 Visual Foundations 1
- ART 1111 Visual Foundations 2
- ART 1501 3D Design Foundations
- DSGN 1101 Photography & Communication
- ART xxx1 Print & Paper 1 or 2
- ART xxx1 Painting or Watercolor
- ART 2601 Art History 1
- ART 2611 Art History 2
- DSGN 1201 Intro Visual Communication Design
- DSGN 1301 Typography
- DSGN 2401 Narrative Structures Design
- DSGN 3401 Identity & Packaging Design
- DSGN 3501 Persuasive Design
- DSGN 3551 Advertising Design 1
- DSGN 3561 Advertising Design 2
- DSGN 2601 Design Research Methods
- DSGN 2651 History of Graphic Design
- DSGN 4601 Professional Practice in Design
ART AND DESIGN

DSGN 3701 Visual Interface Design
DSGN 3751 Interactive Design & Identity
DSGN 4201 Advanced Visual Comm. Design
DSGN 4901 Senior Capstone in Design 1
DSGN 4911 Senior Capstone in Design 2
DSGN 4921 Internship

Other Required Courses
CAPR 1301 Intro to Public Relations
BIZ 2511 Marketing for Business Planning
MRKT 3521 Consumer Behavior
MRKT 4601 Integrated Marketing Communication

Art Education Major
The art education major is an intensive full-time teacher preparation program that enables students to earn a pre-K-12 licensure.

BA Degree Requirements (93 credit hours)
ART 1601 First Year A&D Seminar
ART 1651 Visual Literacy
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design
DSGN 1101 Photography & Communication
DSGN 1201 Introductory Visual Communication Design
ART 2401 Ceramics 1
ART 2601 Art History 1
ART 2611 Art History 2
ART 2651 Non-Western Art
ART 2801 Book Arts
ART 4901 Senior Capstone 1

Choose one:
ART 2201 Painting 1
ART 2251 Watercolor

Choose one:
ART 2501 Sculpture: Additive & Subtractive
ART 2551 Sculpture: Small Metals
ART 3501 Model Making & Casting
ART 3511 Sculpture: Installation

Choose one:
ART 3301 Print and Paper 1
ART 3311 Print and Paper 2

Professional Education Requirements Ohio Northern's teacher education program provides general education, subject area concentration, and professional educational experiences that will enable the student to enter the profession of teaching with competency. Admission, requirements and courses are listed under the Center for Teacher Education.

Graphic Design Major
The graphic design major provides students broad knowledge of the principles, theories and skills of visual communication. First-year courses focus on liberal arts, visual theories, materials and methods. Courses during the second and third year engage students in development within graphic design. The fourth year combines design integration with advanced study. Candidates may choose the BFA degree program with a rigorous study in graphic design or the BA degree program with intense study and a major or minor in another discipline.

BA Degree Requirements (64 credit hours)
ART 1601 First Year A&D Seminar
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design Foundations
DSGN 1101 Photography & Communication
ART xxx1 Print & Paper
ART xxx1 Painting or Watercolor
ART 2601 Art History 1
ART 2651 Non-Western Art
ART 2801 Book Arts
ART 4901 Senior Capstone 1
ART 4911 Senior Capstone 2

BFA Degree Requirements (73 credit hours)
ART 1601 First Year A&D Seminar
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design Foundations
DSGN 1101 Photography & Communication
ART xxx1 Print & Paper 1 or 2
ART xxx1 Painting or Watercolor
ART 2801 Book Arts
ART 2601 Art History 1
ART 2611 Art History 2
ART 4901 Senior Capstone in Design 1
ART 4911 Senior Capstone in Design 2
ART 4921 Internship

Other Required Courses
CAPR 1301 Intro to Public Relations

Studio Arts Major
The studio arts major integrates art and design courses with liberal arts studies. Candidates pursue one of two degree programs. The BA degree program is designed for intense study with the option of a major or minor in another discipline. The BFA degree program is a rigorous study in the visual arts; students pursuing this degree must select a 2D concentration, a 3D concentration or an option in pre-art therapy.

BA Degree Requirements (52 credit hours)
ART 1601 First Year A&D Seminar
ART 1651 Visual Literacy
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design
DSGN 1101 Photography & Communication
ART 2111 Life Drawing
ART 2401 Ceramics 1
ART 2601 Art History 1
ART 2651 Non-Western Art
ART 2801 Book Arts
ART 4901 Senior Capstone 1
ART 4911 Senior Capstone 2
Choose one:
ART 2201 Painting 1
ART 2251 Watercolor

Choose one:
ART 2501 Sculpture: Additive & Subtractive
ART 2551 Sculpture: Small Metals
ART 3501 Model Making & Casting
ART 3511 Sculpture: Installation

Choose one:
ART 3301 Print and Paper 1
ART 3311 Print and Paper 2

Choose one:
ART 4101 Advanced Illustration
ART 4111 Advanced Life Drawing
ART 4201 Advanced Painting
ART 4301 Advanced Print and Paper
ART 4401 Advanced Ceramics
ART 4501 Advanced Sculpture
ART 4701 Advanced Book Arts

BFA Degree Requirements (82 credit hours)
ART 1601 First Year A&D Seminar
ART 1651 Visual Literacy
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design
DSGN 1101 Photography & Communication
ART 2111 Life Drawing
ART 2401 Ceramics 1
ART 3401 Ceramics 2
ART 2601 Art History 1
ART 2611 Art History 2
ART 2851 Non-Western Art
ART 2801 Book Arts
ART 3301 Print and Paper 1
ART 3311 Print and Paper 2
ART 4901 Senior Capstone 1
ART 4911 Senior Capstone 2
ART 4921 Externship

Choose two:
ART 2201 Painting 1
ART 3401 Painting 2
ART 2251 Watercolor

Choose two:
ART 2501 Sculpture: Additive & Subtractive
ART 2551 Sculpture: Small Metals
ART 3501 Model Making & Casting
ART 3511 Sculpture: Installation

2D Concentration Students have the option of choosing an area of emphasis, such as illustration, painting or printmaking. Six courses (18 credits) in 2D media at the advanced level are required; certain 2D media courses may be repeated for credit.

Choose:
ART 2251 Watercolor
ART 4101 Advanced Illustration
ART 4111 Advanced Life Drawing
ART 4201 Advanced Painting
ART 4301 Advanced Print and Paper
ART 4701 Advanced Book Arts

3D Concentration Students have the option of choosing an area of emphasis, such as ceramics or sculpture. Six courses (18 credits) in 3D media at the 3000-level and above are required; certain 3D media courses may be repeated for credit.

Choose:
ART 3501 Model Making & Casting
ART 3511 Sculpture: Installation
ART 4401 Advanced Ceramics
ART 4501 Advanced Sculpture

Pre-Art Therapy Option Practitioners of art therapy help people to better understand themselves and their world. ONU’s pre-art therapy option prepares student to develop a professional portfolio that demonstrates mastery of skill and knowledge necessary to enter graduate school (Masters in art therapy). The option allows students the flexibility to minor in psychology.

PSYC 1001 Psychology
PSYC 2151 Development across the Lifespan
PSYC 2121 Psychology of Personality
PSYC 3121 Psychological Assessment
PSYC 4201 Abnormal Psychology
PSYC xxx1 Psychology elective
ART 4921 Externship (3 credits)

Minors
A minor is available only to non-art and design majors.

Art Minor
ART 1651 Visual Literacy
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
ART 1501 3D Design
2 art electives at the 2000 level or above

Design Minor
ART 1101 Visual Foundations 1
ART 1111 Visual Foundations 2
DSGN 1201 Introductory Visual Communication Design
DSGN 1301 Typography
DSGN 2601 Design Research Methods
2 design electives at the 2000 level or above

Subject - Art (ART)

1101 - Visual Foundations 1
3 Credits
Composition, perception and analysis of visual space through direct observation and the manipulation of elements and principles of design. Offered fall semester.

1111 - Visual Foundations 2
3 Credits
Drawing and design as a means of expression, invention and communication through interaction of perceptual skills, visual language, subject matter and color organization, phenomena, and interaction. Offered spring semester. Prerequisite(s): ART 1101.

1501 - 3-D Design
3 Credits
The visual language, methods and techniques of three-dimensional design. Emphasis on conceptual thinking skills. Offered spring semester.

1601 - First Year Seminar
1 Credit
Familiarization to areas of art and design research, scholarship, and study within visual experiences and across disciplines. Graded S/U. Offered fall semester.
1651 - Visual Literacy
3 Credits
Analysis into the theories, practices, techniques, language and media of the visual arts and design. Fundamentals of art historical study, styles and periods. Focus on major works from prehistoric world through contemporary issues to cultural and social contexts. Emphasis on identifying relationships between composition, form and content. Offered fall and spring semesters.

1981 - Special Topics in Art
1 to 3 Credits
Topics in art. Enrollment restricted to attendees of the Summer Honors Institute. Graded S/U. May repeat as topic varies. This course may be repeated 3 times.

1991 - Special Topics in Art and Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

2111 - Life Drawing
3 Credits
Composition, proportion, structure and form from direct observation of the human figure. Offered spring semester. Prerequisite(s): ART 1111.

2201 - Painting 1
3 Credits
Concepts and competencies of oil painting through composition and the creation of form via direct observation. Offered fall semester.

2211 - Painting 2
3 Credits
Creating and controlling visual space and form and their relationship to composition. Offered alternate spring semesters. Prerequisite(s): ART 2201.

2251 - Watercolor
3 Credits
Concepts, competencies and techniques of aqueous media through composition. Offered alternate spring semesters. This course may be repeated 2 times.

2401 - Ceramics 1
3 Credits
Composition and methods of forming clay objects using various hand building and wheel throwing techniques, including decorating, glazing and firing. Offered fall semester.

2411 - Ceramics 2
3 Credits
Advanced methods and techniques of forming clay objects; hand building, wheel throwing, glazing and firing. Offered spring semester. Prerequisite(s): ART 2401.

2501 - Sculpture: Additive & Subtractive
3 Credits
The composition and rendering of sculpture in clay, plaster, wood, and stone. Emphasis on technical skills and the organization of form and space. Offered alternate fall semesters.

2551 - Sculpture: Small Metals
3 Credits
The visual language, concepts, materials and technical skills of small-scale sculpture. Offered alternate spring semesters.

2601 - Art History 1
3 Credits
Western tradition of painting, sculpture and architecture from the Prehistoric era through the Renaissance. Offered fall semester.

2611 - Art History 2
3 Credits
Western tradition of painting, sculpture and architecture from the 16th century to contemporary. Offered spring semester.

2651 - Non-Western Art
3 Credits
Painting, sculpture and architecture beyond the Western tradition such as India, Southeast Asia, Africa, Japan, Korea, the Pacific area and the Americas. Offered alternate spring semesters. This course may be repeated 2 times.

2801 - Book Arts
3 Credits

2861 - The Art of Tea Pots
3 Credits
Extrdisciplinary seminar. Study of the impact of Japan's Seven Year War in Korea on the development of Japanese ceramics.

2991 - Special Topics in Art and Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

3301 - Print and Paper 1
3 Credits
Methods, techniques, and materials of the silkscreen print process on handmade paper. Offered alternate spring semesters.

3311 - Print and Paper 2
3 Credits
Methods, techniques, and materials of relief print processes on handmade paper. Offered alternate spring semesters.

3501 - Sculpture: Mold Making & Casting
3 Credits
The composition and methods of plaster molds for reproduction and altering of direct cast ceramics and in lost wax casting of bronze. Emphasis on organizational problems of form and space. Offered alternate spring semesters.

3511 - Sculpture: Installation
3 Credits
Design of sculptural environments and site-specific work. Offered alternate fall semesters.

3991 - Special Topics in Art and Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

4101 - Advanced Illustration
3 Credits
Innovative visual solutions in illustration and the mastery of advanced techniques through creative and professional work habits. Offered spring semester. Prerequisite(s): ART 1111. This course may be repeated 2 times.

4111 - Advanced Life Drawing
3 Credits
Structure of the human body with the aim of producing drawings of greater structural and visual integrity. Offered spring semester. Prerequisite(s): ART 2111. This course may be repeated 2 times.
4201 - Advanced Painting
3 Credits
Creating and controlling pictorial space and form and their relationship to concept and composition. Offered spring semester. Prerequisite(s): ART 2211. This course may be repeated 2 times.

4301 - Advanced Print and Paper
3 Credits
Self-directed study in printmaking and papermaking processes. Offered spring semester. Prerequisite(s): ART 3301 or ART 3311. This course may be repeated 2 times.

4401 - Advanced Ceramics
3 Credits
Directed study. Offered fall and spring semesters. Prerequisite(s): ART 3501 or ART 3511. This course may be repeated 2 times.

4501 - Advanced Sculpture
3 Credits
Directed study. Offered fall and spring semesters. Prerequisite(s): ART 3501 or ART 3511. This course may be repeated 2 times.

4691 - Seminar in Art and Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 4 times.

4801 - Advanced Book Arts
3 Credits
Relationship between the book, text and image through narrative, pacing, and techniques in illustration, drawing and printmaking. Traditional and non-traditional applications utilized. May repeat to 6 credits. Offered spring semester. Prerequisite(s): ART 2801. This course may be repeated 2 times.

4901 - Senior Capstone in Art 1
3 Credits
Yearlong investigative project that synthesizes liberal arts and major learning objectives. Offered fall semester.

4911 - Senior Capstone in Art 2
3 Credits
Culmination and presentation of demonstrated knowledge of practices, methods, theories, concepts, and issues. Offered spring semester. Prerequisite(s): ART 2801. This course may be repeated 2 times.

4921 - Externship
1 to 3 Credits
Supervised field experience in an approved studio, agency, firm, department, museum, university, arts organization, or non-profit. International or domestic study may count toward requirement with department authorization. Approval of department required prior to registration. Formal presentation to department required after completion. Offered fall and spring semesters. This course is repeatable for a total of 11 hours.

4981 - Independent Study in Art
1 to 3 Credits
May repeat as topic varies. Offered fall and spring semesters. This course is repeatable.

4991 - Special Topics in Art and Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

Subject - Design (DSGN)

1101 - Photography and Communication
3 Credits
Communication in the context of image creation; composition and technical skills through aesthetics and style. Methods in concept, image and form development, presentation formats, sequence and narrative. Offered spring semester.

1201 - Introductory Visual Communication Design
3 Credits
Basic methods, processes, language, composition and theory of working in two-dimensional communication design. Emphasis on problem analysis, creative concept development, analytical and technical skills. Offered fall semester.

1301 - Typography
3 Credits
Examines typographic changes brought about through cultural, political and sociological influences; language theories; and technological development. Integrates lessons from the past with contemporary theory and technology. Lectures based on four language components: letter and word, sentence and meaning, language and structure, text and textuality. Offered fall semester.

1981 - Special Topics in Design
1 Credit
Topics in design. Enrollment restricted to attendees of the Summer Honors Institute. Graded S/U. May repeat as topic varies. This course may be repeated 3 times.

1991 - Special Topics in Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

2101 - Advanced Photography and Communication
3 Credits
Visual language in context of form, content and meaning; aesthetics and style; sequence and narrative. May repeat to 6 credits. Offered spring semester. Prerequisite(s): DSGN 1101. This course may be repeated 1 time.

2401 - Narrative Structures
3 Credits
Design thinking and the exploration of the nature and practice of visual communication as a story-telling and framing activity in print media. Emphasis on research, concept development and technical skills. Offered spring semester. Prerequisite(s): DSGN 1101.

2601 - Design Research Methods
3 Credits
Research design, gathering, analysis, application and presentation of information for graphic designers. Emphasis on role of research in problem solving process, from initial client intake, to problem definition, design requirements, screening, selection and refinement, to implementation and postproject evaluation. Offered alternate fall semesters.

2651 - History of Graphic Design
3 Credits
Events, ideas, movements, artifacts and designers that have historical significance and influence on contemporary graphic design and the profession. Exploration of the role of design in society and the nature, influence and impact of changing design methods, materials, technologies, theories and values. Offered alternate fall semesters.
2801 - Design for Social Change
3 Credits
Design thinking and the examination of historical, cultural, political or environmental relationships as it pertains to the ways in which design can improve our world. May repeat as topic varies. Offered alternate spring semesters. This course may be repeated 2 times.

2991 - Special Topics in Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

3401 - Packaging and Identity Design
3 Credits
Investigation of comprehensive applied problems in visual communication addressing design identity, branding programs and consumer-oriented design. Offered fall semester. Prerequisite(s): DSGN 1301.

3501 - Persuasive Design
3 Credits
Examination of form, content and context that shape persuasive communication including commercial, political and social contexts; persuasive strategies, critical techniques and ethical issues in shaping design. Offered spring semester. Prerequisite(s): DSGN 2401.

3551 - Advertising Design 1
3 Credits
Form and content that shape communication branding strategies in advertising design. Examination of concept development, the psychology of effective visual messages and the creative, intelligent, emotional and persuasive writing/images of ad campaigns. Offered alternate spring semesters. Prerequisite(s): DSGN 2401.

3561 - Advertising Design 2
3 Credits
Design thinking of integrated communications into media, three-dimensional artifacts and campaigns as an extension of brand experience and strategic solutions. Offered alternate spring semesters. Prerequisite(s): DSGN 3551.

3701 - Visual Interface Design
3 Credits
Communication design of visual interfaces and the analytical behavioral, cognitive and linguistic dimensions of designing for dynamic information environments. May repeat to 6 credits. Offered fall semester. Prerequisite(s): DSGN 1301. This course is repeatable for a total of 3 hours.

3751 - Interactive Design and Identity
3 Credits
Design thinking and processes in the context of e-commerce, branding and identity, usability and hierarchical form. May repeat to 6 credits. Offered spring semester. Prerequisite(s): DSGN 1301. This course is repeatable for a total of 3 hours.

3991 - Special Topics in Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

4201 - Advanced Visual Communication Design
3 Credits
Design thinking and processes in the context of transformation design; interdisciplinary design issues addressed as a means of participation, response, adaptation and innovation beyond traditional design solutions to create fundamental change. May repeat as topic varies. Offered spring semester. Prerequisite(s): DSGN 3501. This course may be repeated 2 times.

4501 - Professional Practices in Design
3 Credits
In-house design and project management issues with emphasis on collaborative communication problem-solving, designer/client relationships, research strategies, legal issues, production methods and ethics in design. May repeat to 6 credits. Offered fall semester. This course is repeatable for a total of 3 hours.

4691 - Seminar in Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 4 times.

4901 - Senior Capstone in Design 1
3 Credits
Yearlong investigative project that synthesizes liberal arts and departments learning objectives. Offered fall semester.

4911 - Senior Capstone in Design 2
3 Credits
Culmination and presentation of demonstrated knowledge of practices, methods, theories, concepts, and issues. Offered spring semester. Prerequisite(s): DSGN 4901 Minimum Grade of C.

4921 - Internship
1 to 3 Credits
Supervised field experience in an approved commercial studio, agency, firm, department, museum, gallery, arts organization, or non-profit. Approval of department required prior to registration. Formal presentation to department required after completion. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

4981 - Independent Study in Design
1 to 3 Credits
May repeat as topic varies. This course is repeatable.

4991 - Special Topics in Design
1 to 3 Credits
May repeat as topic varies. This course may be repeated 2 times.

DEPARTMENT OF BIOLOGICAL AND ALLIED HEALTH SCIENCES

Professors Anderson, Aulthouse, Keiser (Chair), Verb, Woodley, Young; Associate Professors De Luca, Mager, Sanford, Suniga; Assistant Professors Anghelescu, Keas, McAfee, Riley; Visiting Assistant Professors Motz, C. Young; Visiting Instructor: Hyde, Clinical Laboratory Science Program Director Walden; Director of Laboratories MaGaw; Laboratory Technician Brachok; Adjunct Faculty Carmichael, Cordoba, Decanio, DeLong, Enders, Francis, Hoagstrom, Hussain, Johnson, Kuk, Marshall, Nivar, Ramos, Reboulet, Robinson, Sargeant, Sherrick, Sreenan, Westrick, Wiss.

Mission Statement
The department provides a dynamic educational environment in which students, learn, investigate, and apply knowledge in their chosen discipline within the biological and allied health sciences, preparing them to become ethical and competent professionals.

Vision Statement
The department is committed to the continuous integration of academic excellence with professional and personal development of students. Accordingly, the faculty will foster and empower student achievement through scholarship and participation in the classroom and experiential activities using innovative approaches, which will prepare them to become accomplished professionals.
Overview
The department is committed to the continuous integration of academic excellence with professional and personal development. Accordingly, the faculty foster and empower student achievement through scholarship and participation in the classroom and experiential activities using innovative approaches that will prepare students to become accomplished professionals.

Accreditation
The Life Sciences and Integrated Science licensure programs are approved by the state of Ohio. The Teacher Education Program is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Majors, Minors and Degrees Offered
Biology Major (BS)
Environmental Studies and Field Biology Major (BS)
Forensic Biology Major (BS)
Molecular Biology Major (BS)
Clinical Laboratory Science Major (BSCLS)*
Biology Minor
Biomedical Sciences Minor
Environmental Studies Minor
Public Health Minor

Certification and Licensure Offered
Clinical Laboratory Science Post-Baccalaureate Certificate*
Adolescent Young Adult (7-12) Integrated Sciences Licensure
Adolescent Young Adult (7-12) Life Sciences Licensure

*Information about ONU’s West Central Ohio Clinical Laboratory Science Program can be found on pages 43-45.

Special Programs
Pre-professional Medical Sciences
Qualified students can pursue pre-professional education in the following medical science fields: pre-dentistry, pre-medicine, pre-occupational therapy, pre-optometry, pre-physical therapy, pre-physician assistant and pre-veterinary medicine.

Dual Degrees Program
The pharmacy/biology dual degrees program is a six-year curriculum that provides for education, practice and research experiences in both pharmacy and biology. The Doctor of Pharmacy degree and the biology degree are awarded upon completion of the program of study. A more detailed description about this program is available from the Department of Biological and Allied Health Sciences and from the College of Pharmacy. This program is available to pharmacy (Pharm.D) students.

Internships
BIOL 4811, 4821, 4831 and 4901 (summer only)
The 400-hour senior status internship provides an off-campus practical experience in areas of the biological sciences. Examples include toxic waste management, environmental consulting, zoo animal care and management, wildlife and fisheries management, laboratory research, cardiopulmonary technology, state and federal forensic laboratories, hospital and technical health programs. Before embarking on an internship, students must complete at least three years of course work in biology and related areas. The internship must be approved by the faculty of the department prior to registration. Internships credit hours are from 4 to 12, only 4 credit hours count towards the major.

Cooperative Education Experience
BIOL 3401
CO-OP students earn professional experience in a biologically- or environmentally-related occupation with a governmental, consulting or industrial entity interacting with professional scientists in an employer-employee context. The normal undergraduate career of students choosing the CO-OP program is five years rather than the four. CO-OP program students may spend a total of two semesters of employee/intern activity with the CO-OP agency. These CO-OP activities will be interspersed with regular academic terms on campus enrolled as full-time students. Junior status and approval of the department chair is required for participation in the CO-OP program.

Study Abroad
The department has specific study abroad agreements with the Cuba Program (University of Havana), the University of Ulster (Ireland), and the University of Eastern Karelia (Joensuu, Finland). Others can be arranged.

Off-campus Facilities
The department maintains the 300-acre Tidd-Oakes Wetland Restoration Project bordering the Scioto River and Scioto Marsh twelve miles from the campus. The ONU Metzer Nature Center, a 70-acre property in Tuscarawas County, OH, serves as a biology field station. The facility is located near Ragersville and includes a century-old farm house and a modern 8,500 square foot academic residence center. Laboratories and room and board facilities are part of the complex. The hills, valleys, woods, fields, stream and pond provide an excellent opportunity for teaching, study and research in non-glaciated Ohio.

Major Course Requirements
All required courses in the major subject area must be completed with a grade of “C” or higher. All students must show proof of membership in a professional organization each year. A major field test (MFT) is required of all majors during their senior year. Credit will not be granted for both BIOL 2311 and 3241 or 3311 or for BIOL 2311 and 3251 or 3321.

BS Degree Requirements (47-49 credit hours)
BIOL 1951 Biology Orientation (1)
BIOL 1311 Biology 1: Cells and Molecules (4)
BIOL 1321 Biology 2: Organismal Biology (4)
BIOL 2001 Biology 3: Diversity of Life (4)
BIOL 4921 Capstone Experience* (1)
BIOL 4941 Capstone Seminar (1)

Select eighteen (18) credit hours of biology electives from 2000- to 4000 level courses.

Other required courses
Select two non-remedial courses in chemistry totaling eight to ten (8-10) credit hours.

Select two non-remedial courses in mathematics and/or statistics totaling six (6) credit hours.

*“Capstone Experience” must be approved by the Department and may be an off-campus research (REU) experience, internship, study abroad, co-op, or other approved experience.

Adolescent Young Adult (7-12) Life Sciences Licensure
This option is available to students majoring in biology. All courses required for the licensure must be completed with a grade of “C” or higher.

Additional requirements (47 credit hours)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience I (1)
EDUC 1521 Five-Day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4511 Integrated Science Methods (3)
EDUC 4651 Science Education Portfolio (0)
EDUC 4721 Student Teaching Adolescent Young Adults (12)

BS Degree Requirements
completed with a grade of "C" or higher.

Adolescent Young Adult (7-12) Integrated Sciences Licensure

Environmental Studies and Field Biology Major

BS Degree Requirements (63-65 credit hours)

BIOL 1951 Biology Orientation (1)
BIOL 1311 Biology 1: Cells and Molecules (4)
BIOL 1321 Biology 2: Organismal Biology (4)
BIOL 2001 Biology 3: Diversity of Life (4)
BIOL 2131 Natural History (2)
BIOL 2511 Ecology (4)
BIOL 4921 Capstone Experience² (1)
BIOL 4941 Capstone Seminar (1)

Field Semester
The field semester consists of the following five courses taken concurrently by the student, in the fall semester of the junior year. Failure of any of these courses may be remedied by passing course(s) approved by the department.

BIOL 3661 Environmental Research Methods (3)
BIOL 3671 Field Botany (3)
BIOL 3681 Ichthyology (3)
BIOL 3691 Field Invertebrate Biology (3)
BIOL 3701 Marine Biology (3)

Plus
Other required courses
PHIL 3101 Environmental Ethics (3)
PLSC 3061 Environmental Law (3)
GEOG 2481 Intro to G.I.S. (3)

Select two non-remedial courses in chemistry totaling eight to ten (8-10) credit hours.

Plus
Select two non-remedial courses in mathematics and/or statistics totaling six (6) credit hours.

Select one non-remedial course in physics with a lab or complete the two following courses.

GEOL 2801 Geology (3)
GEOL 2811 Lab for Geology 2801 (1)

²"Capstone Seminar" must be approved by the department and may be off-campus REU research experience, internship, study abroad, co-op, or other approved experience.

Molecular Biology Major

The molecular biology major provides the necessary training for students to pursue careers in the biotechnology industry and research in cell and molecular biology. The program offers excellent preparation for graduate and medical school. All required courses must be completed with a grade of "C" or higher.

BS Degree Requirements (70 credit hours)

BIOL 1951 Biology Orientation (1)
BIOL 1311 Biology 1: Cells and Molecules (4)
BIOL 1321 Biology 2: Organismal Biology(4)
BIOL 2001 Biology 3: Diversity of Life (4)
BIOL 2101 Genetics (4)
BIOL 2171 Molecular Biology (3)
BIOL 3571 Forensics DNA Analysis (4)
BIOL 3581 Forensic Entomology (3)
BIOL 4831 Forensic Biology Internship¹ (4)
BIOL 4941 Capstone Seminar (1)

¹Forensic Biology Internship along with BIOL 4941 fulfills senior capstone requirement.

Other required courses
CHEM 1711 General Chemistry 1 (5)
CHEM 1721 General Chemistry 2 (5)
CHEM 2311 Analytical Chemistry 1 (4)
CHEM 2511 Organic Chemistry 1 (3)
CHEM 2521 Organic Chemistry 2 (3)
CHEM 2551 Organic Chemistry Lab 1 (1)
CHEM 2561 Organic Chemistry Lab 2 (1)
CHEM 3111 Biochemistry (3)
CHEM 3151 Biochemistry Lab (1)
COMM 2111 Public Speaking (3)
MATH 1541 Calculus for Life Sciences (3)
PHYS 2111 Physics 1 (3)
PHYS 2121 Physics 2 (3)
PHYS 2341 Physics Lab 1 (1)
PHYS 2351 Physics Lab 2 (1)
PLSC 1211 Intro to Criminal Justice (3)
SOC 2611 Criminology (3)
STAT 1561 Statistics for Professionals 1 (3)

²Capstone Experience must be a research experience approved by the department.

Other required courses
CHEM 1711 General Chemistry 1 (5)
CHEM 1721 General Chemistry 2 (5)
CHEM 2311 Analytical Chemistry 1 (4)
CHEM 2511 Organic Chemistry 1 (3)
CHEM 2521 Organic Chemistry 2 (3)
CHEM 2541 Organic Chemistry Lab 1 (1)
CHEM 2551 Organic Chemistry Lab 2 (1)
CHEM 3111 Biochemistry (3)
CHEM 3151 Biochemistry Lab (1)
BIOL 3251
BIOL 3241
BIOL 2311

Select one of the following two-course sequences:

BIOL 1341
BIOL 1321
BIOL 1311

Biomedical Sciences Minor (22-24 credit hours)

BIOL 1311  Biology: Cells and Molecules (4)
BIOL 1321  Biology: Organismal Biology (4)
BIOL 1341  Human Anatomy and Histology (4)

Select one of the following two-course sequences:

BIOL 2311  Anatomy and Physiology 1 (3)
BIOL 2321  Anatomy and Physiology 2 (3)
or
BIOL 3241  Medical Physiology 1 (4)
BIOL 3251  Medical Physiology 2 (4)

Plus
Select two non-remedial courses in mathematics and/or statistics totaling six (6) credit hours.

Plus
Select two non-remedial courses in physics with a lab totaling eight (8) credit hours.

Business Option
A business option with a management emphasis is available for any student majoring in biology or environmental and field biology or in the clinical laboratory sciences program. See page 31 for further details.

Criminal Justice (Forensics) Option (28 cr. hrs.)
The Criminal Justice (Forensic Science) Option is for students majoring in biology or molecular biology. Students will deal with various aspects of the scientific side of crime scenes and investigations. The list of courses provides the student with the minimal and required course work to fulfill the guidelines set forth by the FBI to become a DNA analyst in Forensic DNA and Convicted Offender Laboratories. The Criminal Justice (Forensic) Option is not available to students with a major in Forensic Biology.

Additional Requirements (38 credit hours)

BIOL 2101  Genetics (4)
BIOL 2171  Molecular (4)
BIOL 2191  Forensic Biology 1
BIOL 3521  Cell and Molecular Biology Lab (2)

Other required courses

CHEM 1711  General Chemistry 1 (5)
CHEM 1721  General Chemistry 2 (5)
CHEM 2511  Organic Chemistry 1 (3)
CHEM 2521  Organic Chemistry 2 (3)
CHEM 2551  Organic Chemistry Lab 1 (1)
CHEM 2561  Organic Chemistry Lab 2 (1)
CHEM 3111  Biochemistry (3)
CHEM 3151  Biochemistry Lab (1)
PLSC 1211  Introduction to Criminal Justice (3)

Minor Course Requirements

Students majoring in Biology that choose to add a minor within the department (i.e. Environmental Studies) must take an additional 8 hours in BIOL courses beyond the requirements of the minor.

Students in majors outside of the Department of Biological and Allied Health Sciences may complete two minors from within the department by taking all required courses for each of the minors plus eight additional hours of BIOL courses.

Biology Minor (20 credit hours)
The minor in biology is available only to students in majors outside of the Department of Biological and Allied Health Sciences.

BIOL 1311  Biology 1: Cells and Molecules (4)
BIOL 1321  Biology 2: Organismal Biology (4)
BIOL 2001  Biology 3: Diversity of Life (4)

Select eight (8) credit hours of biology electives from 2000- to 4000 level courses.

Biomedical Sciences Minor (22-24 credit hours)

BIOL 1311  Biology 1: Cells and Molecules (4)
BIOL 1321  Biology 2: Organismal Biology (4)
BIOL 1341  Human Anatomy and Histology (4)

Select one of the following two-course sequences:

BIOL 2311  Anatomy and Physiology 1 (3)
BIOL 2321  Anatomy and Physiology 2 (3)
or
BIOL 3241  Medical Physiology 1 (4)
BIOL 3251  Medical Physiology 2 (4)

Environmental Studies Minor (23 credit hours)

Students majoring in environmental and field biology may not minor in environmental studies.

BiOL 1311  Biology 1: Cells and Molecules (4)
BIOL 1321  Biology 2: Organismal Biology (4)
BIOL 2001  Biology 3: Diversity of Life (4)
BIOL 2011  Environmental Issues (3)
BIOL 2131  Natural History (2)
PHIL 3101  Environmental Ethics (3)
PLSC 3061  Environmental Law (3)

Public Health Minor (31-32 credit hours)
The minor in public health is designed to prepare students for careers in health education, disease prevention and control and health promotion by acquainting them with major public health issues.

One year of introductory biology (8)
BIOL 2011  Environmental Issues (4)
BIOL 2101  Genetics (4)
BIOL 2551  Epidemiology (3)
One microbiology course (3/4)
PHPR 2511  Preventive Medicine (3)
STAT 1561  Statistics for Professional 1 (3)

Select two courses from this list:

BIOL 2511  Ecology (4)
BIOL 3011  Developmental Anatomy (3)
BIOL 3051  Environmental Toxicology(3)
BIOL 3151  Medical Terminology (1)
BIOL 3541  Bioinformatics (4)
BIOL 3621  Parasitology (3)
CE 3631  Water Resources (3)
CE 3711  Urban Planning (3)
GEOG 2481  Intro to G.I.S. (3)
GEOG 2261  World Geography (3)
HLED 1101  Personal Health Problems (3)
HLED 1201  School & Community Health (2)
HLED 2101  AIDS and other STDs (3)
PHBS 3501  Nutrition (2)
PHBS 3751  Immunology (3)
PHBU 4121  Health Care Management (3)
PHIL 1021  Philosophy of Science (3)
PHIL 1051  Ethics, Justice and Law (3)
PHIL 2401  Professional Ethics (3)
PHIL 3101  Environmental Ethics (3)
PLSC 3661  Public Administration (3)
LAW 1582  Law & Medical Ethics (3)
STAT 2561  Statistics for Professional 2 (3)

West Central Ohio Clinical Laboratory Science Program

The West Central Ohio Clinical Laboratory Science (WCOCLS) Program is a full-year (12 months) clinical training experience for those pursuing the BSCLS degree or the post-baccalaureate certificate. During the first two semesters, students complete didactic coursework in clinical laboratory science theory and practice, hematology, clinical chemistry, clinical microbiology, clinical immunology, immunohematology, biological fluids, professional practice and development. The students complete their last two semester of clinical coursework at an assigned clinical affiliate that may include Lima Memorial Hospital.

Graduates and those who complete the certificate may pursue career opportunities in various laboratory settings including clinical, industrial and public health or choose to continue their education in graduate school.

Mission Statement

The mission of the WCOCLS Program is to educate students in the clinical laboratory sciences, preparing them to practice as ethical and competent professionals and enabling them to meet whatever job-related challenges arise now and in the future.
Admission Requirements

The WCOCLS Program has an enrollment capacity of eight students per year. The start date for the program is the first day of summer term. Prospective students may submit applications at any time but not later than March 1 of the year for which an applicant seeks program admission. Applicants completing prerequisite coursework at the time of application may be considered for admission but, if selected (provisional admit), will be required to submit documentation (transcript or original grade report) of successful completion of the course(s) prior to the first day of class. Applicants selected for admission for a given year are notified by the Program Director by April 1 of that year. Admission to the program is competitive, based on enrollment capacity and admission standards.

At a minimum, BSCLS applicants to the WCOCLS Program must do the following:

- Submit a completed application for admission (only completed applications are considered) by March 1
- Satisfy all applicable university and college requirements for graduation
- Satisfy all applicable degree requirements excluding CLS coursework
- Complete all prerequisite coursework with a minimum of a “C” in each course
- Demonstrate a minimum of 2.80 GPA with a minimum 3.00 science (biology, chemistry, mathematics, physics) GPA on a 4.00 scale
- Demonstrate comprehension and commitment to CLS professionalism

At a minimum, non-degree seeking (Post-Baccalaureate Certificate) applicants to the WCOCLS Program must meet the following requirements:

- Submit a completed application for admission (only completed applications are considered) by March 1
- Satisfy all applicable university and college requirements for admission as a non-degree seeking student
- Possess a baccalaureate degree from an accredited college or university
- Have completed 16 semester hours (or equivalent quarter hours) of biology coursework that must include a microbiology course with laboratory, human anatomy and physiology, genetics and molecular biology
- Have completed 16 semester hours (or equivalent quarter hours) of chemistry including biochemistry or organic chemistry
- Have completed 5 semester hours (or equivalent quarter hours) of college-level mathematics including one course in statistics
- Demonstrate a minimum 2.80 cumulative GPA with a minimum 3.00 science (biology, chemistry, mathematics, physics) GPA on a 4.00 scale
- Demonstrate comprehension and commitment to CLS professionalism

Application packets are available from the WCOCLS Program Office, Meyer Hall 166.

Clinical Laboratory Science Major

The BSCLS degree coursework centers on student learning and professional development using a community-partnered curriculum. Students are expected to complete all degree requirements including (a) a minimum of 35 semester hours of approved general education coursework, (b) a minimum of 37 semester hours of biology prerequisites, (c) a minimum of 18 semester hours of chemistry prerequisites, (d) participation in the college assessment program, and (e) a minimum of 51 semester hours of clinical laboratory science core coursework. Students are encouraged to include recommended science electives as time and scheduling permit. The last year of study requires that students apply for admission to and complete the clinical training program. Students admitted to the program continue their didactic coursework in the Department of Biological and Allied Health Sciences and complete clinical training at an area clinical affiliate that may include Lima Memorial Hospital. Full-time students can complete the degree in nine semesters (i.e. four years plus one summer).

Students who successfully complete all degree requirements are awarded a BS in Clinical Laboratory Science and are eligible to see professional certification from the American Society for Clinical Pathology (ASCP).

Major Course Requirements

Students are required to have a minimum 2.00 cumulative GPA in all general education, biology core, and chemistry courses. All CLSS courses must be completed with a grade of “C” or higher.

BSCLS Degree Requirements (104 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1951</td>
<td>Biology Orientation</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1311</td>
<td>Biology 1: Cells and Molecules</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1321</td>
<td>Biology 2: Organismal Biology</td>
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<td>BIOL 2101</td>
<td>Introductory Genetics</td>
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<tr>
<td>BIOL 2311</td>
<td>Anatomy and Physiology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2312</td>
<td>Anatomy and Physiology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3031</td>
<td>Histology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 3111</td>
<td>Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 3431</td>
<td>Histological Techniques</td>
<td>3</td>
</tr>
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<td>BIOL 3521</td>
<td>Cell and Molecular Biology Lab</td>
<td>2</td>
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<tr>
<td>BIOL 2171</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3511</td>
<td>Cell Biology</td>
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</table>

CLSS core courses

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 4621</td>
<td>Biological Fluids</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4631</td>
<td>Clinical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4641</td>
<td>Hematology and Hemostasis</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 4671</td>
<td>Diagnostic Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4601</td>
<td>Foundations of Clinical laboratory Science</td>
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</tr>
<tr>
<td>CLSS 4611</td>
<td>Professional Practice and Development</td>
<td>3</td>
</tr>
<tr>
<td>CLSS 4651</td>
<td>Blood Banking and Transfusion Science</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4661</td>
<td>Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4681</td>
<td>Clinical Laboratory Practice</td>
<td>2</td>
</tr>
<tr>
<td>CLSS 4691</td>
<td>Clinical Hematology Practice</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4701</td>
<td>Blood Bank Practice</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4711</td>
<td>Clinical Chemistry Practice</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4721</td>
<td>Clinical Microbiology Practice</td>
<td>4</td>
</tr>
<tr>
<td>CLSS 4731</td>
<td>Immunology and Infectious Disease Practice</td>
<td>2</td>
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<tr>
<td>CLSS 4921</td>
<td>Capstone Experience</td>
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<tr>
<td>CLSS 4941</td>
<td>Capstone Seminar</td>
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</table>

Other required courses

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 1711</td>
<td>General Chemistry 1</td>
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<tr>
<td>CHEM 1721</td>
<td>General Chemistry 2</td>
<td>5</td>
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<td>CHEM 2511</td>
<td>Organic Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2521</td>
<td>Organic Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2551</td>
<td>Organic Chemistry Lab 1</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2561</td>
<td>Organic Chemistry Lab 2</td>
<td>1</td>
</tr>
</tbody>
</table>

1 CLS core courses are the requirement for the Post-Baccalaureate Certificate in CLS.

Essential Functions

Essential functions are nonacademic standards that all WCOCLS Program students must master and execute successfully to participate in and complete the program without compromising the safety and well-being of students, instructors, and patients and the public. The WCOCLS program essential functions require that a student do the following:

1. Identify and differentiate physical features, including color, shape and size of microscopically viewed materials.
2. Identify, discriminate and characterize the physical attributes (e.g., color, odor, consistency) of biological samples, reagents and end points of chemical reactions.
essential functions must be completed with a grade of “C” or higher.

1. Demonstrate dexterity to perform analyses in accordance with established laboratory protocols and to manipulate laboratory utensils, tools, equipment and instrumentation, including computer touch-screens, keyboards and handheld calculators.
2. Engage in a sustained physical activity that may require sitting, standing or walking for extended periods of time.
3. Practice laboratory safety and respond to emergent situations in accordance with established guidelines to minimize harm and danger to self and others.
4. Exercise range of motion and reach to work in laboratory facilities, to assist patients who may be seated, prone or standing and to manipulate sample containers, lab utensils, tools, equipment and instrumentation without threatening harm or violating safety protocols.
5. Use available modes of transportation to travel between the university campus and off-campus training sites.
6. Collect specimens in a safe, timely and professional manner without compromising sample integrity or causing the patient undue pain and suffering.
7. Ask appropriate scientific questions and demonstrate ability to evaluate and draw conclusions.
8. Organize and communicate results obtained by observation and experimentation in oral and written form under conditions of stress or calm and within given time constraints.
9. Identify and employ strategies that minimize miscommunication.
10. Adhere to established policies to safeguard confidentiality of information communicated by non-electronic and electronic means.
11. Perform multiple tasks with focused attention on safety, accuracy and quality.
12. Communicate tactfully, respectfully and regardless of the intended audience’s race, color, creed, religion, sex, age, handicap, veteran status or national origin.
13. At all times and in all circumstances, maintain a professional demeanor and perform every task assignment with focused attention on safety, accuracy and quality.
14. Speak, act and perform assigned tasks in an ethical manner.
15. Recognize and work within the limits of personal abilities, ask for help when required and actively participate in opportunities to improve.
16. Communicate tactfully, respectfully and regardless of the intended audience’s race, color, creed, religion, sex, age, handicap, veteran status or national origin.
17. At all times and in all circumstances, maintain a professional demeanor and perform every task assignment with focused attention on safety, accuracy and quality.
18. Speak, act and perform assigned tasks in an ethical manner.
19. Recognize and work within the limits of personal abilities, ask for help when required and actively participate in opportunities to improve.
20. Engage in actions that support team workmanship and minimize conflict.
21. Work collaboratively and independently, demonstrating knowledge and mastery of skills when speaking, writing or taking examinations.

Clinical Laboratory Science Post-Baccalaureate Certificate

The ONU post-baccalaureate certificate in CLS focuses on educating academically qualified individuals in the clinical laboratory sciences using a community-partnered curriculum. Specifically, students must complete a minimum of 51 semester hours of clinical laboratory science core coursework including the supervised applied clinical experience.

Post-Baccalaureate Certificate Requirements

See the list of CLS core courses on page 44. All CLS core courses must be completed with a grade of “C” or higher.

Essential Functions

See the list of Essential Functions on page 44-45.

Subject - Biological Sciences (BIOL)

1031 - Life and Earth Sciences for Early and Middle Childhood Education Majors
3 Credits
Diversity, evolution, ecology, cell biology, inheritance and earth science as they affect and have affected life on earth. For early childhood and middle childhood majors only. A Nature Center use fee is charged. DOES NOT SATISFY ANY REQUIREMENTS FOR THE MAJOR IN BIOLOGY, CLINICAL LABORATORY SCIENCE, MOLECULAR BIOLOGY. Formerly BIOL 103. Offered fall semester.

1101 - Principles and Concepts of Human Biology
3 Credits
This course is designed to take the basic principles of cell structure and function and incorporate them into a working knowledge of the organ systems of the human body by using hands-on experiments and laboratory exercises to reinforce concepts presented in lecture. Formerly BIOL 110. Open to NURS and PHBU only. Offered fall semester.

1201 - Introductory Biology
4 Credits
An introduction to the concepts underlying the structure and function of cells including their organization, chemical foundations, metabolism, and the principles and mechanisms of heredity and gene expression. Laboratory activities emphasize the scientific method in exploring these topics. For NON-MAJORS. Offered fall semester.

1311 - Biology 1: Cells and Molecules
4 Credits
An introduction to the concepts underlying the structure and function of cells including their organization, chemical foundations, metabolism, and the principles and mechanisms of heredity and gene expression. Laboratory activities emphasize the scientific method in exploring these topics. Offered fall semester.

1321 - Biology 2: Organismal Biology
4 Credits
Comprehensive integrated study of plant and animal anatomy and physiology focusing on the major systems. Corresponding inquiry-based laboratories complement the lecture. Offered spring semester. Prerequisite(s): BIOL 1311.

1341 - Human Anatomy and Histology
3 Credits
Basic anatomy of human tissues and organ systems at the gross and microscopic levels. Offered spring semester. Prerequisite(s): BIOL 1311 or BIOL 1201. Corequisite(s): BIOL 1361.

1361 - Lab for Human Anatomy and Histology
1 Credit
Lab for BIOL 1341. Human systems studied using cat dissection, radiographs, anatomical models and histological slides. Offered spring semester. Prerequisite(s): BIOL 1311 or BIOL 1201. Corequisite(s): BIOL 1341.

1911 - Summer Honors Institute - Special Topics
1 Credit
Topics in Biological and Allied Health Sciences field. Enrollment is restricted to attendees of the Summer Honors Institute. May be repeated as the topic varies. Graded S/U. This course is repeatable.

1951 - Biology Orientation
1 Credit
Presentations and discussions relating to adjustment and requirements of academic life within the University, College and the Department of Biological & Allied Health Sciences. Graded S/U. Offered spring semester.

2001 - Biology 3: Diversity of Life
4 Credits
Investigations of ecological and evolutionary processes, biodiversity, phylogenetic relationships, and paleogeography. Offered fall semester. Prerequisite(s): BIOL 1321

BIOLOGICAL & ALLIED HEALTH SCIENCES
2011 - Environmental Issues
3 Credits
The interaction of humans and their surroundings with an emphasis on the problems arising from increasing human population, pollution, and resource use. Offered fall and spring semesters.

2041 - Systematic Plant Survey
3 Credits
The phylogeny, classification, morphology, and development of selected plant and algal taxa. A Nature Center use fee is charged. Offered alternate fall semesters. Prerequisite(s): BIOL 2001.

2101 - Genetics
4 Credits
Cytogenetics, Mendelian, molecular, and population genetics. Molecular genetics has an emphasis on biotechnology. Labs are paper and computer based. Emphasis on human genetics. Offered fall semester. Prerequisite(s): BIOL 1311 and BIOL 1321.

2131 - Natural History
2 Credits
The recognition, identification, and understanding of local biotic communities and their inhabitants. Field study is emphasized. A Nature Center fee and lab fee are charged. Offered spring semester.

2151 - Microbiology for Nurses
3 Credits
The characteristics and control of microorganisms related to human infectious disease. Enrollment restricted to Nursing majors. Offered spring semester. Prerequisite(s): BIOL 2311 or BIOL 231. Corequisite(s): BIOL 2232.

2171 - Molecular Biology
3 Credits
Structure and function of DNA, RNA and Proteins. Transcription, gene regulation, mobile DNA, and molecular evolution. On each topic prokaryotes and eukaryotes are compared. Lab is focused on molecular techniques. A lab fee is charged. Offered spring semesters.

2191 - Forensic Biology 1
4 Credits
Introduction and Investigating the Crime Scene, Identifying and Processing Physical Evidence including, Hair and Fibers, Glass, Fingerprints, Questioned Documents, Firearms, Inorganic substances: Determination of Trace Metals from Gunshot Residue, Arson, Drugs of Abuse, Toxicology, Biological Fluids and Introduction to Forensic DNA Typing, Explosives and Detection of Weapons of Mass Destruction will be covered. Introduction to theory and practice of forensic chemical analysis from spot tests through instrumentation including practical application of this instrumentation. A laboratory fee is charged. High school biology, chemistry and physics are required. Offered fall semester. Prerequisite(s): BIOL 1311 Minimum Grade of C.

2231 - Invertebrate Zoology
3 Credits
The diversity, ecology, evolution, morphology and developmental biology of invertebrate animals. Emphasis on major phyla. A lab fee is charged. Offered spring semester. Prerequisite(s): BIOL 2001.

2291 - Forensic Biology 2
4 Credits
This course is a continuation of the Forensic Biology 2191 course. Topics will include the practice of forensic sciences including an emphasis on forensic toxicological methods and includes Legal Aspects of Forensic Science, Admissibility Standards for Forensic Evidence in the Courts, including aspects of Federal Rules of Evidence, Frye and Daubert Hearings. Ethical considerations of past and present issues. In addition, the introduction to the practice of quality assurance and quality control in the laboratory. A lab fee is charged. Offered fall semester. Prerequisite(s): BIOL 2191 Minimum Grade of C or BIOL 219 Minimum Grade of C.

2311 - Anatomy and Physiology 1
3 Credits
Cells, tissues, skin, nervous, endocrine, skeletal, muscular, and cardiovascular systems. CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 2311 AND BIOL 3241. Offered fall and spring semesters. Prerequisite(s): BIOL 1101 or BIOL 110 or BIOL 1321 or BIOL 1341 or BIOL 122 or BIOL 124.

2321 - Anatomy and Physiology 2
3 Credits
Continuation of BIOL 2311. Blood, lymphatic, respiratory, digestive, excretory, and reproductive systems. CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 2321 AND BIOL 3251. Offered fall and spring semesters. Prerequisite(s): BIOL 2311 or BIOL 231.

2381 - Emergency Medical Technician Training
1 Credit
Ohio Department of Public Safety certified training program. Successful completion of course requirements, and National Registry of Emergency Medical Technicians examination provides national EMT_Basic certification. Open to all students only with permission of the instructor. DOES NOT COUNT TOWARD THE MAJOR IN BIOLOGY. Offered fall semester.

2401 - OSHA 40 Hour Safety Training
2 Credits
Response operations for the remediation incidents involving hazardous materials. Provided by arrangement with the Rhodes State College in Lima. DOES NOT COUNT AS A BIOLOGY COURSE. Offered spring semester.

2451 - OSHA Refresher
1 Credit
Complies with requirements regarding annual follow-up training for hazardous waste site workers who have previously completed BIOL 240 (OSHA Safety Training). Taught at the Rhodes State College in Lima. May be repeated three times for credit. Graded S/U. DOES NOT COUNT AS A BIOLOGY COURSE. Offered fall semester. This course may be repeated 3 times.

2511 - Ecology
4 Credits
Study of the theory and application of how organisms interact with their biotic and abiotic environment. Considers organismal-, population-, community-, and ecosystem-level ecology. Offered fall semester. Prerequisite(s): BIOL 2001 or BIOL 122.

2531 - Nutrition for Nurses
3 Credits
The maintenance of health through conventional dietary strategies, energy factors associated with body weight and the pathology of various body systems with corresponding medical nutrition therapies. Enrollment is restricted to Nursing majors. Offered spring semester. Prerequisite(s): BIOL 2311 or BIOL 231 and BIOL 2321 or BIOL 232.

2551 - Epidemiology
3 Credits
A broad overview of the field of epidemiology, with heavy emphasis on infectious diseases. Students will explore the relationship between behavior and health or disease, learn to identify patterns of disease transmission, and learn how to design an effective epidemiological study and how to evaluate and interpret the results of published studies. Offered spring semester. Prerequisite(s): BIOL 1201 or BIOL 1311, or BIOL 122.

2591 - Forensic Crime Scene Investigation
4 Credits
The techniques of crime scene investigation and reconstruction will emphasize recognition and search, collection and preservation of physical evidence. Exercises will require acquisition of skills to sketch, note take and photograph crime scenes and evidence. Emphasis will be on the goal of crime scene reconstruction. Practical techniques for fingerprint evi-
dence recovery, cast and impressions along with bloodstain evidence and crime scene photography will be practiced. A laboratory fee is charged. Offered spring semester. Prerequisite(s): BIOL 2291 Minimum Grade of C or BIOL 239 Minimum Grade of C.

2631 - Biogeography
4 Credits
Current and historic distribution of plants and animals related to major geological and evolutionary concepts. A Nature Center use fee is charged. Offered alternate spring semesters. Prerequisite(s): BIOL 2001.

2691 - Forensic Computer Analysis
4 Credits
History of Computer crime, investigations of pre-search and on-scene activities, data analysis and file recovery on devices such as computer and cell phones. Actual in class secured network simulations. Hands-on activities utilizing FBI approved software. A laboratory fee is charged. Formerly BIOL 228. Offered spring semester. Prerequisite(s): BIOL 2191 Minimum Grade of C or BIOL 219 Minimum Grade of C.

2751 - Medicinal Herbs
1 Credit
Students will identify locally growing medicinal herbs, learn current and historical medicinal uses for herbs from many locales and practice hands-on techniques for preparation of herbal remedies. Students will participate in a Service Learning Project to establish a medicinal herb garden on campus, develop an educational pamphlet to serve as a self guided tour in a Service Learning Project to establish a medicinal herb garden website and deliver a class presentation on one herb. Offered spring semester.

2901 - Special Topics in Biological Sciences
1 to 3 Credits
Grading system at the discretion of the instructor. May be repeated for credit as the topic varies. Formerly BIOL 290. Offered fall and spring semesters. This course is repeatable.

3011 - Developmental Anatomy
3 Credits
Development of the embryo through the first 8 weeks, as well as germ cell formation, fertilization, conception, and implantation events. Comparative embryological development presented, with focus on human development. Offered spring semester. Prerequisite(s): BIOL 2001.

3021 - Human Anatomy
4 Credits
Human body systems using x-rays, MRIs, skeletal material, and cadaver dissection. A lab fee is charged. Offered fall semester. Prerequisite(s): BIOL 2001.

3031 - Histology
4 Credits
Human cells, tissues, organs, and systems studied at the microscopic level. Offered fall semester. Prerequisite BIOL 2001.

3051 - Environmental Toxicology
3 Credits
Effects of both man-made and natural toxic agents in plant and animal systems. Offered fall semester. Prerequisite(s): (BIOL 1311 and BIOL 1321 and BIOL 2001) and (CHEM 1721 or CHEM 1821) and (CHEM 1731 or CHEM 1831) and (CHEM 100 and CHEM 114 and CHEM 1151 or (CHEM 172 and CHEM 1141 or (CHEM 171 and CHEM 114 and CHEM 1151) or (CHEM 172 and CHEM 1151). The course includes didactic lectures, group discussion/scenario problem solving, and laboratories that present comparisons across various vertebrate and invertebrate species. The laboratories closely follow the content presented in lectures and incorporate some classical experiments pertaining to neural, skeletal muscle, and gastrointestinal physiology. Students will also work in teams to conduct literature reviews, design research proposals, and present these designs in podium presentations. Offered fall semester. Prerequisite(s): (BIOL 2001 and (CHEM 1721 or CHEM 1821) and (CHEM 1731 or CHEM 1831) and (CHEM 100 and CHEM 114 and CHEM 1151 or (CHEM 172 and CHEM 1141 or (CHEM 171 and CHEM 114 and CHEM 1151) or (CHEM 172 and CHEM 1151). The course includes didactic lectures, group discussion/scenario problem solving, and laboratories that present comparisons across various vertebrate and invertebrate species. The laboratories closely follow the content presented in lectures and incorporate some classical experiments pertaining to neural, skeletal muscle, and gastrointestinal physiology. Students will also work in teams to conduct literature reviews, design research proposals, and present these designs in podium presentations. Offered fall semester. Prerequisite(s): (BIOL 2001 and (CHEM 1721 or CHEM 1821) and (CHEM 1731 or CHEM 1831) and (CHEM 100 and CHEM 114 and CHEM 1151 or (CHEM 172 and CHEM 1141 or (CHEM 171 and CHEM 114 and CHEM 1151) or (CHEM 172 and CHEM 1151). The course includes didactic lectures, group discussion/scenario problem solving, and laboratories that present comparisons across various vertebrate and invertebrate species. The laboratories closely follow the content presented in lectures and incorporate some classical experiments pertaining to neural, skeletal muscle, and gastrointestinal physiology. Students will also work in teams to collect, analyze and interpret data pertaining to the approved research protocols submitted in Medical Physiology I, and will present their findings in oral (poster) and written formats. Offered spring semester. Prerequisite(s): BIOL 3241.

3101 - Medical Terminology
1 Credit
Medical terminology associated with the following specific related disciplines: pharmacology, optometry, otorhinolaryngology, emergency medicine, gerontology, radiology, oncology, physical therapy, occupational therapy, rehabilitation services, surgery, psychiatry, alternative medicine, and pediatrics. Offered fall semester. Prerequisite(s): BIOL 1321 or BIOL 1341 or BIOL 2001 or CHEM 173.

3101 - Medical Terminology
1 Credit
Students will master the vocabulary of the medical field as it pertains to the ten major body systems. Additionally, students will review medical terminology associated with the following specific related disciplines: pharmacology, optometry, otorhinolaryngology, emergency medicine, gerontology, radiology, oncology, physical therapy, occupational therapy, rehabilitation services, surgery, psychiatry, alternative medicine, and pediatrics. Offered fall semester. Prerequisite(s): BIOL 1321 or BIOL 1101.

3191 - Forensic Microscopy
3 Credits
Introduction to fundamentals of light and optics, to advanced microscopical analysis including forensic sample analysis utilizing bright field, dark field, polarizing, fluorescent and phase contrast microscopy. Laboratory application to forensic science for identification of hairs, fibers and trace evidence. A laboratory fee is charged. Offered fall semester. Prerequisite(s): BIOL 2291 Minimum Grade of C or BIOL 239 Minimum Grade of C.

3221 - Bioscience Laboratory
1 Credit
Methods used in drug development; routine histological techniques, and in vitro and in vivo drug screening. In vivo models of selected diseases are presented. Experimental data analysis in microbiology, molecular biology and cell biology. A lab fee is charged. Formerly BIOL 322 and BIOL 323. Offered fall semester. Prerequisite(s): (BIOL 1341 and BIOL 1361) and (BIOL 3111 or BIOL 3131)

3241 - Medical Physiology 1
4 Credits
The first in a sequence of two courses that provides an in-depth survey of human physiology systems. The course includes didactic lectures, group discussion/scenario problem solving, and laboratories that present comparisons across various vertebrate and invertebrate species. The laboratories closely follow the content presented in lectures and incorporate some classical experiments pertaining to neural, skeletal muscle, and gastrointestinal physiology. Students will also work in teams to collect, analyze and interpret data pertaining to the approved research protocols submitted in Medical Physiology I, and will present their findings in oral (poster) and written formats. Offered spring semester. Prerequisite(s): BIOL 3241.

3251 - Medical Physiology 2
4 Credits
The second in a sequence of two courses that provides an in-depth survey of human physiology systems. The course includes didactic lectures, group discussion/scenario problem solving, and laboratories that incorporate some classical experiments pertaining to cardiovascular, respiratory, renal, endocrine and reproductive physiology. Students will work in teams to collect, analyze and interpret data pertaining to the approved research protocols submitted in Medical Physiology I, and will present their findings in oral (poster) and written formats. Offered spring semester. Prerequisite(s): BIOL 3241.
3291 - Forensic Physical Methods
4 Credits
Introduction to advanced examination of firearms evidence, gunshot residue analysis, tool mark identification, vehicle lamp examination, serial number restoration and forensic shooting reconstruction and advanced fingerprint identification and latent prints with practical application of the Cogent CAFIS software and interpretation. An introduction to ACE-V application of the paradigm of analysis, comparison, evaluation and verification. A laboratory fee is charged. Offered fall semester. Prerequisite(s): BIOL 2291 Minimum Grade of C.

3311 - Physiology 1
4 Credits
The first in a sequence of two courses that provides an in-depth survey of human physiology systems. The course includes didactic lectures, pharmacy connections and practical applications of physiological principles through scenario analyses. Major themes covered in this course include: transport across the plasma membrane, the somatic and autonomic nervous systems, smooth and skeletal muscle physiology, and the gastrointestinal system. Restricted to Pharmacy majors. Offered fall semester. Prerequisite(s): BIOL 1341 and (CHEM 1721 or CHEM 1821) and (CHEM 173 or CHEM 183) and (CHEM 100 and CHEM 114 and CHEM 115) or (CHEM 172 and CHEM 114) or (CHEM 171 and CHEM 114 and CHEM 115) or (CHEM 172 and CHEM 115).

3321 - Physiology 2
4 Credits
The second in a sequence of two courses that provides an in-depth survey of human physiology systems. The course includes didactic lectures, pharmacy connections and practical applications of physiological principles through scenario analyses. Offered spring semester. Prerequisite(s): BIOL 3311.

3401 - Professional Experience Co-op
4 Credits
Experience in a biologically or environmentally-related occupation with a governmental, consulting or industrial entity. Junior status and approval of the Department Chair is required. Graded S/U. Offered fall semester.

3431 - Histological Techniques
3 Credits
Principles and procedures used in the preparation of biological specimens for microscopic study. Techniques include tissue spreads and smears, and paraffin and frozen sections using routine and histochemical stains. Offered alternate spring semesters. Prerequisite(s): BIOL 1321.

3511 - Cell Biology
3 Credits
Students will be expected to integrate lecture and laboratory data regarding cell structure and function to develop an understanding of eukaryotic cells as dynamic entities. Offered spring semester. Prerequisite(s): (BIOL 2101 or BIOL 210 and (CHEM 1721 or CHEM 1821) and (CHEM 173 or CHEM 183) and (CHEM 100 and CHEM 114 and CHEM 115) or (CHEM 172 and CHEM 114) or (CHEM 171 and CHEM 114 and CHEM 115) or (CHEM 172 and CHEM 115).

3521 - Integrated Cell and Molecular Biology Laboratory
2 Credits
Execution of advanced research techniques in molecular/cellular biology utilizing plant and animal model systems with added emphasis on data analysis and interpretation. Offered fall and spring semesters. Corequisite(s): BIOL 2171 or BIOL 3511.

3541 - Bioinformatics
4 Credits
Introduction to the use of data mining using the extensive NCBI-based applications for the field of genomic and proteomics analysis. Computer-based laboratory and homework exercises using NCBI databases and other public domain sequence sources to explore genetic diseases, antibiotic resistance, protein function, the relationship between RNA sequence and protein structure prediction, and molecular phylogenetics with a slant to evolution theory. A laboratory fee is charged. Offered fall semester. Prerequisite(s): BIOL 2171 Minimum Grade of C or BIOL 2101 Minimum Grade of C.

3571 - Forensics DNA Analysis
4 Credits
Review of the historical methods of forensic DNA analysis and including multiple techniques for the extraction, quantification and analysis of genomic STR, mitochondrial DNA and Y-STR analysis. Laboratory will include sample collection methods, storage and characterization of various crime scene samples and performance of human DNA quantification, autosomal DNA analysis, mitotyping and Y-STR typing. Includes the statistical interpretation of forensic DNA evidence, DNA databases, and Quality Assurance. A laboratory fee is charged. Instructor permission required. Offered spring semester. Prerequisite(s): (BIOL 2291 Minimum Grade of C and BIOL 2171 Minimum Grade of C or BIOL 217 Minimum Grade of C). Corequisite(s): CHEM 3111 and CHEM 3151.

3601 - North American Mammals
3 Credits
Natural history, behavior, ecology and systematics of North American orders and most North American families. A weekend field trip is required. Offered alternate fall semesters. Prerequisite(s): (BIOL 1321).

3611 - Entomology
3 Credits
Morphology, physiology, ecology, evolution of insects. Laboratory emphasizes field collection, identification and curation of insects. A weekend field trip is required. A Nature Center use fee is charged. BIOL 2231 recommended. Offered alternate fall semesters. Prerequisite(s): BIOL 2001.

3621 - Parasitology
3 Credits
Taxonomy, pathology, ecology, and evolution of major human and veterinary protozoan and metazoan parasites, including their distribution, life cycles, prevention and control. BIOL 2231 recommended. Offered alternate fall semesters. Prerequisite(s): BIOL 2001.

3631 - Ornithology
3 Credits
Study of taxonomy, ecology, natural history, and behavior of birds, with emphasis on North American taxa. A weekend field trip is required. A Nature Center use fee is charged. Instructor permission required. Offered spring semester. Prerequisite(s): BIOL 2001.

3641 - Herpetology
2 Credits
Study of salamanders, amphibians and reptiles emphasizing species native and introduced to Ohio and neighboring states. A weekend field trip is required. A Nature Center usage fee is charged. Offered alternate spring semesters. Prerequisite(s): (BIOL 2001).

3651 - Forensic Entomology
3 Credits
Application of insects to legal proceedings, especially medico-criminal. The collection and identification of larval and adult insects from carrion models and their use in determining post-mortem interval is emphasized. Recent developments in the field of forensic entomology, including molecular and laboratory techniques, are examined. A lab fee is charged. Offered alternate fall semesters. Prerequisite(s): (BIOL 2001 Minimum Grade of C and BIOL 2291 Minimum Grade of C).

3661 - Environmental Research Methods
3 Credits
The study of the design, execution, analysis, and communication of original research in environmentally-oriented fields. Offered fall semester. Prerequisite(s): BIOL 2001. Corequisite(s): BIOL 3671 and BIOL 3681 and BIOL 3691 and BIOL 3701.

3671 - Field Botany
3 Credits
Identification of native aquatic and terrestrial flora with an emphasis on the use of keys, principles of classification, field work, ecological concepts, and herbarium methods. University defensive driving certification required. A Nature Center use fee is charged. Offered fall semester. Prerequisite(s): BIOL 2001. Corequisite(s): BIOL 3661 and BIOL 3681 and BIOL 3691 and BIOL 3701.
3691 - Field Invertebrate Biology
3 Credits
Field investigations of aquatic and terrestrial invertebrates emphasizing the diversity, ecology, conservation, and methods for their study. University defensive driving certification required. A Nature Center use fee is charged. Offered fall semester. Corequisite(s): BIOL 3661 and BIOL 3671 and BIOL 3691 and BIOL 3701.

3701 - Marine Biology
3 Credits
Organisms and their habitats emphasizing southeastern and Gulf coastal and offshore environments. A two-week field trip to a selected marine environment is required. University defensive driving certification required. Additional fee is charged. Permission of the instructor required. Offered fall semester. Corequisite(s): BIOL 3661 and BIOL 3671 and BIOL 3681 and BIOL 3691.

3711 - Advanced Marine Biology
3 Credits
Ecological, physical and chemical aspects of marine systems. A two-week field trip to a selected marine environment is required. An additional fee is charged. Permission of the instructor required. Offered spring semester.

3721 - Topics in Marine Biology
1 to 3 Credits
Ecological, physical and chemical aspects of marine systems. A two-week field trip to a selected marine environment is required. An additional fee is charged. Permission of the instructor required. Formerly BIOL 372. Offered alternate spring semesters.

3831 - Animal Behavior
3 Credits
Invertebrates and vertebrates, stressing observational and descriptive techniques. Offered alternate years. A lab fee is charged. Offered alternate spring semesters. Prerequisite(s): (BIOL 3511 or BIOL 351) and (CHEM 3111 or CHEM 311) or (PHBS 3411 or PHBS 341). This course is repeatable.

4231 - Topics in Ecology and Biogeography
1 to 3 Credits
Current literature on selected topics. Permission of instructor. May be repeated for credit as topics vary. Formerly BIOL 423. Offered spring semester. This course is repeatable.

4511 - Advanced Topics in Cell Biology
2 Credits
Current literature on selected cell biology. May be repeated for credit as the topics vary. Formerly BIOL 451. Offered fall semester. Prerequisite(s): (BIOL 3511 or BIOL 351) and (CHEM 3111 or CHEM 311) or (PHBS 3411 or PHBS 341). This course is repeatable.

4621 - Biological Fluids
3 Credits
Lecture/laboratory coverage of various human body fluids, including urine, sweat, seminal fluid, amniotic fluid, cerebrospinal fluid, and serous fluids, the physical and biochemical methods used to analyze them, and correlations of results with states of health and disease. A lab fee is charged. Minimum grade of C for CLS majors. Instructor permission required. Offered fall semester.

4631 - Clinical Immunology
3 Credits
Lecture/laboratory coverage of the structure and function of the human immune system and methods used to diagnose, prognose, and monitor its response in health and disease states. A lab fee is charged. Minimum grade of C for CLS majors. Instructor permission required. Offered summers.

4671 - Diagnostic Microbiology
5 Credits
Lecture/laboratory coverage of microbes of medical interest, emphasizing application of conventional methods and emerging technologies to isolate, identify, and detect antimicrobial susceptibility of bacteria, viruses, fungi, and parasites associated with human disease. A lab fee is charged. Minimum grade of C for CLS majors. Instructor permission required. Offered summers.

4811 - Internship Program
12 Credits
Experience enables the student to experience working with scientists in a professional workplace. Only 4 credit hours can be used in the major. Seniors only. Graded S/U. The Major Field Test (ETS) is required. A special fee is assessed. Offered fall and spring semesters. Formerly BIOL 481.

4821 - Internship in Environmental Studies
12 Credits
Experience working with scientists in a professional workplace. Only 4 credit hours can be used in the major. The Major Field Test (ETS) is required. A special fee is assessed. Offered fall and spring semesters. For ENVR majors. Normal grading. Formerly BIOL 482.

4831 - Forensic Biology Internship
4 Credits
Capstone experience for Forensic Biology Major or Biology Major/Molecular Biology Major with Criminal Justice Option. This experiential program is designed for the student to work in a forensic testing laboratory or laboratory approved by the Director of the Forensic Biology and the Internship Committee. ETS Major Field Test in Biology or American Board of Criminalistics (ABC) Forensic Science Aptitude Test is required. Formerly BIOL 483. Completion of three years of forensic biology coursework or senior status. Only 4.0 hours will count for the major. Pre-requisite(s): BIOL 3571 minimum grade of C or BIOL 357 minimum grade of C.

4841 - Experiential Biology
4 Credits
Summer off-campus field and laboratory experiences. Only available during summer terms. 400 hours of experiential experience required. Requires junior status and permission of instructor. ETS Major Field Test is required. A special fee is assessed.

4901 - Special Topics in Biological Sciences
1 to 4 Credits
Disciplines such as mammalogy and plant taxonomy. May be repeated for credit as topic varies. Formerly BIOL 490. Offered alternate fall and spring semesters. This course is repeatable.

4921 - Capstone Experience
1 Credit
Experience (off-campus REU research program, study abroad, internship or other approved experience in a biological field of study). Student must be approved by the Department in the semester prior to enrollment. Offered fall and spring semesters.
4941 - Capstone Seminar
1 Credit
Oral and written presentations of Capstone Experience. A special fee is assessed. Offered fall and spring semesters. Pre-requisite: BIOL 4921 Minimum Grade of C. ETS Major Field Test is required.

4971 - Independent Research in Biology
1 to 3 Credits
For students interested in mentored research project with the proposed topic approved by the department and chair. The completed research will involve a scientific paper. Graded S/U only. Enrollment restricted to BIOL, MBIO, ENVIR, FRBI and CLS majors. Offered fall and spring semesters.

Subject - Clinical Laboratory Science (CLSS)

4601 - Foundations of Clinical Laboratory Science
3 Credits
Lecture/laboratory coverage of the professional practices, including safety, regulatory issues, phlebotomy and specimen collection, handling, and processing, quality assurance, professionalism and ethics. Lab fee charged. Admission to CLS program required. Offered summers.

4611 - Professional Practice and Development
3 Credits
Web-based, interactive coverage of clinical laboratory management including organizational structure, laboratory operations, leadership, team building, legal issues, interpersonal and interdisciplinary communication, resources management, career development and education methodology. Admission to the CLS Program required. Offered fall semester.

4651 - Blood Banking and Transfusion Science
4 Credits
Lecture/laboratory coverage of blood groups biochemistry, genetics, and immunology, and discipline specific practices including donor selection, component preparation, detection and identification of antibodies, and compatibility testing. Lab fee charged. Instructor permission required. Offered fall semester.

4661 - Clinical Chemistry
4 Credits
Lecture/laboratory coverage of analytical principles, techniques, and applications of tests to diagnose, assess, and manage health and disease states. Lab fee charged. Instructor permission required. Offered summers.

4681 - Clinical Laboratory Practicum
2 Credits
Practical experience emphasizing policies and procedures governing operations including safety, specimen collection and phlebotomy, resource management, communications and information systems. Lab fee charged. Graded S/U. Offered spring semester.

4691 - Clinical Hematology Practicum
4 Credits
Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a clinical setting, and further develop discipline-specific competency. Enrollment restricted to CLS majors. Lab fee is charged. Offered spring semester.

4701 - Blood Bank Practicum
4 Credits
Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a clinical setting, implement therapy protocols, and further develop discipline-specific competency. Lab fee charged. Enrollment restricted to CLS majors. Offered spring semester. Prerequisite(s): (CLSS 4651 Minimum Grade of C).

4711 - Clinical Chemistry Practicum
4 Credits
Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a clinical setting and further develop discipline-specific competency. Lab fee charged. Enrollment restricted to CLS majors. Offered spring semester. Prerequisite(s): (CLSS 4661 Minimum Grade of C).

4721 - Clinical Microbiology Practicum
4 Credits
Practical experience emphasizing application of knowledge and skills in a clinical setting to perform a wide variety of testing and to further develop discipline-specific competency. Lab fee charged. Enrollment is restricted to CLS majors. Offered spring semester.

4731 - Immunology and Infectious Diseases Practicum
2 Credits
Practical experience emphasizing application of knowledge and skills in a clinical setting to perform a wide variety of testing and to further develop discipline-specific competency. Lab fee charged. Enrollment is restricted to CLS majors. Offered spring semester.

4741 - Case Studies in Clinical Laboratory Science
1 Credit
Exploration of current topics in the field of laboratory medicine culminating in a written manuscript suitable for publication in a discipline-specific journal. The course may be repeated to appreciate various topical prospects. Enrollment is restricted to CLS majors Offered spring semester.

Subject - Geology (GEOL)

2801 - Geology
3 Credits
Physical geology and paleogeology, including chemical properties of minerals and rocks, geologic processes, and earth materials. May be taken without GEOL 2811. Formerly GEOL 280. Offered fall semester.

2811 - Geology Lab
1 Credit
Labs utilize minerals, rock, sediments, maps and field trips to illustrate techniques used by geologists. A Nature Center use fee is charged. Offered fall semester. Corequisite(s): GEOL 2801.

2901 - Special Topics in Geology
1 to 3 Credits
May be repeated for credit up to total of 8 hours as the topic varies. Formerly GEOL 290. Offered fall semester. Prerequisite(s): (GEOL 2801 or GEOL 280). This course is repeatable for a total of 7 hours.

2971 - Independent Study in Geology
1 to 3 Credits
Independent study in geology. Permission of instructor. Graded S/U. Formerly GEOL 297. Offered fall semester. This course is repeatable.

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Professors Gray (Chair), Peterson; Associate Professors Bates, Bowers, Brokemeier, Celius, Myers; Assistant Professors Anderson-Wile, Dickson, Perrine, Spiese, Wile, Zimmerman; Post-Doctoral Associate Manpadi; Introductory Laboratory Coordinator Duliba; Director of Laboratories Daws

Mission Statement
The Department of Chemistry and Biochemistry prepares students for research, academic, professional and technical careers in the physical and medical sciences. Students master methods in mathematics and physical sciences while developing competence to identify, analyze and solve scientific problems. The department also meets the needs of non-technical students for an understanding of scientific concepts and the scientific method and the ability to apply quantitative methods to identify and solve real-world problems.

Overview of Purpose and Offerings
The department offers majors and minors in chemistry and biochemistry. Chemistry majors in the department may choose a general education program leading to either the Bachelor of Arts degree or the Bachelor of Science degree. Students may pursue a concentration which
results in American Chemical Society (ACS) certification. In addition, the department cooperates with the Center for Teacher Education in program planning for licensure for those desiring to teach at the secondary school level.

**Accreditation**
The department is approved by the American Chemical Society for the professional education of chemists and biochemists.

**Majors, Minors and Degrees Offered**
Biochemistry Major (BS)
Chemistry Major (BA, BS)
Biochemistry Minor
Chemistry Minor

**Certifications and Licensure**
Biochemistry Major/ACS Certified (BS)
Chemistry Major/ACS Certified (BS)
Teacher Licensure in Chemistry (BA, BS)

**Major Course Requirements**
All required courses in the major subject area must be completed with a grade of "C" or higher. All required courses outside of the major subject area must be completed with a grade of "D" or higher.

**Biochemistry**
Optional ACS Certification and teacher licensure are available to students completing this major.

**BS Degree Requirements (70 credit hours)**
CHEM 1811 General Chemistry 1 – Majors (5)
CHEM 1821 General Chemistry 2 – Majors (5)
CHEM 2001 Capstone 1 (1)
CHEM 2311 Analytical Chemistry 1 (4)
CHEM 2481 Chemical Applications of Math (3)
CHEM 2611 Organic Chemistry 1 – Majors (3)
CHEM 2651 Organic Chemistry 1 Lab – Majors (1)
CHEM 2621 Organic Chemistry 2 – Majors (3)
CHEM 2661 Organic Chemistry 2 Lab – Majors (2)
CHEM 3001 Capstone 2 (1)
CHEM 3111 Biochemistry (3)
CHEM 3151 Biochemistry Lab (1)
CHEM 3411 Physical Chemistry 1 (4)
CHEM 3401 Capstone 3 (2)
CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)
CHEM 4121 Advanced Biochemistry: Information Transfer (3)
CHEM 4161 Advanced Biochemistry Lab (2)

Other Required Courses
BIOL 1311 Biology 1: Cells and Molecules (4)
BIOL 1321 Biology 2: Form and Function (4)
MATH 1631 Calculus 1 (4)
MATH 1641 Calculus 2 (4)
PHYS 2311 Physics 1 (3)
PHYS 2341 Physics 1 Lab (1)
PHYS 2321 Physics 2 (3)
PHYS 2351 Physics 2 Lab (1)

ACS Certified Biochemistry
Additional requirements (19 to 20 credit hours)
CHEM 2621 Organic Chemistry 2 – Majors (3)
CHEM 2661 Organic Chemistry 2 Lab – Majors (2)
CHEM 3711 Inorganic Chemistry 1 (3)
CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)
CHEM 4121 Advanced Biochemistry: Information Transfer (3)
CHEM 4161 Advanced Biochemistry Lab (2)

Choose one:
BIOL 3001/4001 approved by the department
CHEM 3201 Medicinal Chemistry (3)
CHEM 3421 Physical Chemistry 2 (4)
CHEM 3601 Organic Synthesis (4)
CHEM 4321 Analytical Chemistry 2 (3)
CHEM 4421 Advanced Physical Chemistry (3)
CHEM 4601 Physical Organic Chemistry (3)
CHEM 4721 Inorganic Chemistry 2 (3)
CHEM 4811 Senior Research 1 (2)
and
CHEM 4821 Senior Research 2 (2)

**Chemistry**
Optional ACS Certification (BS) and teacher licensure (BA, BS) are available to students completing this major.

**BA Degree Requirements (46 to 51 credit hours)**
CHEM 1811 General Chemistry 1 – Majors (5)
CHEM 1821 General Chemistry 2 – Majors (5)
CHEM 2001 Capstone 1 (1)
CHEM 2311 Analytical Chemistry 1 (4)
CHEM 2611 Organic Chemistry 1 – Majors (3)
CHEM 2651 Organic Chemistry 1 Lab – Majors (1)
CHEM 2401 Elements of Physical Chemistry (3)
or
CHEM 3411 Physical Chemistry 1 (4)
CHEM 3001 Capstone 2 (1)
CHEM 4001 Capstone 3 (2)

Choose two:
CHEM 2621 Organic Chemistry 2 – Majors (3)
CHEM 2661 Organic Chemistry 2 Lab – Majors (2)
CHEM 3111 Biochemistry (3)
CHEM 3151 Biochemistry Lab (1)
CHEM 3201 Medicinal Chemistry (3)
or
CHEM 3261 Medicinal Chemistry Lab (1)
CHEM 3421 Physical Chemistry 2 (4)
CHEM 3601 Organic Synthesis (4)
CHEM 3711 Inorganic Chemistry 1 (3)
or
CHEM 3751 Inorganic Chemistry 1 Lab (1)
CHEM 4321 Analytical Chemistry 2 (3)

Other Required Courses
PHYS 2111 General Physics 1 (3)
PHYS 2121 General Physics 2 (3)
PHYS 2341 Physics 1 Lab (1)
PHYS 2351 Physics 2 Lab (1)
or
PHYS 2311 Physics 1 (3)
PHYS 2321 Physics 2 (3)
PHYS 2341 Physics 1 Lab (1)
PHYS 2351 Physics 2 Lab (1)

Choose two:
MATH 1431 Calculus for Science and Technology (3)
MATH 1461 Calculus for Life Sciences (3)
MATH 1611 Calculus w/ Precalculus 1 (4)
MATH 1621 Calculus w/ Precalculus 2 (4)
MATH 1631 Calculus 1 (4)
MATH 1641 Calculus 2 (4)
STAT 2501 Statistics for Scientists and Engineers (3)

**BS Degree Requirements (58 credit hours)**
CHEM 1811 General Chemistry 1 – Majors (5)
CHEM 1821 General Chemistry 2 – Majors (5)
CHEM 2001 Capstone 1 (1)
CHEM 2311 Analytical Chemistry 1 (4)
CHEM 2481 Chemical Applications of Math (3)
CHEM 2611 Organic Chemistry 1 – Majors (3)
CHEM 2651 Organic Chemistry 1 Lab – Majors (1)

CHEMISTRY AND BIOCHEMISTRY
Minors

Students may earn a minor in Biochemistry or Chemistry, but not both. All courses required for a minor must be completed with a grade of "C" or higher.

Biochemistry Minor (25 credit hours)

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<td>CHEM 1721</td>
<td>General Chemistry 2</td>
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<td>Organic Chemistry 1</td>
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Choose one:

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<tr>
<td>CHEM 4111</td>
<td>Advanced Biochemistry: Proteins and Metabolism</td>
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<tr>
<td>CHEM 4121</td>
<td>Advanced Biochemistry: Information Transfer</td>
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</table>

Chemistry Minor (21 to 22 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1711</td>
<td>General Chemistry 1</td>
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<tr>
<td>CHEM 1721</td>
<td>General Chemistry 2</td>
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Choose three:

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<tr>
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<tbody>
<tr>
<td>CHEM 2311</td>
<td>Analytical Chemistry 1</td>
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</tr>
<tr>
<td>CHEM 2401</td>
<td>Elements of Physical Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 2511</td>
<td>Organic Chemistry 1</td>
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<td>CHEM 2551</td>
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<td>CHEM 2521</td>
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<td>CHEM 2561</td>
<td>Organic Chemistry 2 Lab</td>
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<td>CHEM 3111</td>
<td>Biochemistry</td>
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<tr>
<td>CHEM 3201</td>
<td>Medicinal Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 3411</td>
<td>Physical Chemistry 1</td>
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<tr>
<td>CHEM 3421</td>
<td>Physical Chemistry 2</td>
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<tr>
<td>CHEM 3601</td>
<td>Organic Synthesis</td>
<td>4</td>
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<tr>
<td>CHEM 3711</td>
<td>Inorganic Chemistry 1</td>
<td>3</td>
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<tr>
<td>CHEM 4321</td>
<td>Analytical Chemistry 2</td>
<td>3</td>
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<tr>
<td>CHEM 4421</td>
<td>Advanced Physical Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 4601</td>
<td>Physical Organic Chemistry</td>
<td>3</td>
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<tr>
<td>CHEM 4721</td>
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<td>CHEM 4811</td>
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<tr>
<td>CHEM 4821</td>
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ACS Certified Chemistry

Additional requirements (18 to 20 credit hours)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHEM 2621</td>
<td>Organic Chemistry 2 – Majors</td>
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<tr>
<td>CHEM 2661</td>
<td>Organic Chemistry 2 Lab – Majors</td>
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<tr>
<td>CHEM 3111</td>
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<tr>
<td>CHEM 3421</td>
<td>Physical Chemistry 2</td>
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Choose two:

<table>
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<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 3201</td>
<td>Medicinal Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 3601</td>
<td>Organic Synthesis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 4321</td>
<td>Analytical Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4421</td>
<td>Advanced Physical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4601</td>
<td>Physical Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4721</td>
<td>Inorganic Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4811</td>
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<tr>
<td>CHEM 4821</td>
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ACS certified chemistry course work must include 400 laboratory hours above general chemistry.

Teacher Licensure in Chemistry

This option is available to students majoring in biochemistry or chemistry.

Additional requirements (54 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1311</td>
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<tr>
<td>EDUC 1151</td>
<td>Culture and Schooling</td>
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<tr>
<td>EDUC 1501</td>
<td>Five-Day Field Experience</td>
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<td>EDUC 1521</td>
<td>Five-Day Field Experience</td>
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<tr>
<td>EDUC 2101</td>
<td>Exceptional Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 2681</td>
<td>Curriculum and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 3201</td>
<td>Instructional Media and Educational Technologies</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 3451</td>
<td>Literacy Across the Content Areas AYA/MA</td>
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<tr>
<td>EDUC 4401</td>
<td>Educational Psychology and Instructional Practices</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4511</td>
<td>Integrated Science Methods</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4541</td>
<td>Leadership Seminar in Education</td>
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<tr>
<td>EDUC 4651</td>
<td>Science Education Portfolio</td>
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<tr>
<td>EDUC 4721</td>
<td>Student Teaching/AYA</td>
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Choose one:

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<tr>
<td>GEOL 2801</td>
<td>Geology</td>
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<tr>
<td>PHYS 1051</td>
<td>Planetary Astronomy</td>
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Specified general education courses

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom</td>
<td>3</td>
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<tr>
<td>PSYC 1001</td>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2171</td>
<td>Adolescent Psychology</td>
<td>3</td>
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</table>

Subject - Chemistry (CHEM)

1001 - Chemistry in Society

3 Credits

The behavior of matter at the macroscopic level and explanations of this behavior using molecular-level models. Applications in everyday life. Chemistry 1711 recommended for science majors. Credit may be received for only one of the following courses: CHEM 1001, CHEM 1201, CHEM 1501, CHEM 1711, or CHEM 1811. Offered fall and spring semesters.

1201 - Chemistry for the Health Sciences

5 Credits

Chemical principles and theories in the areas of atomic structure, chemical bonding, solution chemistry, redox chemistry and acid/base chemistry. Basic principles and applications of kinetics and thermodynamics. Stereochemistry, functional groups and the basic properties of functional groups. Structures, properties and functions of biologically relevant carbohydrates, lipids, and proteins. Facets of DNA structures and replication as well as relevant concepts in protein synthesis. Principles of enzyme catalysis in biochemical processes with application to specific pathways in both carbohydrate and lipid metabolism. Basic bioenergetic principles as present in the citric acid and oxidative phosphorylation. Lab supports principles presented in lecture. Credit may be received for only one of the following courses: CHEM 1001, CHEM 1201, CHEM 1501, CHEM 1711, or CHEM 1811. High school chemistry recommended. Offered fall and spring semesters.

1501 - Chemistry for Engineering

3 Credits

Atomic structure, the mole, stoichiometry, chemical reactions, thermochmistry, electron configuration, periodicity, bonding, molecular structure, states of matter, solutions, thermodynamics, kinetics, equilibria, acids, bases, and electrochemistry. Taken concurrently with CHEM 1551. Credit may be received for only one of the following courses: CHEM 1001, CHEM 1201, CHEM 1501, CHEM 1711, or CHEM 1811. High school chemistry recommended. Offered fall semester. Prerequisite(s): CHEM 1551.
CHEM 183 or CHEM 173 or CHEM 226.

Semesters. Prerequisite(s): CHEM 1501 or CHEM 1721 or CHEM 1821 or CHEM 2401 or CHEM 3411 but not for both. Offered alternate spring semesters. Prerequisite(s): CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173) and (MATH 1641 or MATH 165).

1711 - General Chemistry 1
5 Credits
Macroscopic concepts of the elements, compounds and reactions. Stoichiometry, thermochemistry and properties of ideal gases as applied to reactive systems. Emphasis on acid-base, redox, and descriptive chemistry. Atomic theory and its application to bonding. Laboratory supports principles presented in lecture, including spectroscopy. Credit may be received for only one of the following courses: CHEM 1001, CHEM 1201, CHEM 1501, CHEM 1711, or CHEM 1811. High school chemistry required. Offered fall semester.

1721 - General Chemistry 2
5 Credits
Molecular structure, condensed phases, chemical reactions and mechanisms. Physical principles controlling chemical reactions including kinetics, thermodynamics, electrochemistry, and acid-base equilibrium conditions. Laboratory supports principles presented in lecture, including kinetics and equilibrium. Credit may be received for either CHEM 1721 or CHEM 1821, but not for both. Offered spring semester. Prerequisite(s): CHEM 1711 or CHEM 1811 or CHEM 172 or CHEM 182.

1811 - General Chemistry 1 - Majors
5 Credits
Macroscopic concepts of the elements, compounds and reactions. Stoichiometry, thermochemistry and properties of ideal gases as applied to reactive systems. Emphasis on acid-base, redox, and descriptive chemistry. Atomic theory and its application to bonding. Laboratory supports principles presented in lecture, including spectroscopy. Credit may be received for only one of the following courses: CHEM 1001, CHEM 1201, CHEM 1501, CHEM 1711, or CHEM 1811. Offered fall semester.

1821 - General Chemistry 2 - Majors
5 Credits
Molecular structure, condensed phases, chemical reactions and mechanisms. Physical principles controlling chemical reactions including kinetics, thermodynamics, electrochemistry, and acid-base equilibrium conditions. Laboratory supports principles presented in lecture, including kinetics and equilibrium. Credit may be received for either CHEM 1721 or CHEM 1821, but not for both. Offered spring semester. Prerequisite(s): CHEM 1711 or CHEM 1811 or CHEM 172 or CHEM 182.

1901 - Special Topics
1 to 3 Credits
Can be repeated as topic varies. This course is repeatable.

2001 - Capstone 1
1 Credit
Methods and objectives of chemical research. Undergraduate research opportunities in the department. Science literature search engines. Summer research opportunities at other institutions. Offered fall semester. Prerequisite(s): CHEM 1821 or CHEM 1721 or CHEM 183 or CHEM 173.

2311 - Analytical Chemistry 1
4 Credits
Practice and principles of modern chemical methods of analysis including instrumental methods. Offered fall semester. Prerequisite(s): CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173.

2401 - Elements of Physical Chemistry
3 Credits
Principles and applications of selected areas of physical chemistry including thermodynamics, kinetics, and spectroscopy. Credit may be received for CHEM 2401 or CHEM 3411 but not for both. Offered alternate spring semesters. Prerequisite(s): CHEM 1501 or CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173 or CHEM 226.

2481 - Chemical Applications of Mathematics
3 Credits
Application of mathematical techniques to problems in chemistry. Offered spring semester. Prerequisite(s): (CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173) and (MATH 1641 or MATH 165).

2511 - Organic Chemistry 1
3 Credits
Bonding, acidity, functional groups, conformations, stereochemistry, nomenclature, fundamental reactions/mechanisms (SN1, SN2, E1, E2) of organic chemistry, addition reactions to alkenes and alkynes, oxidation and reduction, and structure determination using IR, NMR, and MS spectroscopy. Taken concurrently with CHEM 2551. Credit may be received for CHEM 2511 or 2611, but not for both. Offered fall semester. Prerequisite(s): (CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173) and CHEM 2551.

2521 - Organic Chemistry 2
3 Credits
Reactions with/on radicals, dienes, aromatics, alcohols, carbonyls, amines, the structure and chemistry of carbohydrates, and organic polymer chemistry. Taken concurrently with CHEM 2561. Credit may be received for CHEM 2521 or 2621, but not for both. Formerly known as CHEM 253. Offered spring semester. Prerequisite(s): (CHEM 2511 and CHEM 2551 and CHEM 2561) or (CHEM 2611 and CHEM 2651 and CHEM 2661) or (CHEM 252 and CHEM 2561) or (CHEM 262 and CHEM 2661).

2551 - Organic Chemistry Lab 1
1 Credit
Basic laboratory techniques used for synthesis, isolation, purification, and analysis of organic compounds are studied in the course. Some functional group interconversion, substitution, and elimination processes are introduced. Structure analysis using spectroscopy. The lab experiments are designed to illustrate practical implementation of the theories and concepts learned in lecture. Taken concurrently with CHEM 2511. Credit may be received for CHEM 2551 or 2651, but not for both. Offered fall semester. Prerequisite(s): CHEM 2511.

2561 - Organic Chemistry Lab 2
1 Credit
Reactions with/on radicals, dienes, aromatics, alcohols, carbonyls, amines, the structure and chemistry of carbohydrates, and organic polymer chemistry. Taken concurrently with CHEM 2521. Credit may be received for CHEM 2561 or 2661, but not for both. Offered spring semester. Prerequisite(s): CHEM 2521.

2611 - Organic Chemistry 1 - Majors
3 Credits
Bonding, acidity, functional groups, conformations, stereochemistry, nomenclature, fundamental reactions/mechanisms (SN1, SN2, E1, E2) of organic chemistry, addition reactions to alkenes and alkynes, oxidation and reduction, and structure determination using IR, NMR, and MS spectroscopy. Taken concurrently with CHEM 2651. Credit may be received for CHEM 2511 or 2611, but not for both. Offered fall semester. Prerequisite(s): (CHEM 1721 or CHEM 1821 or CHEM 183 or CHEM 173) and CHEM 2651.

2621 - Organic Chemistry 2 - Majors
3 Credits
Reactions with/on radicals, dienes, aromatics, alcohols, carbonyls, amines, the structure and chemistry of carbohydrates, and organic polymer chemistry. Taken concurrently with CHEM 2661. Credit may be received for CHEM 2521 or 2621, but not for both. Formerly known as CHEM 263. Offered spring semester. Prerequisite(s): (CHEM 2511 and CHEM 2551 and CHEM 2661) or (CHEM 2611 and CHEM 2651 and CHEM 2661) or (CHEM 252 and CHEM 2561) or (CHEM 262 and CHEM 2661).
2651 - Organic Chemistry Lab 1 - Majors
1 Credit
Basic laboratory techniques used for synthesis, isolation, purification, and analysis of organic compounds are studied in the course. Some functional group interconversion, substitution, and elimination processes are introduced. Structure analysis using spectroscopy. The lab experiments are designed to illustrate practical implementation of the theories and concepts learned in lecture. Taken concurrently with CHEM 2611. Credit may be received for CHEM 2551 or 2651, but not for both. Offered fall semester. Prerequisite(s): CHEM 2611.

2661 - Organic Chemistry Lab 2 - Majors
2 Credits
Free radical reactions, cycloaddition, electrophilic aromatic substitution, and other reactions relevant to the lecture material are explored. The reactivity of phenols, enolates, amines, and carboxylic acid derivatives is investigated. The structure of carbohydrates, and representative multiple-step organic syntheses of relevant pharmaceutical agents are explored. Grignard and multiple step synthesis are introduced. Use of the chemical literature. Routine acquisition of NMR, IR, MS spectra and other physical data are used for structure elucidation of unknown organic compounds. In-depth coverage of two-dimensional NMR, IR UV, and MS spectroscopy. Taken concurrently with CHEM 2621. Credit may be received for CHEM 2561 or 2661, but not for both. Formerly known as CHEM 266. Offered spring semester. Prerequisite(s): CHEM 2621.

2901 - Special Topics
1 to 3 Credits
Can be repeated as topic varies. This course is repeatable.

2971 - Independent Study
1 to 4 Credits
Can be repeated for a maximum of 4 credit hours. Offered fall and spring semesters. This course may be repeated 3 times. This course is repeatable for a total of 4 hours.

3001 - Capstone 2
1 Credit
Careers in the chemical/biochemical sciences. Critical evaluation of scientific literature. Preparation for oral presentations. Offered spring semester. Prerequisite(s): CHEM 2001 or CHEM 200.

3111 - Biochemistry
3 Credits
Fundamentals of biochemistry with emphasis on the structures and properties of the major classes of biological molecules and the relationships between biomolecular structure and function; introduction to enzyme catalysis and metabolic pathways. Optional associated laboratory: CHEM 3151. Offered fall semester. Prerequisite(s): (CHEM 2521 and CHEM 2561) or (CHEM 2621 and CHEM 2661) or CHEM 253 or CHEM 263.

3151 - Biochemistry Lab
1 Credit
Structure and properties of proteins, carbohydrates, lipids, and nucleic acids; introduction to enzyme kinetics and proteomics. Taken concurrently with CHEM 3111 or PHBS 3411. Offered fall semester. Prerequisite(s): (CHEM 3111 or PHBS 3411).

3201 - Medicinal Chemistry
3 Credits
Fundamentals of drug design and drug action including SAR, stereocchemical considerations, free energy relationships, receptors, enzymes, prodrugs and drug metabolism. Isolation, synthesis, characterization, and biology of bioactive natural products. Offered alternate spring semesters. Prerequisite(s): (CHEM 2521 and CHEM 2561) or (CHEM 2621 and CHEM 2661) or CHEM 253 or CHEM 263.

3261 - Medicinal Chemistry Lab
1 Credit

3411 - Physical Chemistry 1
4 Credits
Classical thermodynamics. Quantum mechanics of atoms and molecules. Laboratory illustrates principles and applications. Knowledge of computer programming recommended. Offered fall semester. Prerequisite(s): CHEM 271 or (MATH 263 and MATH 272 and MATH 275) and (PHYS 231 and PHYS 232 and PHYS 233 and PHYS 234 and PHYS 235 and PHYS 236).

3421 - Physical Chemistry 2
4 Credits
Molecular structure, statistical thermodynamics, and reaction dynamics. Laboratory illustrates applications in spectroscopy and kinetics. Offered spring semester. Prerequisite(s): CHEM 3411 or CHEM 342.

3601 - Organic Synthesis
4 Credits
Retrosynthetic analysis, functional group transformations, asymmetric synthesis, organometallic chemistry. Laboratory involves multistep synthesis utilizing techniques to work with air and water sensitive materials, standard purification techniques, and organic product characterization. Offered alternate spring semesters. Prerequisite(s): (CHEM 2621 and CHEM 2661) or CHEM 263.

3711 - Inorganic Chemistry 1
3 Credits
Bonding, structures, preparation, properties, compounds, and reactions of main group and transition metal elements. Laboratory involves basic methods of synthesis and characterization. Offered fall semester. Prerequisite(s): (CHEM 2621 and CHEM 2661) or CHEM 263.

3751 - Inorganic Chemistry 1 Lab
1 Credit
Lab for CHEM 3711. Offered fall semester. Corequisite(s): CHEM 3711.

3901 - Special Topics
1 to 3 Credits
Can be repeated as topic varies. This course is repeatable.

4001 - Capstone 3
2 Credits
Oral presentation and a formal paper on a chemical topic. Offered spring semester. Prerequisite(s): CHEM 3001 or CHEM 300.

4111 - Advanced Biochemistry: Proteins and Metabolism
3 Credits
In depth study of protein structure and function; enzyme kinetics and mechanisms; regulation and integration of metabolism; bioenergetics. Offered alternate spring semesters. Prerequisite(s): CHEM 3111 or CHEM 311.

4121 - Advanced Biochemistry: Information Transfer
3 Credits
DNA replication and repair; transcription; RNA modifications; translation; control of gene expression; signal transduction. Offered alternate spring semesters. Prerequisite(s): CHEM 3111 or CHEM 311.

4161 - Advanced Biochemistry Lab
2 Credits
Purification and characterization of biological macromolecules; enzyme kinetics and uses of enzymes in biochemical analyses. Offered spring semester. Prerequisite(s): CHEM 3151 or CHEM 315.
4321 - Analytical Chemistry 2
3 Credits
Theoretical and experimental study of modern methods of instrumental analysis. Principles, design and use of chemical instrumentation. Laboratory stresses independent, investigative experimentation. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s): (CHEM 2311 or CHEM 351) and (CHEM 3421 or CHEM 343).

4421 - Advanced Physical Chemistry
3 Credits
Selected topics from group theory, advanced quantum mechanics, spectroscopy and chemical dynamics. Knowledge of computer programming recommended. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s): CHEM 3421 or CHEM 343.

4601 - Physical Organic Chemistry
3 Credits
Application of molecular orbital theory, thermodynamics, and kinetics to the study of organic reaction mechanisms. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s): (CHEM 2521 or CHEM 2621 or CHEM 253 or CHEM 263) and (CHEM 3421 or CHEM 343).

4721 - Inorganic Chemistry 2
3 Credits
Theory, bonding, spectroscopy, reaction mechanisms and organometallic compounds. Laboratory involves advanced methods of synthesis and characterization. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s): (CHEM 2511 or CHEM 2621 or CHEM 253 or CHEM 263) and (CHEM 3421 or CHEM 343).

4811 - Senior Research 1
2 Credits
Mentored research project. Offered fall semester. Prerequisite(s): CHEM 3001.

4821 - Senior Research 2
2 Credits
Mentored research project. Offered spring semester. Prerequisite(s): CHEM 4811.

4901 - Special Topics
1 to 3 Credits
Can be repeated as topic varies. This course is repeatable.

4971 - Independent Study
1 to 4 Credits
Can be repeated for a maximum of 4 credit hours. Offered fall and spring semesters. This course may be repeated 3 times. This course is repeatable for a total of 4 hours.

DEPARTMENT OF COMMUNICATION AND THEATRE ARTS

Professors
Riess (Chair), Bell (Asst. Chair and Resident Artist), North: Associate Professor Gainey; Assistant Professors Agozzino, Armstrong, Cruea, Walton; Lecturer Robbins; Resident Artists Butler, Osburn-Manley; Resident Lighting Designer DeVault; Resident Technical Director Phillips; Costumer Smalley

Mission
Communication and Theatre Arts majors emphasize a liberal arts education combined with a professional program, designed to produce graduates who are prepared for a lifetime of learning in a diverse and changing world. Our flexible programs maintain professional standards while adapting easily to individual needs and interests. Our curriculum and manner of instruction encourage critical thinking, development of aesthetic and ethical standards and an understanding of human communication in all aspects of personal and professional life. With a strong foundation in general knowledge and specialty studies, graduates are prepared for entry level positions or graduate studies in their professional areas. They also attain the reasoning, organization and management skills necessary for a useful and meaningful life.

Overview Statement
The departmental course offerings promote understanding of the theory, practice and aesthetics of human communication. Students pursue a major particular to their professional education goals.

 Majors, Minors and Degrees Offered
Communication Studies Major (BA)
Electronic Media and Broadcasting Major (BA)
International Theatre Production Major (BFA)
Musical Theatre Major (BFA)
Public Relations Major (BA)
Theatre Major (BA)

Admission Requirements
An interview and portfolio review is required for the BFA in International Theatre Production. An audition is required for the BFA in Musical Theatre.

Special Programs
Internships and Study Abroad
Internships are an integral part of all programs. All students majoring in International Theatre Production are required to complete an international internship or study abroad.

Departmental Activities
Students are encouraged to become involved in a variety of departmental activities. ONU3-TV, ONU's Local Access Cable Channel, allows students to gain experience in broadcasting and management. ONU Cable TV provides students with experience in campus telecommunication activities. The Public Relations Student Society of America introduces students to professional networking, workshops, campaigns, and service. Ohio Northern University theatre offers opportunities for students to act in and engage in technical work for musicals, new works, readers theatre, dance and traditional plays. The National Communication Association Student Club allows students an opportunity to interact with professionals and provide service to the campus community. Credit toward graduation may be received for participation in some activities.

Major Course Requirements
All required courses in the major subject area must be completed with a grade of "C" or higher.

Communication Studies Major
Communication Studies provides knowledge and skills emphasizing the close relationship between effective communication and successful personal and professional relationships. The major prepares students for graduate study and for careers in fields such as human resources, law, business, education, entrepreneurship and politics.

BA Degree Requirements (39 credit hours)
CATA 1001 Orientation (0)
CACS 1111 Presentational Speaking (3)
CACS 2251 Interpersonal Communication (3)
CACS 3251 Communication Theory (3)
CACS 3351 Internship (3)
CACS 4951 Capstone (3)
BA Degree Requirements

ence gained through participation in projects within the campus radio
and media management. Course work is enhanced with practical experi-
cation to creative expressions, to offer diversified technological expertise

CAEM 4561
CAEM 4531
CAEM 4521
CAEM 3551
CAEM 4521
CAEM 4511
CAEM 4501
ENGL 4051
ENGL 4521
Rhetorical Theory (3)

Research Methods – Select three (3) hours:
CAPR 3421 Public Relations Research (3)
ISR 2531 Social Research 1 (3)
MRKT 4341 Marketing Research (3)

Communication Contexts – Select six (6) hours:
CACS 2151 Communication in the Classroom (3)
CACS 2201 Cross-cultural Communication (3)
CACS 3211 Group Dynamics and Team Interaction (3)
CACS 3451 Organizational Communication (3)
CACS 3481 Health Communication (3)
CATA 2901 Special Topics (3)
or
CATA 4901 Special Topics (3)
BIZ 2331 Behavioral Management for Business Planning (3)
or
BIZ 2511 Marketing for Business Planning (3)
TAAD 1201 Introduction to Arts Administration (3)

Writing – Select three (3) hours:
CAPR 2361 Public Relations Writing (3)
ART 1201 Introduction to Visual Communication (3)
ENGL 1411 News Writing (3)
ENGL 2051 Writing in the Profession (3)
TECH 1421 Web Development and Multimedia (3)

Electronic Media and Broadcasting Major

The Electronic Media and Broadcasting major is designed to give di-
rection to creative expressions, to offer diversified technological expertise
and to provide practical training in writing for the media, media production
and media management. Course work is enhanced with practical experi-
ence gained through participation in projects within the campus radio
station and the campus television studio as well as media internships.

The program is designed to ensure that students acquire the skills and
knowledge in electronic media necessary for professional career opportu-
nities.

BA Degree Requirements (40 credit hours)

CATA 1001 Orientation (0)
CAEM 1501 Introduction to Mass Media (3)
CAEM 2561 Multimedia Writing (3)
CAEM 2581 Electronic Media and Broadcasting Practicum: Audio
(WONB) (3)
CAEM 2591 Electronic Media and Broadcasting Practicum: Video
(ONU3-TV) (3)
CAEM 3351 Internship in Electronic Media and Broadcasting (3)
CAEM 3511 Introduction to Audio/Video Production (3)
CAEM 4531 Mass Media and Society (3)
CAEM 4591 Senior Capstone Experience (2)

Select two (2) hours:
CAEM 2581 Electronic Media and Broadcasting Practicum: Audio (1 to 2)
CAEM 2591 Electronic Media and Broadcasting Practicum: Video (1 to 2)

Select fifteen (15) hours:
CAEM 3551 Multimedia Journalism (3)
CAEM 3571 Introduction to DVD Design (2)
CAEM 4511 Introduction to AVID Editing (2)
CAEM 4521 Broadcast Sales, Marketing and Promotions (3)
CAEM 4531 Corporate Video Production (3)
CAEM 4551 Multimedia Management (3)
CAEM 4561 Advanced AVID Editing (2)

CAPR 1301 Introduction to Public Relations (3)
ENGL 1411 News Writing (3)

International Theatre Production Major

International Theatre Production graduates students with a com-
prehensive knowledge of the aspect of theatre technology and design.
Students are exposed to the different methodologies employed by theatre
artists from across the globe, providing students with a broad understand-
ing of the theatre arts. The program is intended for the individual who
plans to pursue a professional career, graduate study or further training in
theatre. Students are expected to successfully complete portfolio reviews
eyear during their course of study. Failure to successfully complete
two portfolio reviews in a row may result in dismissal from the program.

BFA Degree Requirements (71 to 82 credit hours)

CATA 1001 Orientation (0)
TAAD 1211 Art of Presenting (3)
TAIP 2001 Portfolio review (0)
TAIP 2111 Fundamentals of Stagecraft (3)
TAIP 2121 Fundamentals of Lighting/Sound (3)
TAIP 2131 Fundamentals of Costumes (3)
TAIP 2151 Makeup (2)
TAIP 2551 Technical Direction (3)
TAIP 2601 Stage Management (3)
TAIP 2651 Stage Management Practicum (1)
TAIP 2751 Intro to Design (3)
TAIP 3351 Study abroad or Internship (1-12)
TAIP 3501 Advanced Stagecraft (3)
TAIP 3761 Advanced Production Practicum (1)
TAIP 3781 Design Practicum (1)
TAIP 4001 Portfolio Review 2 (0)
TAIP 4951 Capstone (2)
TATH 2591 Acting for Non-Majors (2)
TATH 2751 Play Analysis (3)
TATH 2911 World Theatre History 1 (3)
TATH 2921 World Theatre History 2 (3)
TATH 3001 Symposiums (0)
TATH 4451 Business of Theatre (1)
TECH 1201 Introduction to CAD (3)
TECH 1601 Fund. Elec/Electron. (3)

One-year competency of a foreign language (6)

Select six (6) hours:
TAIP 3751 Scenic Design (3)
TAIP 3751 Lighting Design (3)
TAIP 3751 Sound Design (3)
TAIP 3751 Costume Design (3)
TAIP 3551 Elegant Solutions (3)

Select three (3) hours:
TATH 3801 World Theatre History III (3)
TATH 3911 American Theatre History (3)
TATH 3821 Playwriting (3)
TAMT2101 Musical Theatre History (3)
TADN 3601 Dance History (3)

Select three (3) hours:
TAIP 2761 Production Practicum (1)
TAIP 2651 Stage Management Practicum (1)
TAIP 2571 Shop Practicum (1)
TAIP 3781 Design Practicum (1)
TAIP 3761 Advanced Production Practicum (1)

Select three (3) hours:
PLSC 2201 International Studies (3)
GEOG 2261 World Regional Geography (3)

Musical Theatre Major

Musical Theatre provides professional training in dance, music
and theatre within a liberal arts environment. Students must audition for
admittance into the major and are expected to successfully complete
a sophomore hearing during their course of study. Graduates typically pursue professional careers in the performing arts.

**BFA Degree Requirements (77 credit hours)**

CATA 1001 Orientation (0)
TADN 1611 Musical Theatre Dance Styles I (2)
TADN 2611 Musical Theatre Dance Styles II (2)
TAIP 2151 Make-up (2)
TAIP 2651 Stage Management Practicum (1)
TMT 2951 Sophomore Hearing (0)
TMT 2101 Musical Theatre History and Literature (3)
TMT 3501 Acting Styles for Musical Theatre (3)
TMT 4501 Musical Theatre Audition Techniques (3)
TMT 4951 Senior Showcase (2)
TATH 2751 Play Analysis (3)
TATH 2911 World Theatre History I (3)
TATH 2921 World Theatre History II (3)
TATH 3001 Symposium (0)
TATH 2601 Introduction to Acting (2)
TATH 3601 Acting 2: Scene Study (3)
TATH 2501 Movement for the Actor (1)
TATH 4451 Business of Theatre (1)
TATH 2401 Voice and Speech (2)
MUSC 1041 Fundamentals of Music for MT (3)
MUSC 1051 Advanced Musicianship for MT (3)
MUSL 1111 Applied Lessons (1)
MUSL 1121 Applied Lessons (1)
MUSL 2111 Applied Lessons (1)
MUSL 2121 Applied Lessons (1)
MUSL 3111 Applied Lessons (1)
MUSL 3121 Applied Lessons (1)

Select twelve (12) hours:
CATA 2901 Special Topics (1 to 3)
TADN 2121 Dance and Culture (3)
TADN 3601 Dance History (3)
TADN 4601 Dance Composition (3)
TADN 1201 Ballet I (2)
TADN 1301 Modern I (2)
TADN 1401 Jazz I (2)
TADN 1501 Tap I (2)
TAIP 2601 Stage Management (3)
TATH 3501 Stage Combat (2)
TATH 3651 Acting 3: Shakespeare (3)
TATH 3601 Topics in Theatre History (3)
TATH 3861 Directing (3)
TATH 3911 American Theatre History (3)
MUSE 1111 Opera Workshop (1)

Select four (4) hours:
TADN 2601 Dance Practicum (1)
TATM 2601 Performance Practicum (1)
TATH 2611 Performance Practicum (1)

Select three (3) hours:
TAIP 2101 Fundamentals of Stagecraft (3)
TAIP 2201 Fundamentals Lighting and Sound (3)
TAIP 2301 Fundamentals of Costuming (3)

Select eight (8) hours:
TADN 2201 Ballet II (2)
TADN 2301 Modern II (2)
TADN 2401 Jazz II (2)
TADN 2501 Tap II (2)
TADN 3201 Ballet III (2)
TADN 3301 Modern III (2)
TADN 3401 Jazz III (2)
TADN 3501 Tap III (2)

Select two (2) hours:
MUCL 0011 Class Piano (1)
MUSL 0421 Applied Piano (1)

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**Public Relations Major**

The Public Relations program prepares students for jobs with agencies, nonprofit organizations and corporations doing both internal and external communication tasks. Public relations majors learn how to conduct research, plan programs, produce communication materials and carry out program evaluation. Ohio Northern University’s public relations program is designated as Certified for Education in Public Relations (CEPR) by the Public Relations Society of America (PRSA), the largest professional organization in the public relations field.

**BA Degree Requirements (46 credit hours)**

CATA 1001 Orientation (0)
CAPR 1301 Intro to Public Relations (3)
CAPR 2361 Public Relations Writing (3)
CAPR 2461 Public Relations and Social Media (3)
CAPR 3421 Public Relations Research (3)
CAPR 3361 Advanced Public Relations Writing (3)
CAPR 3351 Internship (3)
CAPR 3521 Publicity, Media and Campaigns (3)
CAPR 4301 Public Relations Case Studies (Capstone) (3)
CAPR 2031 Public Relations Practicum (4)

Select twelve (12) credits:
CACS 1111 Public Speaking (3)
CACS 2251 Interpersonal Communication (3)
CACS 3211 Group Communication (3)
CAEM 2561 Multimedia Writing (3)
CAPR 3731 Issues in Public Relations (3)
CATA 3901 Special Topics in Public Relations (3)
ENGL 1411 News Writing (3)
ISR 2531 Research Methods (3)

Select six (6) credits:
CACS 2211 Interviewing (3)
BIZ 2331 Behavioral Management and Business Planning (3)
BIZ 2511 Marketing and Business Planning (3)
CACS 3251 Communication Theory (3)
CACS 3451 Organizational Communication (3)

**Theatre Major**

Theatre explores the artistic expression of human action. As a liberal art, it is a foundation for many careers where critical thinking, analytic ability and creative expression are important. Graduates have been successful in theatre, law, medicine, banking and public service. The program permits the student to develop his or her individual focus.

**BA Degree Requirements (39 credit hours)**

CATA 1001 Orientation (0)
TAIP 2121 Fundamentals of Lighting and Sound (3)
TATH 2601 Fundamentals of Stagecraft (3)
TATH 2601 Introduction to Acting (2)
TATH 2751 Play Analysis (3)
TATH 2911 World Theatre History I (3)
TATH 2921 World Theatre History II (3)
TATH 3001 Theatre Symposium (0)
TATH 4951 Senior Capstone (2)

Select two (2) hours:
TAAD 2601 Arts Administration Practicum (1)
TADN 2601 Dance Practicum (1)
TAIP 2571 Shop Practicum (1)
TAIP 2651 Stage Management Practicum (1)
TAIP 2761 Production Practicum (1)
TAIP 3781 Design Practicum (1)
TATH 2611 Performance Practicum (1)
TATH 3621 Directing Practicum (1)

Select three (3) hours:
TADN 3701 Dance History (3)
TADN 2121 Dance and Culture (3)
TATH 3801 Topics in Theatre History/Dramatic Literature (3)
TATH 3821 Playwriting (3)
Select three (3) hours:
TAIP 2121 Fundamentals of Lighting and Sound (3)
TAIP 2571 Shop Practicum (1)
TAIP 2601 Stage Management (3)
TAIP 2651 Stage Management Practicum (1)
TAIP 2751 Introduction to Design (3)
TAIP 2761 Production Practicum (1)
TAIP 3501 Advanced Stage Technique in Stagecraft (3)
TAIP 3761 Advanced Theatre Production Practicum (1)
TAIP 3781 Design Practicum (1)

Select fifteen (15) hours:
In addition to the courses listed above, the student must complete 15 credit hours in TAIP, TATH, TAMT, or TADN courses. A maximum of six of these hours may be in dance, and a maximum of three of these hours may be practicum credit.

Communication and Theatre Arts Business Option
This option is available only to Communication and Theatre Arts majors.

Additional Requirements (21 credit hours)
ABUS 2011 Personal Computer Applications for Business (3)
BIZ 2111 Financial Accounting Foundations for Business Planning (3)
BIZ 2131 Legal Environment for Business Planning (3)

Select six (6) hours:
FINC 1101 Personal Finance (3)
BIZ 2331 Behavioral Mgmt for Business Planning (3)
BIZ 2511 Marketing for Business Planning (3)
BIZ 3621 Financial Analysis for Business Planning (3)
MRKT 4601 Integrated Marketing Communication (3)

Select two (2) courses:
Two additional 3000- or 4000-level business courses as approved by the CATA department.

Minors
All courses required for a minor must be completed with a grade of “C” or higher.

Arts Administration Minor (19 credit hours)
MGMT 4771 Non-profit Management (3)
TAAD 2111 Art of Presenting: Arts Admin. (3)
TAAD 2311 Arts Marketing/Audience Development (3)
TAAD 2411 Grant Writing/Arts Fundraising (3)
TAAD 2611 Arts Administration Practicum (1)
TAAD 3011 Arts Administration Symposium (0)
TAAD 3351 Arts Administration Internship (2)
TAHT 4451 Business of Theater (1)

Select three (3) hours:
BIZ 2511 Marketing for Business Planning (3)
CACS 2111 Advanced Presentational Speaking (3)
CACS 3451 Organizational Communication (3)
ENGL 2441 Desktop Publishing (3)
TECH 1421 Web Development and Multimedia (3)

Communication Studies Minor (18 credit hours)
CACS 1111 Presentational Speaking (3)
CACS 2251 Interpersonal Communication (3)
CACS 3111 Rhetorical Theory (3)
CACS 3251 CACS Theory (3)
Select at least three (3) hours from the area of Rhetorical Studies within the Communication Studies major. See page 56.

Select at least three (3) hours from the area of Communication Contexts within the Communication Studies major. See page 56.

Select at least three (3) hours from any of the four areas within the Communication Studies major. See page 56.

Dance Minor (22 credit hours)
TADN 1201 Ballet I (2)
TADN 1301 Modern I (2)
TADN 2121 Dance and Culture (3)
TADN 2201 Ballet II (2)
or
TADN 3201 Ballet III (2)
TADN 2301 Modern II (2)
or
TADN 3301 Modern III (2)
TADN 2601 Dance Practicum (1)
TADN 3601 Dance History (3)
TADN 4601 Dance Composition (3)

Select four (4) hours:
TADN 1211 Social Dance (1)
TADN 1221 International Folk Dance (1)
TADN 1401 Jazz I (2)
TADN 1501 Tap I (2)
TADN 2201 Ballet II (2)
TADN 2301 Modern II (2)
TADN 2401 Jazz II (2)
TADN 2501 Tap II (2)
TADN 3201 Ballet III (2)
TADN 3301 Modern III (2)
TADN 3401 Jazz III (2)
TADN 3501 Tap III (2)
TADN 4201 Ballet IV Pointe (2)

Electronic Media and Broadcasting Minor (23 credit hours)
CAEM 1501 Introduction to Mass Media (3)
CAEM 2561 Multimedia Writing (3)
CAEM 2581 Electronic Media and Broadcasting Practicum: Audio (2)
CAEM 2591 Electronic Media and Broadcasting Practicum: Video (2)
CAEM 3351 Internship in Electronic Media and Broadcasting (1)
CAEM 3511 Introduction to Audio/Video Production (3)
CAEM 4531 Mass Media and Society (3)

Select six (6) hours: 2
CAEM 3551 Multimedia Journalism (3)
CAEM 3571 Introduction to DVD Design (2)
CAEM 4511 Introduction to AVID Editing (2)
CAEM 4521 Broadcast Sales, Marketing and Promotions (3)
CAEM 4531 Corporate Video Production (3)
CAEM 4551 Multimedia Management (3)
CAEM 4561 Advanced AVID Editing (2)

Public Relations Minor (21 credit hours)
CAPR 1301 Introduction to Public Relations (3)
CAPR 2361 Public Relations Writing (3)
CAPR 2461 Public Relations and Social Media (3)
CAPR 3361 Advanced Public Relations Writing (3)
CAPR 3421 Public Relations Research (3)
CAPR 3521 Publicity, Media and Campaigns (3)
CAPR 4301 Public Relations Case Studies (3)
Theatre Minor (21 credit hours)
A maximum of six (6) credit hours in practicum courses may count toward the Theatre Minor. Students may not accomplish the minor in conjunction with any other Theatre discipline major.

TATH 2911 World Theatre History I (3)
TATH 2921 World Theatre History II (3)

Select one three-hour course (3) from a performance-based area: A practicum and skill driven course. A formal list is available in the department and on the department website.

Select one three-hour course (3) from a production-based area: A practicum and skill driven course. A formal list is available in the department and on the department website.

Select at least three other three-hour courses (for a total of nine (9) hours from the Theatre discipline.

Subject - Communication Studies (CACS)

1111 - Presentational Speaking
3 Credits
Basic principles of preparation, organization, and delivery of original informative and persuasive speeches. Offered fall and spring semesters.

2031 - Communication Studies Practicum
1 to 3 Credits
Hands-on experiential learning related to a variety of areas of communication studies. Practicum experiences require faculty approval. Offered fall and spring semesters. This course is repeatable for a total of 5 hours.

2111 - Advanced Presentational Speaking
3 Credits
Advanced principles of preparation, organization, and delivery of original informative, persuasive, group and special occasion speeches in natural, conversational, and audience-centered styles. Offered spring semester. Prerequisite(s): CACS 1111 Minimum Grade of C or COMM 211 Minimum Grade of C.

2151 - Communication in the Classroom
3 Credits
Emphasis on special audiences and situations unique to classroom teaching. Focus on interpersonal and speaking skills as they relate to interactions with students, parents, and the educational system. Offered fall and spring semesters.

2251 - Interpersonal Communication
3 Credits
Explores issues and theories which will assist students in their abilities to interact interpersonally in personal and professional relationships. Offered fall and spring semesters.

3111 - Rhetorical Theory
3 Credits
In depth examination and application of classical and contemporary rhetorical theories about the nature and dynamics of human communication. Offered alternate spring semesters. Prerequisite(s): CACS 1111 Minimum Grade of C or COMM 211 Minimum Grade of C or CACS 2251 Minimum Grade of C or COMM 2225 Minimum Grade of C.

3201 - Cross-Cultural Communication
3 Credits
Equips students with an awareness of the social construction of values, cognitions, performances across cultural lines. Familiarization with major theories, concepts, and skills in cultural adaptation and identity management. Offered fall semester.

3211 - Group Dynamics and Team Interaction
3 Credits
Group dynamics, theory, and problem solving/decision making methods are examined; emphasis on working effectively in teams and effective team interaction. Offered fall semester.

3251 - Communication Theory
3 Credits
In depth examination and application of communication theories about the nature and dynamics of human communication/interaction. Offered alternate spring semesters. Prerequisite(s): CACS 1111 Minimum Grade of C or COMM 211 Minimum Grade of C or CACS 2251 Minimum Grade of C or COMM 2225 Minimum Grade of C.

3311 - Interviewing
3 Credits
Basic principles and structures of interviewing are examined and applied to interview situations such as employment, performance/appraisal, journalism, counseling, etc. Offered fall semester.

3351 - Internship
1 to 9 Credits
A supervised program of experiences applying discipline related theories and practices to a working experience. Approval of department necessary for course registration. Offered fall and spring semesters. This course is repeatable for a total of 9 hours.

3451 - Organizational Communication
3 Credits
Major organization and communication theories and their practical applications for effective communication within organizations. Communication processes, various roles and relationships in organizations, leadership communication, ethics, and problematic communication situations. Offered fall semester.

3481 - Health Communication
3 Credits
Theory and practice of health communication. Examines communication between practitioner/client, in community/consumer health education, in health teams and groups, in health care delivery systems, in support systems for caretakers and patients, and in intercultural settings. Offered fall semester.

3501 - Film Study and Analysis
3 Credits
In depth exploration of the rhetorical principles found in popular contemporary films that define social trends, analyze social issues, and serve as metaphors for the human experience. Offered alternate fall semesters.

4211 - Political Communication and Campaigns
3 Credits
Political communication and the means to assess political activities through rhetorical methods of analysis. Methods may include those presented by classical and contemporary theorists such as Aristotle, Lloyd Bitzer, and Kenneth Burke. Offered alternate fall semesters.

4951 - Communication Studies Capstone
3 Credits
A multi-component project completed during the senior year. Integration of skills and experiences acquired during study to complete the major, including a major project and portfolio. Offered fall and spring semesters.
Subject - Electronic Media and Broadcasting (CAEM)

1501 - Introduction to Mass Media
3 Credits
A survey course that examines various aspects of mass media including broadcasting, cable, the internet, and the emerging electronic media. Offered fall semester.

2561 - Multimedia Writing
3 Credits
A study of the principles and techniques of copywriting for multimedia including radio and television and corporate audio/video. Offered spring semester. Prerequisite(s): CAEM 1501 Minimum Grade of C or COMM 150 Minimum Grade of C

2571 - Electronic Media and Broadcasting Practicum
1 to 12 Credits
Production practicum utilizing the facilities of WONB Radio and/or ONU Cable for the purpose of directed study using various production programs and utilizing various production skills. Permission of instructor required. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

2581 - Electronic Media and Broadcasting Practicum: Audio
1 to 12 Credits
Production practicum utilizing the facilities of WONB Radio. Highly skilled non-majors are welcome to take the course. Permission of instructor required. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

2591 - Electronic Media and Broadcasting Practicum: Video
1 to 12 Credits
Production practicum utilizing the facilities of ONU Cable. Highly skilled non-majors are welcome to take the course. Permission of instructor required. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

3351 - Internship
1 to 12 Credits
A skills course blending classroom theory with practical experience through working in an outside organization. Approval of department required. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

3511 - Multimedia Production
3 Credits
Principles and techniques of multimedia production. Course will include lab times utilizing the facilities of WONB Radio and ONU Cable Television. Offered fall semester. Prerequisite(s): CAEM 2561 Minimum Grade of C or COMM 256 Minimum Grade of C.

3551 - Multimedia Journalism
3 Credits
Principles of multimedia news gathering and reporting primarily for television and radio. Subjective and objective analysis of news, its presentation, and its effects. Practical assignments emphasized. Offered alternate spring semesters. Prerequisite(s): CAEM 1501 Minimum Grade of C or COMM 150 Minimum Grade of C.

3571 - Introduction to DVD Design
2 Credits
Hands-on course designed to provide an introductory understanding of video DVD creation. Using Apple DVD Studio Pro as the core software, the student will learn the process of DVD authoring beginning with the basic user interface of iDVD, and growing to use the advanced interface options of the software. Students will create a finished menu-driven DVD as a final project. Offered spring semester. Prerequisite(s): CAEM 3511 Minimum Grade of C or COMM 351 Minimum Grade of C.

4511 - Beginning Digital Editing
2 Credits
The technology and practice of digital editing, conversion of analog video and digital capture to a final assembly. Editing software, importing files, assembling, applying the transitions, adding titles, editing techniques and theory. Software from AVID Technology will be used, however other brands will be discussed. Formerly COMM 451. Offered fall semester. Prerequisite(s): CAEM 3511 Minimum Grade of C or COMM 351 Minimum Grade of C.

4521 - Broadcast Sales, Marketing and Promotions
3 Credits
Skills involved in selling broadcast time and station promotion. Offered alternate spring semesters. Prerequisite(s): CAEM 1501 Minimum Grade of C or COMM 150 Minimum Grade of C.

4531 - Mass Media and Society
3 Credits
The legal, ethical, and social responsibilities of journalists and other multimedia communicators. Offered alternate fall semesters. Prerequisite(s): CAEM 1501 Minimum Grade of C or COMM 150 Minimum Grade of C.

4541 - Corporate Video Production
3 Credits
An overview of industrial video production and script writing for applications in business, education, and industry. Principles and techniques for nonlinear video editing and production of an industrial video using Apple's Final Cut Pro software. Offered alternate spring semesters. Prerequisite(s): CAEM 3511 Minimum Grade of C or COMM 351 Minimum Grade of C.

4551 - Multimedia Management
3 Credits
Sales, programming, marketing, and management techniques unique to the multimedia. Offered alternate spring semesters. Prerequisite(s): CAEM 1501 Minimum Grade of C or COMM 150 Minimum Grade of C.

4561 - Advanced Digital Editing
2 Credits
Develops proficiency in using the AVID editing system, creation of videos, developing sophisticated editing skills, emphasis on editing aesthetics. Junior or senior standing. Offered spring semester. Prerequisite(s): CAEM 3511 Minimum Grade of C or COMM 351 Minimum Grade of C.

4951 - EMB: Senior Capstone
2 Credits
A production/performance based course which serves as the senior capstone for the Broadcasting and Electronic Media concentration. Permission of instructor required. Offered fall and spring semesters.

Subject - Public Relations (CAPR)

1301 - Introduction to Public Relations
3 Credits
The role, function, and responsibilities of the public relations practitioner within organizations. Offered fall and spring semesters.

2031 - Public Relations Practicum
1 to 8 Credits
Course provides students the opportunity to experience public relations firsthand through professional involvement with service and non-profit projects. Offered fall and spring semesters. Prerequisite(s): CAPR 2361 Minimum Grade of C or COMM 236 Minimum Grade of C. This course is repeatable for a total of 8 hours.

2361 - Public Relations Writing
3 Credits
Study of basic concepts for public relations writing and production of written public relations materials. The course consists of lectures, discussions, and supervised writing labs. Offered fall and spring semesters. Prerequisite(s): CAPR 1301 Minimum Grade of C or COMM 130 Minimum Grade of C.
2461 - Public Relations & Social Media
3 Credits
An introduction to basic concepts in public relations social media. Practitioners define social media in several ways. The course examines the similarities and differences while participating in hands-on writing and editing using the Internet and other social media tools. Offered fall semester. Prerequisite(s): CAPR 2361 Minimum Grade of C or COMM 236 Minimum Grade of C.

3351 - Public Relations Internship
1 to 12 Credits
A skills course blending classroom theory with practical experience through working in an outside organization. Permission of instructor required. Offered fall and spring semesters. Prerequisite(s): CAPR 2361 Minimum Grade of C or COMM 236 Minimum Grade of C. This course is repeatable for a total of 12 hours.

3361 - Advanced Public Relations Writing
3 Credits
The course presents opportunities for research, indentifying and writing public affairs columns, editorials, features, and position papers for use in the public relations arena. Offered fall semester. Prerequisite(s): CAPR 2361 Minimum Grade of C or COMM 236 Minimum Grade of C.

3421 - Public Relations Research
3 Credits
The planning and evaluation process and methods for public relations. Offered spring semester. Prerequisite(s): CAPR 3361 Minimum Grade of C or COMM 336 Minimum Grade of C.

3521 - Publicity Media and Campaigns
3 Credits
A course analyzing techniques for motivating target audiences with practical analysis. The preparation of communication materials to elicit reactions or support from specialized groups in order to build and/or maintain mutually beneficial relationships. Offered spring semester. Prerequisite(s): CAPR 3361 Minimum Grade of C or COMM 336 Minimum Grade of C.

3731 - Issues in Public Relations
1 to 3 Credits
Current topics in the field including but not limited to: the role of public relations in organizational decision making, ethics, and special practice areas. Offered spring semester. Prerequisite(s): CAPR 2361 Minimum Grade of C or COMM 236 Minimum Grade of C. This course is repeatable.

4951 - Public Relations Case Studies
3 Credits
Public relations case studies concerning problems in industry, business, education, government, social welfare, and trade associations. Offered spring semester. Prerequisite(s): CAPR 3521 Minimum Grade of C or COMM 330 Minimum Grade of C.

Subject - Communication & Theater Arts (CATA)

1001 - Orientation
0 Credits
Familiarization with the departmental requirements for majors, planning a program of courses, university catalog and library. Required of departmental majors. Offered fall semester.

1901 - Special Topics in Communication and Theatre Arts
1 to 3 Credits
Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. A repeatable course.

2901 - Special Topics in Communication and Theatre Arts
1 to 3 Credits
Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. A repeatable course.

2991 - Independent Study in Communication and Theatre Arts
1 to 3 Credits
A topic in Communication and Theatre Arts that is of particular interest to the student. Permission of the department. Formerly COMM 299. Offered fall and spring semesters. A repeatable course.

3901 - Special Topics in Communication and Theatre Arts
1 to 3 Credits
Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. A repeatable course.

4901 - Special Topics in Communication and Theatre Arts
1 to 3 Credits
Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. A repeatable course.

4991 - Independent Study in Communication and Theatre Arts
1 to 3 Credits
A topic in Communication and Theatre Arts that is of particular interest to the student. Permission of the department. Offered fall and spring semesters. A repeatable course.

Subject - Arts Administration (TAAD)

2111 - Art of Presenting: Arts Administration
3 Credits
General overview of programming, arts management skills, boards, mission statements, long and short range plans, personnel development, logistics of running various arts organizations and planning effective seasons. Offered alternate fall semesters.

2311 - Arts Marketing/Audience Development
3 Credits
Course focuses on marketing strategies for non-profit arts organizations and audience development. This includes the study of community outreach and arts education in addition to general audience development. Offered alternate spring semesters. Prerequisite(s): TAAD 2111 Minimum Grade of C.

2411 - Grant Writing/Arts Fundraising
3 Credits
Course explores fundraising techniques, prospect identification, gifts, capital campaigns and other sources of funding for arts organizations. An in-depth study of grant writing is also a major component. Offered alternate spring semesters. Prerequisite(s): TAAD 2111 Minimum Grade of C.

2611 - Arts Administration Practicum
1 Credit
Audience development, educational outreach and marketing within the Freed Center for the Performing Arts. Offered fall and spring semesters. This course may be repeated 3 times. This course is repeatable for a total of 3 hours.

3351 - Arts Administration Internship
3 Credits
External work experience in an arts organization. Offered fall and spring semesters. This course is repeatable.

Subject - Dance (TADN)

1101 - Introduction to Dance
2 Credits
Ballet, jazz and tap presented to develop the ability to learn basic components and vocabulary of each of these forms. Offered fall semester.

1201 - Ballet I
2 Credits
Designed for the student with little experience in ballet technique. Offered fall and spring semesters. This course may be repeated 1 time.
1221 - International Folk Dance
1 Credit
Dances from cultures around the world: step and rhythmic patterns, position, and formations of traditional and ethnic group dances. Offered alternate spring semesters.

1301 - Modern Dance I
2 Credits
Designed for the student with little experience in modern dance technique. Offered spring semester. This course may be repeated 1 time.

1401 - Jazz Dance I
2 Credits
Designed for the student with little experience in jazz dancing. Offered spring semester. Prerequisite(s): TADN 1201 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

1501 - Tap Dance I
2 Credits
Designed for the student with little experience in tap dancing. A repeatable course. Offered fall semester. This course may be repeated 1 time.

1611 - Musical Theatre Dance Styles I
2 Credits
The study and recreation of historical musical theatre dance and related social dances influencing Broadway stage choreography. Offered alternate spring semesters.

2111 - Social Dance
1 Credit
Social dance course to include waltz, foxtrot, swing, polka, rhumba, tango, and cha-cha. Emphasis will be placed on rhythm, style and skill development. Offered alternate fall semesters.

2121 - Dance and Culture
3 Credits
An investigation of movement and dance as a vehicle for understanding culture through movement and an understanding of the rich diversity of movement via readings, films and discussion. Offered alternate spring semesters.

2201 - Ballet II
2 Credits
For intermediate students with experience in ballet technique. Offered spring semester. Prerequisite(s): TADN 1201 Minimum Grade of C or COMM 117 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

2301 - Modern Dance II
2 Credits
For intermediate students with experience in modern technique. Offered fall semester. Prerequisite(s): TADN 1301 Minimum Grade of C or COMM 118 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

2401 - Jazz Dance II
2 Credits
For intermediate students with experience in jazz dance. Offered fall semester. Prerequisite(s): TADN 1401 Minimum Grade of C or COMM 116 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

2501 - Tap Dance II
2 Credits
Designed for intermediate students with experience in tap dancing. Offered fall semester. Prerequisite(s): TADN 1501 Minimum Grade of C or COMM 115 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

2601 - Dance Practicum
1 to 3 Credits
Participation in a collaborative experience with guest artists and choreographers. Open only to students who have auditioned and have been awarded roles in dance productions. A repeatable course. Permission of the instructor. Offered fall and spring semesters.

2611 - Musical Theatre Dance Styles II
2 Credits
A continuation of Musical Theatre Dance Styles I. The study and recreation of historical musical theatre dance and related social dances influencing Broadway stage choreography. Offered alternate spring semesters.

3201 - Ballet III
2 Credits
For students with advanced experience in ballet technique. May include pointe work for students with strong technique. Permission of instructor required. Offered alternate fall semesters. Prerequisite(s): TADN 2201 Minimum Grade of C or COMM 217 Minimum Grade of C or permission of the instructor.

3301 - Modern Dance III
2 Credits
For students with advanced experience in modern technique. Prerequisite(s): TADN 2301 Minimum Grade of C or COMM 218 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

3401 - Jazz Dance III
2 Credits
For students with advanced experience in jazz dance. Offered spring semester. Prerequisite(s): TADN 2401 Minimum Grade of C or COMM 216 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

3501 - Tap Dance III
2 Credits
For students with advanced experience in tap dance. Permission of instructor required. Offered spring semester. Prerequisite(s): TADN 2501 Minimum Grade of C or COMM 215 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

3601 - Dance History
3 Credits
From the Middle Ages through present times, an historical survey of the origins, growth, and development of theatrical dance. Focus on the forces, processes, and personalities that influenced dance. Offered alternate fall semesters.

4201 - Ballet IV Pointe
2 Credits
Techniques of pointe work at the barre and center work. Offered alternate fall semesters. Prerequisite(s): TADN 3201 Minimum Grade of C or permission of the instructor. This course may be repeated 1 time.

4601 - Dance Composition
3 Credits
Principles general to choreographic compositional styles and their application via compositional projects and in-class explorations. Offered alternate spring semesters. Prerequisite(s): TADN 2201 Minimum Grade of C or COMM 217 Minimum Grade of C or TADN 2301 Minimum Grade of C or COMM 218 Minimum Grade of C or TADN 2401 Minimum Grade of C or COMM 216 Minimum Grade of C or permission of the instructor.
Subject - International Theater Production (TAIP)

2001 - Portfolio Review I
0 Credits
International Theatre Production students are required to present an updated portfolio and resume of production and course work at a formal portfolio review session at the end of each year enrolled. The faculty will advise the student to continue in their ITP degree or select another degree program in the University. Open to freshmen and sophomores. This course may be repeated 1 time.

2111 - Fundamentals of Stagecraft
3 Credits
Theoretical and practical work in the fundamentals of technical theatre production. Content includes scenic construction, property construction, theatrical rigging, basic drafting, and basic design theory. Offered alternate fall semesters.

2121 - Fundamentals of Lighting and Sound
3 Credits
Theoretical and practical work in the fundamentals of lighting and sound production. Content includes stage lighting, sound theory for live reinforcement and recorded sound effects. Offered alternate fall semesters.

2131 - Fundamentals of Costuming
3 Credits
Theoretical and practical work in the hand sewing, draping and drafting of patterns for basic garments, various problems of layout and cutting, and specialized sewing techniques for costumes. Offered alternate fall semesters.

2151 - Make-Up
2 Credits
Methods and practice in the creation and application of stage makeup. Students may comprise makeup crews for University Theatre and Studio Theatre productions. Offered spring semester.

2551 - Technical Direction
3 Credits
Technology, organization, and operation of the theatrical scene shop centered around the proper and safe use of tools, the choosing of materials, and methods of construction. Offered alternate fall semesters.

2571 - Shop Practicum
1 to 3 Credits
Participation in a collaborative laboratory experience working in the scene or costume shop for University productions. More than six hours may apply towards graduation only for Theatre, Musical Theatre and International Theatre Production majors. Permission of instructor. Offered fall and spring semesters. A repeatable course.

2601 - Stage Management
3 Credits
Principles and practices of stage management and logistical organization of commercial and non-commercial theatre. Content includes scheduling, pre-production planning, auditions, rehearsals, performance procedures, budgeting, company organization and structure. Offered alternate fall semesters.

2651 - Stage Management Practicum
1 to 3 Credits
Participation in a collaborative laboratory experience working as a stage manager, assistant stage manager or company manager for University productions. More than six hours may apply toward graduation only for Theatre, Musical Theatre and International Theatre Production majors. Permission of instructor. Offered fall and spring semesters. A repeatable course.

2751 - Introduction to Design
3 Credits
Introduction to theory and practice of theatrical design, text analysis and the ways a production concept and visual metaphor can be communicated in the design of scenery, costumes and lighting. Offered alternate fall semesters.

2761 - Production Practicum
1 to 3 Credits
Participation in a collaborative laboratory experience which involves serving on a crew for University productions. More than six hours may apply toward graduation only for Theatre, Musical Theatre and International Theatre Production majors. Permission of instructor. Offered fall and spring semesters. This course is repeatable.

3351 - Internship in International Theatre Production
1 to 12 Credits
A skills course blending classroom theory with practical experience through working in an outside organization. Approval of department required prior to registration for course. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

3501 - Advanced Stagecraft
3 Credits
Advanced construction principles and techniques applied to stage scenery and design. Advanced woodworking, rigging and welding are possible topics covered. Offered alternate spring semesters. Prerequisite(s): TAIP 2111 Minimum Grade of C or COMM 275 Minimum Grade of C.

3551 - Topics in Theatre Technology
3 Credits
The principle technical elements of theatre including technical problems solving, scene painting, welding, and graphic solutions to technical theatre. Offered alternate spring semesters. Prerequisite(s): TAIP 2111 Minimum Grade of C or COMM 275 Minimum Grade of C and TAIP 2121 Minimum Grade of C or COMM 274 Minimum Grade of C and TAIP 3501 Minimum Grade of C. This course may be repeated 3 times.

3751 - Topics in Theatre Design
3 Credits
The principle design elements of theatre including but not limited to scenic, costume, lighting and sound. A repeatable course. Permission of the instructor. Offered annually. Prerequisite(s): TAIP 2751 Minimum Grade of C. This course may be repeated 3 times.

3761 - Advanced Production Practicum
1 to 3 Credits
Participation in a collaborative laboratory experience which focuses on the supervision and execution of lights, sound, scenic, costumes or props for University productions. More than six hours may apply toward graduation only for Theatre, Musical Theatre and International Theatre Production majors. Permission of instructor. Offered fall and spring semesters. A repeatable course.

3781 - Design Practicum
1 to 3 Credits
Participation in a collaborative laboratory experience which focuses on the design of lights, sound, scenic, or costumes for University productions. More than six hours may apply toward graduation only for Theatre, Musical Theatre and International Theatre Production majors. Permission of instructor. Offered fall and spring semesters. This course is repeatable.

4001 - Portfolio Review II
0 Credits
International Theatre Production students are required to present an updated portfolio and resume of production and course work at a formal portfolio review session at the end of each year enrolled. Upon completion of the final semester, students shall present their work at an exit portfolio presentation: all accumulated design and/or production work completed while enrolled in the B.F.A. program shall be presented. Open to juniors and seniors. Offered spring semester. Prerequisite(s): TAIP 2001 Minimum Grade of S. This course may be repeated 2 times.

4951 - International Theatre Production Capstone
2 Credits
An advanced production project which integrates skills and experiences acquired during the completion of the major. Permission of instructor and completion of project abstract. A graduating senior survey must be completed to receive credit for this course. Offered fall and spring semesters.
Subject - Musical Theater (TAMT)

2101 - Musical Theatre History & Literature
3 Credits
The history of American Musical Theatre, its origins, and development through the 20th century, covering Broadway and film musicals, as well as the famous and historical figures of Broadway. Offered alternate spring semesters.

2601 - Musical Theatre Performance Practicum
1 Credit
Participation in a collaborative rehearsal experience. Open only to students who have auditioned for and been awarded roles in University mainstage or studio theatre productions. A repeatable course but only 4 hours apply toward the major. Permission of instructor required. Offered fall and spring semesters.

2611 - Musical Theatre Pit Orchestra Practicum
1 Credit
Participation in a collaborative rehearsal experience. Open only to students who have been invited to perform in the pit orchestra of a University mainstage or studio theatre production. Permission of instructor required. Offered fall and spring semesters. This course is repeatable.

2951 - Musical Theatre Sophomore Hearing
0 Credits
An assessment procedure typically performed at the end of the second year spring semester. Students prepare monologues and song material for presentation and evaluation including dance assessment. Permission of instructor required. Offered spring semester. Prerequisite(s): (TATH 3601 or COMM 360) and (MUSC 1051 or MUSC 121) and MUSC 131 and (MUSC 2121 or APMU 225) and (TADN 2501 or COM 215 or TADN 2401 or COMM 216 or TADN 2201 or COMM 217 or TADN 2301 or COMM 218) all with a Minimum grade of C.

3351 - Internship in Musical Theatre
1 to 12 Credits
Working in an external organization having the opportunity to blend classroom theory and practical experience. Permission of instructor required. Offered fall and spring semesters. Prerequisite(s): TAMT 2951 Minimum Grade of S. This course is repeatable for a total of 12 hours.

3501 - Musical Theatre Audition Techniques
3 Credits
Prepares students for the musical theatre profession by exploring the skills and knowledge required for casting. This course focuses on audition techniques, selecting and interpreting audition material, and researching the resources available to actors seeking work in the professional theatre. Permission of instructor required. Offered alternate spring semesters. Prerequisite(s): TAMT 2951 Minimum Grade of S.

4501 - Acting Styles for Musical Theatre
3 Credits
A scene study class geared toward an understanding of the range of acting techniques used specifically in musical theatre from vaudeville to contemporary and modern musicals. Permission of instructor required. Offered alternate spring semesters. Prerequisite(s): TAMT 2951 Minimum Grade of S.

4951 - Musical Theatre Senior Showcase
2 Credits
Musical Theatre research, preparation, planning, and rehearsal, culminating in a presentation for agents and casting directors. Permission of instructor required. Offered spring semester. Prerequisite(s): TAMT 2951 Minimum Grade of S

Subject - Theater (TATH)

1051 - Introduction to the Performing Arts
3 Credits
An introduction to theatre through the study of its origin and development, and its contemporary theory and practice. For the nonmajor. Includes lecture, play attendance and production experience. Offered fall and spring semesters.

2401 - Voice and Speech
2 Credits
An exploration of the voice as an organ and as a means of expression. Vocal technique is developed through exercises which expand breath, range and resonance while speech is enhanced through the exploration and expression of dramatic text. Offered fall semester.

2501 - Movement for the Actor
1 Credit
Enhances the actor’s instrument through development of physical expression and character work. Techniques include but are not limited to: Alexander, Laban, Feldenkrais, Chekhov, and physical training such as yoga, pilates and tai chi. Offered spring semester.

2591 - Acting for Nonmajors
2 Credits
The fundamentals of stage acting through exercises, readings, discussions and scene study, for the student not majoring in performance. Offered fall semester. May not be enrolled in one of the following Major fields of study: Musica Theatre, Theatre .

2601 - Introduction to Acting
2 Credits
The fundamentals of stage acting through exercises, readings, discussion and scene study. The beginning actor learns to analyze action, activity, objectives and obstacles and to incorporate them into performance. Offered fall semester.

2611 - Theatre Performance Practicum
1 to 3 Credits
Participation in a collaborative performance experience. Open only to students who have auditioned for and have been awarded roles in University mainstage or studio theatre productions. Offered fall and spring semesters. A repeatable course.

2751 - Play Analysis
3 Credits
A study of the play from page to stage with an emphasis on critical analysis of structure, style, theme, character, language, dramatic event, and the perspectives of the actor, director, critic, and audience. Offered fall semester.

2911 - World Theatre History I
3 Credits
A survey of the history and social impact of the theatre in Western and non-Western cultures from ancient times to the Renaissance. Permission of instructor required. Offered fall semester. Prerequisite(s): TATH 2751 Minimum Grade of C.

2921 - World Theatre History II
3 Credits
A survey of the history and social impact of the theatre in Western and non-Western cultures from the Renaissance to the 19th Century. Permission of instructor required. Offered spring semester. Prerequisite(s): TATH 2751 Minimum Grade of C.

3001 - Symposium
0 Credits
Workshop with visiting theatre professionals which may include stage directors, designers, choreographers, and professional performers. Repeatable with different topics. Student may complete 1 course per academic year. Offered fall and spring semesters. This course may be repeated 2 times.
3351 - Internship in Theatre
1 to 12 Credits
Blends classroom theory with practical experience through working in an external organization. Permission of Instructor. Offered fall and spring semesters. This course is repeatable for a total of 12 hours.

3501 - Stage Combat
2 Credits
An introduction to the fundamentals of stage combat including but not limited to: unarmed and rapier /dagger. Formerly COMM 262. Offered alternate spring semesters. Prerequisite(s): TAMT 2951, minimum grade of S or permission of the instructor.

3601 - Acting II: Scene Study Intensive
3 Credits
A scene study intensive that expounds upon the techniques acquired in Intro. to Acting, TATH 2601. The actor now learns to apply acting skills to the development of a role in a scripted play with greater emphasis on the character and its throughline. Theatre and Musical Theatre Majors only, or permission of instructor. Offered annually. Prerequisite(s): TATH 2601 Minimum Grade of C or COMM 260 Minimum Grade of C. A repeatable course.

3621 - Directing Practicum
1 to 3 Credits
Participation in a collaborative directorial experience that focuses on directing a University mainstage or studio theatre production with faculty advising. Offered fall and spring semesters. Prerequisite(s): TATH 3861 Minimum Grade of C or COMM 386 Minimum Grade of C or permission of the instructor. A repeatable course.

3651 - Acting III: Shakespeare
3 Credits
An exploration of the works of the world’s most celebrated playwright, this course develops an understanding of Shakespeare’s language, rhetoric and performance techniques through sonnets, monologues, scene study and demonstration. Offered annually. Prerequisite(s): TATH 3861 Minimum Grade of C or COMM 360 Minimum Grade of C and TATH 2401 Minimum Grade of C or COMM 340 Minimum Grade of C. A repeatable course.

3801 - Topics in Theatre History/Dramatic Literature
3 Credits
Major topics in theatre history and/or dramatic literature including but not limited to: 20th-century theatre, issues in contemporary theatre, Irish theatre, contemporary women playwrights. May be repeated with different topic. Offered annually. Prerequisite(s): TATH 2751 Minimum Grade of C. This course may be repeated 3 times.

3821 - Playwriting
3 Credits
A writing workshop designed to introduce students to the basic building blocks of writing for the stage, including: plot, character, dialogue, setting and dramatic action. Offered alternate fall semesters.

3861 - Directing
3 Credits
Methods, theories, exercises, and practices in directing and presenting dramatic scenes. Offered fall semester. Prerequisite(s): TATH 2601 Minimum Grade of C or COMM 260 Minimum Grade of C or permission of the instructor.

3911 - American Theatre History
3 Credits
A historical survey of American theatre and popular entertainment forms from the colonial period through the rise of realism and contemporary theatre. Offered alternate spring semesters. Prerequisite(s): TATH 2751 Minimum Grade of C.

4451 - Business of Theatre
1 Credit
Prepares students for a career in the professional theatre by teaching the skills and knowledge needed for gaining employment and for good career management. Topics include audition/portfolio materials, audition techniques and resources for various professional markets. Offered alternate spring semesters.

4601 - Acting IV: Styles of Acting
3 Credits
A scene study course focusing on specific performance techniques of genres beyond American realism. The material practiced includes playwrights such as Chekhov, Beckett, Wilde, Moliere, Pinter and Ionesco. Offered alternate spring semesters. Prerequisite(s): TATH 3601 Minimum Grade of C or COMM 360 Minimum Grade of C and TATH 2401 Minimum Grade of C or COMM 340 Minimum Grade of C.

4851 - Dramatic Criticism and Production Analysis
3 Credits
The director and dramaturg’s analysis of a play in preparation for production. Theories/approaches considered include: action structures, character-based analysis, epic theatre, feminism, and semiotics. Offered alternate spring semesters. Prerequisite(s): TATH 2751 Minimum Grade of C.

4951 - Senior Capstone
1 to 3 Credits
A production/performance based project that serves as the senior capstone for the Theatre major. Permission of instructor and senior status. Offered fall and spring semesters.

DEPARTMENT OF EDUCATION AND CENTER FOR TEACHER EDUCATION

Associate Professors Freeman, Kieffer, Roepke (Director of the Center for Teacher Education); Assistant Professors Gallagher, Garlough, Gillham, Schul; Lecturers Osborn; Visiting Associate Professor Berg (Chair); Visiting Instructor Lehman

Center for Teacher Education The Center includes the Education faculty above plus the following faculty from other areas of Ohio Northern University: Professors C. Bates, D’Arca, Dufault, McMans, Meininger, Putt, Rough Associate Professors S. Bates, J. Pinkney, Reid, S. Schroeder, E. Wilson; Assistant Professors Beaschler, Crawford, Kanwit, Maher, Rohan, Witte; Visiting Instructor R. Miller

Mission Statement
The Center for Teacher Education is a community of dedicated faculty committed to providing quality instruction in the knowledge of the learner, the classroom, knowledge of the discipline, and knowledge of pedagogy. These areas of knowledge are integrated, the end result is an enabling teacher who can prepare students with diverse backgrounds and abilities to contribute both individually and cooperatively to the common good of the larger society.

Vision Statement
In collaboration with the broader Ohio Northern community and the professional community in schools surrounding our university, the Center for Teacher Education seeks to prepare educators who are able to meet the challenges of teaching in the twenty-first century. Our shared vision has two central components. The first relates to the nature of the learner and the second to our role in educational change and understanding.
1. We envision an educational system that prepares a citizenry that is made up of diverse individuals who are lifelong learners and who contribute individually and collectively to the common good of the larger society.
2. It is also the vision of the Center for Teacher Education to prepare teachers who are enablers. By this we mean that an ONU teacher education candidate will be the type of educator who uses knowledge of the learner, knowledge of the appropriate discipline, and knowledge of pedagogy to create environments and circumstances that enable all students to become autonomous learners. This requires the establishment of teaching methods, strategies and environments that contribute to all students’ physical, cognitive, and socio-emotional growth and well-being.
Accreditation
The Center for Teacher Education is accredited by the National Council for Accreditation of Teacher Education (NCATE). In addition, Teacher Education Programs are approved by the Chancellor of the Ohio Board of Regents as meeting curriculum and experience requirements for the initial Ohio teaching license. All requirements are subject to change and approval by these two entities.

Majors and Degrees Offered
Early Childhood Education Major (BA, BS)
Middle Childhood Education Major (BA, BS)

Licensure Offered
The Center for Teacher Education offers the following teacher licensure programs for Early Childhood, Middle Childhood, Adolescent/Young Adult (AYA) and Multi-age (MA) teacher candidates:
- Early Childhood (grades PK-3)
- Early Childhood Generalist Endorsement (grades 4-5)
- Middle Childhood (grades 4-9)
- Middle Childhood Generalist Endorsement (grades 4-6)
- AYA Integrated Language Arts (grades 7-12)
- AYA Integrated Mathematics (grades 7-12)
- AYA Integrated Social Studies (grades 7-12)
- AYA Integrated Science (grades 7-12)
- AYA Life Sciences (grades 7-12)
- AYA Physical Sciences: Physics and Chemistry (grades 7-12)
- AYA Physical Sciences: Chemistry (grades 7-12)
- MA Music (grades PK-12)
- MA Visual Arts (grades PK-12)
- MA Physical Education (grades PK-12)
- MA Health (grades PK-12)
- MA Foreign Languages (French, Spanish or German) (grades PK-12)
- MA Technology (grades 4-12)

Those candidates pursuing the AYA or MA programs must complete the major and degree requirements in the subject area from the appropriate ONU department and complete the professional education coursework listed below.

Admission Requirements
Teacher education candidates typically apply for formal admission to the Teacher Education Program during the sophomore year. Requirements include a minimum 2.50 grade point average, passage of the Praxis I examination, a grade of ‘C’ or higher in specified prerequisite courses, and favorable recommendations. Candidates should contact the Center for Teacher Education office for complete requirements and application procedures. Applications for admission are considered by the Center faculty.

Special Programs
Student Teaching At-home and Abroad
The Teacher Education Program culminates with a twelve-week minimum supervised student teaching experience. Although most candidates student teach near Ohio Northern University, the Center for Teacher Education offers a student teaching abroad program. Candidates may be approved through application to student teach at various worldwide locations with which ONU’s Center for Teacher Education collaborates for this purpose.

Major Course Requirements
Requirements are listed by program and degree. The teacher candidate must be formally admitted to the Teacher Education Program to take any course marked with an asterisk (*).

Field Experience
All teacher candidates complete required coursework as well as extensive field experience in which the candidate collaborates with university faculty and K-12 classroom teachers and students to develop the knowledge, skills, and dispositions necessary to become a competent teacher. Field experience requirements differ by program and are available in the Center for Teacher Education office.

Early Childhood Education (PK-3) Major (67 credit hours)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience 1 (1)
EDUC 1521 Five-Day Field Experience 2 (1)
ECED 2051 Children’s Literature (3)
EDUC 2101 Exceptional Learners (3)
ECED 2301* Early Childhood Mathematics Methods (2)
ECED 2401 Introduction to Early Childhood Education (3)
ECED 2421* Early Childhood Curriculum/Policies (3)
ECED 2671* Educational Psychology (3)
EDUC 3001 Foundations of Literacy (3)
ECED 3051* Social Studies in Early Childhood Education (2)
EDUC 3121 Teaching Phonics (3)
ECED 3151* Teaching Science as Inquiry (3)
ECED 3181 EC Classroom Assessment (3)
EDUC 3201* Instructional Media and Educational Technologies (3)
EDUC 3221* Integrated Language Arts (3)
ECED 3351* Visual Arts in Early Childhood Education (2)
EDUC 3421* Literacy Across the Content Areas (3)
ECED 3551* Music and Movement in Early Childhood Education (2)
EDUC 4001* Assessment and Evaluation of Reading Instruction (3)
EDUC 4451* Leadership Seminar in Education (3)
EDUC 4701* Student Teaching/EC/MC (12)

In addition, each Early Childhood Education major must complete the selected coursework below to meet the requirements of either the BA or BS degree for the Getty College of Arts and Sciences.

BA Degree General Education Requirements (58 credit hours)
TREX XXX1 Transitions Experience (3)
XSEM XXX1 Extra-disciplinary Seminar (3)
ART 1651 Visual Literacy (3)
CACS 2151 Communication in the Classroom (3)
HIST XXX1 History elective (3)
HPSS 1011 Lifetime Fitness and Wellness (1)
MATH 1661 Fundamental Mathematics 1 (3)
MATH 1671 Fundamental Mathematics 2 (3)
PHIL 2401 Professional Ethics (3)
PSYC 1001 Psychology (3)
PSYC 2161 Child Psychology (3)
RELG XXX1 Religion elective (3)
SOC XXX1 Sociology elective (3)

Select one:
ENGL 1221 Writing Seminar (3)
ENGL 1231 Writing Seminar (3)

Select one:
BIOL 1031 Life/Earth Sciences for EC/MC (3)
BIOL 2011 Environmental Issues (3)
CHEM 1001 Chemistry in Society (3)
GEOL 2801 Geology (3)
PHYS 1001 Conceptual Physics (3)
PHYS 1051 Planetary Astronomy (3)

Select one:
GEOG 2261 World Regional Geography (3)
GEOG 2271 Physical Geography (3)

Select one:
ENGL XXX1 English literature elective (3)
MDLG XXX1 Modern Language literature elective (3)

Select one:
MUSC 1001 Music Appreciation (3)
MUSC 2201 Non-western Music (3)
One year of a modern language (or equivalent through placement) (6)

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<td>Elementary Chinese 1 (3)</td>
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**BS Degree General Education Requirements** (55 credit hours)

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<td>Child Psychology (3)</td>
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<td>SOC XXX1</td>
<td>Sociology elective (3)</td>
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One additional mathematics or science elective (3).

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<td>Chemistry in Society (3)</td>
</tr>
<tr>
<td>GEOL 2801</td>
<td>Geology (3)</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>Conceptual Physics (3)</td>
</tr>
<tr>
<td>PHYS 1051</td>
<td>Planetary Astronomy (3)</td>
</tr>
</tbody>
</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 2261</td>
<td>World Regional Geography (3)</td>
</tr>
<tr>
<td>GEOG 2371</td>
<td>Physical Geography (3)</td>
</tr>
</tbody>
</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL XXX1</td>
<td>English literature elective (3)</td>
</tr>
<tr>
<td>MDLG XXX1</td>
<td>Modern Language literature elective (3)</td>
</tr>
</tbody>
</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 1001</td>
<td>Music Appreciation (3)</td>
</tr>
<tr>
<td>MUSC 2201</td>
<td>Non-western Music (3)</td>
</tr>
</tbody>
</table>

**Early Childhood Generalist Endorsement** (12 credit hours) This optional Early Childhood Generalist Endorsement provides the coursework for an Early Childhood Education major (grades PK-3) to add grades 4-5 to the Ohio teaching license.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCED 2601</td>
<td>Introduction to Middle Childhood Education (3)</td>
</tr>
<tr>
<td>MCED 3091*</td>
<td>Middle School Science Methods (3)</td>
</tr>
<tr>
<td>MCED 3111*</td>
<td>Middle School Social Studies Methods (3)</td>
</tr>
</tbody>
</table>

In addition, all Middle Childhood Education majors must select two of the following four areas in which to concentrate.

**Middle Childhood Language Arts/Reading** (24 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom (3)</td>
</tr>
<tr>
<td>EDUC 3221*</td>
<td>Integrated Language Arts (3)</td>
</tr>
<tr>
<td>ENGL 2001</td>
<td>Grammar in Context (3)</td>
</tr>
<tr>
<td>ENGL XXX1</td>
<td>Literature elective (3)</td>
</tr>
<tr>
<td>ENGL XXX1</td>
<td>Writing elective (3)</td>
</tr>
<tr>
<td>MCED 3051*</td>
<td>Adolescent Literature (3)</td>
</tr>
<tr>
<td>TATH 1051</td>
<td>Introduction to the Performing Arts (3)</td>
</tr>
</tbody>
</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1221</td>
<td>Writing Seminar (3)</td>
</tr>
<tr>
<td>ENGL 1231</td>
<td>Writing Seminar (3)</td>
</tr>
</tbody>
</table>

**Middle Childhood Mathematics** (24 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1661</td>
<td>Fundamental Mathematics 1 (3)</td>
</tr>
<tr>
<td>MATH 1671</td>
<td>Fundamental Mathematics 2 (3)</td>
</tr>
<tr>
<td>MATH 1201</td>
<td>Mathematics for Liberal Arts (3)</td>
</tr>
<tr>
<td>MATH 2011</td>
<td>Mathematics History (3)</td>
</tr>
<tr>
<td>MCED 3081*</td>
<td>Middle Childhood Mathematics Methods (3)</td>
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</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1251</td>
<td>College Algebra (3)</td>
</tr>
<tr>
<td>MATH 1401</td>
<td>Functions for Science/Tech (3)</td>
</tr>
</tbody>
</table>

Select one:

<table>
<thead>
<tr>
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<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1431</td>
<td>Calculus for Science and Technology (3)</td>
</tr>
<tr>
<td>MATH 1461</td>
<td>Calculus for Life Sciences (3)</td>
</tr>
<tr>
<td>MATH 1611</td>
<td>Calculus w/PreCalculus (4)</td>
</tr>
<tr>
<td>MATH 1631</td>
<td>Calculus 1 (4)</td>
</tr>
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</table>

Select one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 1311</td>
<td>Introduction to Statistical Reasoning (3)</td>
</tr>
<tr>
<td>STAT 1561</td>
<td>Statistics for Professionals I (3)</td>
</tr>
</tbody>
</table>

**Middle Childhood Science** (24 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1031</td>
<td>Life/Earth Sciences for EC/MC (3)</td>
</tr>
<tr>
<td>BIOL 2011</td>
<td>Environmental Issues (3)</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>Chemistry in Society (3)</td>
</tr>
<tr>
<td>GEOL 2801</td>
<td>Geology (3)</td>
</tr>
<tr>
<td>MCED 3091*</td>
<td>Middle Childhood Science Methods (3)</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>Conceptual Physics (3)</td>
</tr>
<tr>
<td>PHYS 1051</td>
<td>Planetary Astronomy (3)</td>
</tr>
</tbody>
</table>

One additional science elective (3)

**Middle Childhood Social Studies** (24 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 2021</td>
<td>Microeconomics (3)</td>
</tr>
<tr>
<td>HIST 1151</td>
<td>World Civilizations I (3)</td>
</tr>
</tbody>
</table>
Finally, each Middle Childhood Education major must complete the selected coursework below to meet the requirements of either the BA or BS degree for the Getty College of Arts and Sciences.

**BA Degree General Education Requirements** (49 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREX XXX1</td>
<td>Transitions Experience</td>
<td>(3)</td>
</tr>
<tr>
<td>XSEM XXX1</td>
<td>Extra-disciplinary Seminar</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 1651</td>
<td>Visual Literacy</td>
<td>(3)</td>
</tr>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST XXXX</td>
<td>History elective</td>
<td>(3)</td>
</tr>
<tr>
<td>HPSS 1011</td>
<td>Lifetime Fitness and Wellness</td>
<td>(1)</td>
</tr>
<tr>
<td>PHIL 2401</td>
<td>Professional Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>PSYC 1001</td>
<td>Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSYC 2171</td>
<td>Adolescent Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>RELG XXXX</td>
<td>Religion elective</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Select one:

- BIOL 1031  Life/Earth Sciences for EC/MC (3)
- BIOL 2011  Environmental Issues (3)
- CHEM 1001  Chemistry in Society (3)
- GEOL 2801  Geology (3)
- PHYS 1001  Conceptual Physics (3)
- PHYS 1051  Planetary Astronomy (3)

Select one:

- MATH 1661  Fundamental Mathematics 1 (3)
- MATH 1671  Fundamental Mathematics 2 (3)

Select one:

- ENGL 1221  Writing Seminar (3)
- ENGL 1231  Writing Seminar (3)

Select one:

- ENGL XXX1  English literature elective (3)
- MDLG XXX1  Modern Language literature elective (3)

Select one:

- MUSC 1001  Music Appreciation (3)
- MUSC 2201  Non-western Music (3)

One year of a modern language (or equivalent through placement) (6)

**BS Degree General Education Requirements** (46 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREX XXX1</td>
<td>Transitions Experience</td>
<td>(3)</td>
</tr>
<tr>
<td>XSEM XXX1</td>
<td>Extra-disciplinary Seminar</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 1651</td>
<td>Visual Literacy</td>
<td>(3)</td>
</tr>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST XXXX</td>
<td>History elective</td>
<td>(3)</td>
</tr>
<tr>
<td>HPSS 1011</td>
<td>Lifetime Fitness and Wellness</td>
<td>(1)</td>
</tr>
<tr>
<td>PHIL 2401</td>
<td>Professional Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>PSYC 1001</td>
<td>Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSYC 2171</td>
<td>Adolescent Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>RELG XXXX</td>
<td>Religion elective</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Select one:

- ENGL 1221  Writing Seminar (3)
- ENGL 1231  Writing Seminar (3)

Select one:

- BIOL 1031  Life/Earth Sciences for EC/MC (3)
- BIOL 2011  Environmental Issues (3)
- CHEM 1001  Chemistry in Society (3)
- GEOL 2801  Geology (3)
- PHYS 1001  Conceptual Physics (3)
- PHYS 1051  Planetary Astronomy (3)

Select one:

- ENGL XXX1  English literature elective (3)
- MDLG XXX1  Modern Language literature elective (3)

Select one:

- ART 1651  Visual Literacy (3)
- MUSC 1001  Music Appreciation (3)
- MUSC 2201  Non-western Music (3)

**Middle Childhood Generalist Endorsement** (6 credit hours each) This optional Middle Childhood Generalist Endorsement provides the coursework for a Middle Childhood Education major (grades 4-9) to add grades 4-6 non-concentration areas to the Ohio teaching license.

**Middle Childhood Generalist Language Arts/Reading**

- EDUC 3221* Integrated Language Arts (3)
- MCED 3051* Adolescent Literature (3)

**Middle Childhood Generalist Mathematics**

- MATH 1671  Fundamental Mathematics II (3)
- MCED 3081* Middle Childhood Mathematics Methods (3)

**Middle Childhood Generalist Science**

One additional science course (3 credit hours) chosen from the following (one biological science required, one physical science required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1031</td>
<td>Life/Earth Sciences for EC/MC</td>
<td>(3)</td>
</tr>
<tr>
<td>BIOL 2011</td>
<td>Environmental Issues</td>
<td>(3)</td>
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<tr>
<td>CHEM 1011</td>
<td>Chemistry in Society</td>
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<tr>
<td>GEOL 2801</td>
<td>Geology</td>
<td>(3)</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>Conceptual Physics</td>
<td>(3)</td>
</tr>
<tr>
<td>PHYS 1051</td>
<td>Planetary Astronomy</td>
<td>(3)</td>
</tr>
<tr>
<td>MDLG XXX1</td>
<td>Modern Language literature</td>
<td>(3)</td>
</tr>
</tbody>
</table>

- MCED 3091* MC Science Methods (3)

**Middle Childhood Generalist Social Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCED 3111*</td>
<td>Middle School Social Studies Methods (3)</td>
<td>(3)</td>
</tr>
<tr>
<td>GEOG 2261</td>
<td>World Regional Geography</td>
<td>(3)</td>
</tr>
<tr>
<td>GEOG 2271</td>
<td>Physical Geography</td>
<td>(3)</td>
</tr>
</tbody>
</table>
Adolescent/Young Adult (AYA) Professional Education (7-12) Requirements (44 credit hours)

Candidates pursuing AYA licensure must complete the appropriate major and general requirements within the subject area department. In addition, the following professional education requirements must be completed:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom (3)</td>
</tr>
<tr>
<td>PSYC 2171</td>
<td>Adolescent Psychology (3)</td>
</tr>
<tr>
<td>EDUC 1151</td>
<td>Culture and Schooling (3)</td>
</tr>
<tr>
<td>EDUC 1501</td>
<td>Five-Day Field Experience I (1)</td>
</tr>
<tr>
<td>EDUC 1521</td>
<td>Five-Day Field Experience 2 (1)</td>
</tr>
<tr>
<td>EDUC 2101</td>
<td>Exceptional Learners (3)</td>
</tr>
<tr>
<td>EDUC 2681</td>
<td>Curriculum and Assessment (3)</td>
</tr>
<tr>
<td>EDUC 3201*</td>
<td>Instructional Media and Educational Technologies (3)</td>
</tr>
<tr>
<td>EDUC 3451*</td>
<td>Literacy Across the Content Areas AYA/MA (3)</td>
</tr>
<tr>
<td>EDUC 4401*</td>
<td>Educational Psychology and Instructional Practices (3)</td>
</tr>
<tr>
<td>EDUC 4451*</td>
<td>Leadership Seminar in Education (3)</td>
</tr>
<tr>
<td>EDUC 4721*</td>
<td>Student Teaching/AYA/MA (12)</td>
</tr>
</tbody>
</table>

Select one:

- EDUC 4511* Integrated Science Methods (3)
- EDUC 4521* Integrated Language Arts Methods (3)
- EDUC 4531* Integrated Social Studies Methods (3)
- EDUC 4541* Integrated Mathematics Methods (3)

Finally, all AYA science licensure candidates are required to complete EDUC 4651 Science Education Portfolio (0).

Multi-age (MA) Professional Education Requirements (44 credit hours)

This section does not cover MA Music Education and Technology Education licensures. For those requirements, please see the subsequent sections.

Candidates pursuing MA licensure must complete the appropriate major and general requirements within the subject area department. In addition, the following professional education requirements must be completed:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom (3)</td>
</tr>
<tr>
<td>PSYC 2151</td>
<td>Developmental Psychology (3)</td>
</tr>
<tr>
<td>EDUC 1151</td>
<td>Culture and Schooling (3)</td>
</tr>
<tr>
<td>EDUC 1501</td>
<td>Five-Day Field Experience I (1)</td>
</tr>
<tr>
<td>EDUC 1521</td>
<td>Five-Day Field Experience 2 (1)</td>
</tr>
<tr>
<td>EDUC 2101</td>
<td>Exceptional Learners (3)</td>
</tr>
<tr>
<td>EDUC 2681</td>
<td>Curriculum and Assessment (3)</td>
</tr>
<tr>
<td>EDUC 3201*</td>
<td>Instructional Media and Educational Technologies (3)</td>
</tr>
<tr>
<td>EDUC 3451*</td>
<td>Literacy Across the Content Areas AYA/MA (3)</td>
</tr>
<tr>
<td>EDUC 4401*</td>
<td>Educational Psychology and Instructional Practices (3)</td>
</tr>
<tr>
<td>EDUC 4451*</td>
<td>Leadership Seminar in Education (3)</td>
</tr>
<tr>
<td>EDUC 4721*</td>
<td>Student Teaching/AYA/MA (12)</td>
</tr>
</tbody>
</table>

Select one:

- EDUC 4511* Integrated Science Methods (3)
- EDUC 4521* Integrated Language Arts Methods (3)
- EDUC 4531* Integrated Social Studies Methods (3)
- EDUC 4541* Integrated Mathematics Methods (3)

Multi-age (MA) Technology Education Professional Education Requirements (41 credit hours)

Candidates pursuing Technology licensure must complete the appropriate major and general requirements within the subject area department. In addition, the following professional education requirements must be completed:

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CACS 2151</td>
<td>Communication in the Classroom (3)</td>
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<tr>
<td>PSYC 2151</td>
<td>Developmental Psychology (3)</td>
</tr>
<tr>
<td>EDUC 1151</td>
<td>Culture and Schooling (3)</td>
</tr>
<tr>
<td>EDUC 1501</td>
<td>Five-Day Field Experience I (1)</td>
</tr>
<tr>
<td>EDUC 1521</td>
<td>Five-Day Field Experience 2 (1)</td>
</tr>
<tr>
<td>EDUC 2101</td>
<td>Exceptional Learners (3)</td>
</tr>
<tr>
<td>EDUC 2681</td>
<td>Curriculum and Assessment (3)</td>
</tr>
<tr>
<td>EDUC 3451*</td>
<td>Literacy Across the Content Areas AYA/MA (3)</td>
</tr>
<tr>
<td>EDUC 4401*</td>
<td>Strategies for Technology Education (3)</td>
</tr>
<tr>
<td>EDUC 4451*</td>
<td>Leadership Seminar in Education (3)</td>
</tr>
<tr>
<td>EDUC 4701*</td>
<td>Student Teaching/EC/MC (6)</td>
</tr>
<tr>
<td>EDUC 4721*</td>
<td>Student Teaching/AYA/MA (6)</td>
</tr>
</tbody>
</table>

Subject- Early Childhood Education (ECED)

2051 - Children's Literature in the Early Childhood Classroom
3 Credits

Selecting and evaluating quality children's literature. Examination of works of notable authors and illustrators, concepts of diversity, strategies for integrating various genre into the curriculum, story-telling, and helping children respond to literature. Offered spring semester.

2301 - Early Childhood Mathematics Methods
2 Credits

Content, strategies, materials, technology and assessment from a constructivist perspective in the early childhood mathematics classroom. Offered fall semester. Prerequisite(s): MATH 1661 and MATH 1671.

2401 - Introduction to Early Childhood Education
3 Credits

Introduction to the profession with emphasis on issues, ethics, developmentally appropriate practices in early childhood education including creating effective families and community partnerships. Offered spring semester. Prerequisite(s): EDUC 1151. 2.50 grade point average and Praxis I required.

2421 - Early Childhood Curriculum and Policies
3 Credits

Early childhood curriculum, curriculum delivery models, unit planning, guidance approach to classroom and behavior management appropriate to the early childhood classroom. Admission to Teacher Education required. Offered fall semester. Prerequisite(s): ECED 2401.

2671 - Educational Psychology
3 Credits

Psychological theories, concepts, and principles applied to teaching and learning. Learning processes, motivation, development, social processes, individual differences, and instruction practices. Case study applications. Admission to Teacher Education required. Offered fall semester.
Ohio Northern University
Praxis II Pass-rate Data: Regular Teacher Preparation Program

Academic Year 2009-10 Number of Program Completers: 46

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th># Taking Praxis II</th>
<th># Passing Praxis II</th>
<th>ONU Pass Rate (%)</th>
<th>OH Pass Rate (%)</th>
<th>Nat'l Pass Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Knowledge</td>
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</tr>
<tr>
<td>Principles of Learning and Teaching EC</td>
<td>11</td>
<td>11</td>
<td>100%</td>
<td>99%</td>
<td>88.0%</td>
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<tr>
<td>Principles of Learning and Teaching 5-9</td>
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<td>10</td>
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<td>95%</td>
<td>71.0%</td>
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<tr>
<td>Principles of Learning and Teaching 7-12</td>
<td>25</td>
<td>24</td>
<td>96%</td>
<td>98%</td>
<td>67.6%</td>
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<td>Academic Content Areas</td>
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</tr>
<tr>
<td>Education of Young Children</td>
<td>11</td>
<td>11</td>
<td>100%</td>
<td>99%</td>
<td>92.9%</td>
</tr>
<tr>
<td>English Language, Literature &amp; Composition Content Knowledge</td>
<td>6</td>
<td>***</td>
<td>95%</td>
<td>69.3%</td>
<td></td>
</tr>
<tr>
<td>Middle School English Language Arts</td>
<td>8</td>
<td>***</td>
<td>97%</td>
<td>83.1%</td>
<td></td>
</tr>
<tr>
<td>Mathematics: Content Knowledge</td>
<td>2</td>
<td>***</td>
<td>98%</td>
<td>58.0%</td>
<td></td>
</tr>
<tr>
<td>Middle School Mathematics</td>
<td>6</td>
<td>***</td>
<td>100%</td>
<td>88.5%</td>
<td></td>
</tr>
<tr>
<td>Social Studies: Content Knowledge</td>
<td>2</td>
<td>***</td>
<td>97%</td>
<td>73.6%</td>
<td></td>
</tr>
<tr>
<td>Middle School Social Studies</td>
<td>5</td>
<td>***</td>
<td>96%</td>
<td>78.0%</td>
<td></td>
</tr>
<tr>
<td>Music: Content Knowledge</td>
<td>6</td>
<td>***</td>
<td>98%</td>
<td>83.4%</td>
<td></td>
</tr>
<tr>
<td>Art: Content Knowledge</td>
<td>3</td>
<td>***</td>
<td>98%</td>
<td>85.0%</td>
<td></td>
</tr>
<tr>
<td>Spanish: Content Knowledge</td>
<td>2</td>
<td>***</td>
<td>98%</td>
<td>76.8%</td>
<td></td>
</tr>
<tr>
<td>Biology: Content Knowledge</td>
<td>2</td>
<td>***</td>
<td>97%</td>
<td>80.2%</td>
<td></td>
</tr>
<tr>
<td>Middle School Science</td>
<td>2</td>
<td>***</td>
<td>98%</td>
<td>81.3%</td>
<td></td>
</tr>
</tbody>
</table>

Aggregate Data

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th># Taking</th>
<th># Passing</th>
<th>ONU Pass Rate (%)</th>
<th>OH Pass Rate (%)</th>
<th>Nat'l Pass Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Knowledge</td>
<td>46</td>
<td>45</td>
<td>98%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Content Areas (Math, English, Biology, etc.)</td>
<td>57</td>
<td>57</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary Totals and Pass Rates</td>
<td>46</td>
<td>45</td>
<td>98%</td>
<td>96%</td>
<td></td>
</tr>
</tbody>
</table>

Contextual Information

Average number of weeks of supervised student teaching | 11 | Student teacher/faculty ratio | 5.6:1 |
Average number of student teaching hours per week | 35 | Full-time faculty in professional education | 9 |
Average number of hours required for student teaching | 385 | Part-time faculty in professional education | 5 |
Total number of students in supervised student teaching | 50 | who work full-time in the institution | |
Number of faculty members who supervised student teachers | 9 | Part-time faculty in professional education not otherwise employed by the institution | 2 |

1The number of program completers found, matched, and used in the passing rate calculation will not equal the sum of the column label “Number Taking Assessment” since a completer can take more than one assessment.
2Number of completers who took one or more tests in a category and within their area of specialization.
3Number who passed all tests they took within the category and within their area of specialization.
4The national passing rate is calculated at Ohio’s cut schools, which are among the highest in the nation. For instance, Ohio requires the highest cut score in Principles of Learning and Teaching 5-9 and ranks second in Principles of Learning and Teaching 7-12.
5Numbers of completers who successfully completed one or more tests across all categories used by the state for licensure and the total pass rate.

*** No pass rate percentage is calculated when fewer than 10 teacher candidates take the Praxis II test.

For more information, visit http://title2.ed.gov/View.asp.

3051 - Social Studies in Early Childhood Education
2 Credits
An integrated approach to the planning, processes and content of the social studies based on developmental characteristics of the preschool/primary child. Admission to Teacher Education required. Offered spring semester.

3151 - Teaching Science as Inquiry
3 Credits
Constructivist approach to science education methods and materials in the early childhood classroom. Focus on standards, inquiry, safety, assessment, and incorporation of technology with content of a general science curriculum. Admission to Teacher Education required. Offered spring semester.

3181 - Educational Assessment for Early Childhood Education
3 Credits
Concepts in developmentally appropriate assessment with emphasis on crafting assessments to inform teaching and learning aligned with state and national standards. Development and appropriate use of traditional and alternative assessments, evaluating student progress, applying technologies, interpreting and using standardized tests and federal and state assessment requirements/reporting. Offered fall semester. Prerequisite(s): EDUC 1151.

3351 - Visual Arts in Early Childhood Education
2 Credits
An integrated, constructivist approach to curriculum and pedagogy for teaching the visual arts based on developmental characteristics of the preschool-primary child. Admission to Teacher Education required. Offered spring semester.

3551 - Music and Movement in Early Childhood Education
2 Credits
An integrated, constructivist approach to incorporating music into the PreK and K-3 primary curricula. Elements of music and movement applied to developmentally appropriate practice. Admission to Teacher Education required. Offered spring semester.

3901 - Special Topics in Early Childhood Education
3 Credits
Selected special topics in early childhood education. Can be repeated as the topic varies. This course is repeatable.

Subject-Education (EDUC)

1151 - Culture and Schooling
3 Credits
The philosophical, historical, and sociological aspects of the American public school experience. Includes the impact that cultural factors have on students, teachers, and on the development and enactment of the school curriculum. Offered fall and spring semesters.

1501 - Five-Day Field Experience I
1 Credit
Observation and participation with students and teachers in a racially or ethnically diverse school setting for five consecutive school days and a minimum of 35 hours. A paper, pre-conference and post-conference are required. Approval of advisor and the Director of Teacher Education are required prior to this experience. Offered fall and spring semesters. Prerequisite(s): EDUC 1151.
1521 - Five-Day Field Experience II
1 Credit
Observation and participation with students and teachers in a school setting for five consecutive school days and a minimum of 35 hours. Experience will focus on teaching and the reflective practice. A paper, pre-conference and post-conference are required. Approval of the advisor and the Director of Teacher Education are required prior to this experience. Offered fall and spring semesters. Prerequisite(s): EDUC 1501 Minimum Grade of S.

2101 - Exceptional Learners
3 Credits
Understanding the varying characteristics and needs of exceptional individuals; legal requirements, bilingual/multicultural considerations, least restrictive environment and programming alternatives developed to meet student needs. Offered fall and spring semesters. Prerequisite(s): EDUC 1151.

2681 - Curriculum and Assessment
3 Credits
General and specific topics related to curriculum development and general teaching methods, lesson and unit development, constructivist teaching, and effective classroom practices including formal and informal assessment for adolescent and multiage classrooms. Offered fall and spring semesters. Prerequisite(s): EDUC 1151.

3001 - Foundations of Literacy
3 Credits
Theoretical orientations of the reading processes, brief history of the U.S. literacy trends, and evaluation of literacy materials in accordance with literacy theories. Offered fall and spring semesters. Prerequisite(s): EDUC 1151. 2.50 grade point average and Praxis I required.

3041 - Strategies for Technology Education
3 Credits
Technology and technological activity to assist the synthesis of learning. The use of materials, tools and processes to enhance learning and to assist in developing interests and talents. Emphasis on STEM integration through the development of hands-on, manipulative, problem based learning strategies to be used in the classroom. Typical problems and the planning and organizing of the learning environment. Admission to Teacher Education required. Offered alternate spring semesters.

3121 - Teaching Phonics
3 Credits
Emphasis on stages of orthographic development, phonics generalizations, how to teach phonics, and word recognition skills within a structured word study methodology. Offered fall and spring semesters. Prerequisite(s): EDUC 3001.

3201 - Instructional Media and Educational Technologies
3 Credits
The role that technologies play in our schools of today as well as in American society. Emphasis on technology integration in instruction including planning, selection, utilization, operation, and evaluation of hardware (computers, digital cameras, digital camcorders, digital document cameras, smart board, etc.) and software applications; culminating in the production of a multimedia project for a classroom teacher and his/her students. Admission to Teacher Education required. Offered fall and spring semesters.

3221 - Integrated Language Arts
3 Credits
Strategies for integrating the language arts within a literacy program with an emphasis on the writing process, applications and conventions. Admission to Teacher Education required. Offered fall and spring semesters. Prerequisite(s): EDUC 3001.

3421 - Literacy Across the Content Areas
3 Credits
Literacy connections across the curriculum including instruction methods in prereading, vocabulary, comprehension strategies, and study skills. Appropriate for licensure requirements in ECED and MCED. Admission to Teacher Education required. Offered fall and spring semesters. Prerequisite(s): EDUC 3001.

3451 - Literacy Across the Content Areas/AYA/MA
3 Credits
Literacy connections across the curriculum including instruction methods in prereading, vocabulary, comprehension strategies, and study skills. Appropriate for licensure requirements in AYA and MA. Admission to Teacher Education required. Offered fall and spring semesters.

3901 - Special Topics in Education
3 Credits
Selected special topics in education. Can be repeated as the topic varies. This course is repeatable.

4001 - Assessment of Reading Instruction
3 Credits
Use of student assessment information to inform planning, teaching and learning for struggling readers and writers. Admission to Teacher Education required. Offered fall and spring semesters. Prerequisite(s): EDUC 3121.

4401 - Educational Psychology and Instructional Practices
3 Credits
Teaching behavior, instructional techniques and classroom management from a constructivist perspective essential for effective instruction in adolescent and multiage classrooms. Admission to Teacher Education required. Offered fall and spring semesters.

4451 - Leadership Seminar in Education
3 Credits
An emphasis on professional growth and development and an overview of legal and financial aspects of education, organizational structure at the local and state level; influence and requirements from the state and federal government, and information related to teaching position search. Admission to Teacher Education required. Offered fall and spring semesters.

4531 - Integrated Mathematics Methods
3 Credits
An emphasis on professional growth and development and an overview of legal and financial aspects of education, organizational structure at the local and state level; influence and requirements from the state and federal government, and information related to teaching position search. Admission to Teacher Education required. Offered fall and spring semesters.

4541 - Integrated Mathematics Methods
3 Credits
Methods and current issues in adolescent/young adult mathematics teaching including concept construction, differentiation, assessment, technology, and teaching strategies. Admission to Teacher Education required. Offered fall semester.
4561 - Integrated Modern Language Methods
3 Credits
Practical approaches to meeting standards for foreign language teaching. Strategies for developing communication skills, addressing diverse learner needs, and assessing outcomes. Admission to Teacher Education required. Offered alternate fall semesters.

4571 - Integrated Art Methods
3 Credits
Effective strategies and methods of instruction in teaching visual art. Lesson planning, resource materials, media, curriculum, issues, and assessment of a comprehensive program. Admission to Teacher Education required. Offered alternate fall semesters.

4581 - Organization and Methods of Technology Education
3 Credits
Philosophical constructs, organizing courses, program and course objectives, preparing lesson plans and industrial materials, laboratory procedures, administrative practices, and project management. Offered alternate spring semesters.

4591 - Integrated Music Methods
3 Credits
Philosophy, techniques, materials, curriculum planning for the music teacher. Admission to Teacher Education required. Offered alternate fall semesters.

4601 - Integrated Health Methods
3 Credits
Innovative strategies for the teaching of health education are applied. Attention is given to conceptualizing instruction, specifying instructional objectives, planning units and lessons, utilizing various instructional methods, selecting and using instructional materials, and evaluating teaching effectiveness. Admission to Teacher Education required. Offered alternate spring semesters.

4611 - Integrated Physical Education Methods
3 Credits
Methods and techniques most effective in teaching of the discipline in the public schools. Includes analysis of successful teaching behaviors during the planning and implementation of quality learning experiences. Admission to Teacher Education required. Offered fall semester, Corequisite(s): PHED 3001

4651 - Science Education Portfolio
0 Credits
Self-directed exploration of topics important to secondary education, including the history of science, its relationship to other disciplines and society, ethics and legal issues, laboratory safety, and scientific research. Admission to Teacher Education required. Offered fall semester. Corequisite(s): EDUC 4511.

4701 - Student Teaching - EC/MC
6 or 12 Credits
Capstone practicum of supervised teaching in the major licensure field of the candidate. Admission to Teacher Education required. Offered fall and spring semesters. Corequisite(s): EDUC 4451.

4721 - Student Teaching-Adolescent
6 or 12 Credits
Capstone practicum of supervised teaching in the major licensure field of the candidate. Admission to Teacher Education required. Offered fall and spring semesters. Corequisite(s): EDUC 4451. This course is repeatable.

4761 - Education Capstone
3 Credits
Exploration of a topic in education with faculty supervision including preparation of a paper on the topic. Admission to Teacher Education required. Offered fall and spring semesters.

Subject- Middle Childhood Education (MCED)

2601 - Introduction to Middle Childhood Education
3 Credits
The history, philosophy, and organization of middle school education. Planning, instructional strategies, and evaluation responsive to the needs of young adolescents. Utilization of multi-media materials, creative exploration, and enrichment activities to build an effective middle school curriculum. Offered fall semester. Prerequisite(s): EDUC 1151. 2.50 grade point average and Praxis I required.

2621 - Middle Childhood Methods, Curriculum, and Policies
3 Credits
The understanding of theory, organization, and decision making in middle school curriculum from an integrated, interdisciplinary focus. Includes the development of integrated planning, teaching, and assessing at the middle school level. Offered spring semester. Prerequisite(s): MCED 2601.

2671 - Educational Psychology and Middle Childhood Assessment
3 Credits
Connecting learning with formal and informal assessments and from a cognitive, linguistic, and social development perspective in a middle childhood classroom. Offered spring semester. Prerequisite(s): EDUC 1151.

3021 - Classroom Guidance, Family, School, and Community Partnerships
3 Credits
A guidance approach to classroom and behavior management appropriate to the middle school classroom. Understanding students and families through sensitivity to diversity and effective communication strategies. Research and development of family/school/community plans. Admission to Teacher Education required. Offered fall semester.

3051 - Young Adult Literature for the Middle Childhood Classroom
3 Credits
Literature for individual, group, and whole-class reading in middle childhood education (grades 4-9). Offered fall semester.

3081 - Middle School Mathematics Methods
3 Credits
Methods and current issues in middle school mathematics teaching, including content, strategies, materials, technology and assessment. Admission to Teacher Education required. Offered spring semester.

3091 - Middle School Science Methods
3 Credits
Constructivist approach to science education methods and materials in the middle school classroom. Focus on standards, inquiry, safety, assessment, and incorporation of technology with content of a general science curriculum. Admission to Teacher Education required. Offered fall semester.

3111 - Middle School Social Studies Methods
3 Credits
A theoretical basis for social studies education with a strong emphasis on the teaching methods and practices that enliven the social studies classroom for middle childhood students. The student will also be prepared to effectively teach Ohio history, including coverage of the necessary content. Admission to Teacher Education required. Offered fall semester.

3901 - Special Topics in Middle Childhood Education
3 Credits
Selected special topics in middle childhood education. Can be repeated as the topic varies. This course is repeatable.
DEPARTMENT OF ENGLISH

Professors Robeson (Chair), McManus, R. Scott; Associate Professors Bauer, Cullen, O’Connell, J. Pitts; Assistant Professors Kanwit, Rogers; Visiting Assistant Professors Babbitt, Dowland

Mission Statement
As a humanities discipline, English promotes the close reading of Western and non-Western literature as a form of art, a source of pleasure, a means of understanding people and diverse cultures, and a model for writing. As a theoretical discipline, it responds to and incorporates changing conceptions of language, texts, literature, rhetoric, and interpretation. As a practical discipline, it develops critical and creative thinking and writing skills within multimedia contexts.

The English faculty designs its courses for the general education of the university student and for the training of its majors. English prepares students for life, for professional, business and teaching careers, for law school, and for graduate study in English and other disciplines.

Vision or Overview Statement
The English Department at Ohio Northern University will continue to strengthen our unique and individualized programs in Creative Writing, Language Arts Education, Literature, Journalism, and Professional Writing, while also encouraging a sense of community and common purpose among our students and faculty. We will continue to create innovative programs and classes that foster critical and creative thinking, reading, and writing. We will cultivate an understanding of diverse cultures and an appreciation for aesthetics. We will take a leadership role in developing writing skills for students across the university.

Accreditation and Professional Memberships
The Integrated Language Arts (grades 7-12) licensure program (Language Arts Education major) is approved by the state of Ohio. Ohio Northern University’s Teacher Education Program is accredited by the National Council for Accreditation of Teacher Education (NCATE). Additionally, the department holds membership in the National Council of Teachers of English (NCTE), Modern Language Association (MLA), Association of Writers and Writing Programs (AWP), Ohio Council of Teachers of English Language Arts (OCTELA), College English Association of Ohio (CEAO), College English Association (CEA), College Media Advisers (CMA), Associated Collegiate Press (ACP), Ohio Newspaper Association (ONA), and Sigma Tau Delta, the international English honor society.

Majors, Minors and Degrees Offered
Creative Writing Major (BA)
Journalism Major (BA)
Language Arts Education Major (BA)
Literature Major (BA)
Professional Writing Major (BA)
Creative Writing Minor
Journalism Minor
Literature Minor
Professional Writing Minor

Licensure Offered
Adolescent Young Adult (grades 7-12) Language Arts Teaching Licensure for students majoring in Language Arts Education.

Admission Requirements
Only one major in the department, Language Arts Education for Integrated Language Arts Secondary Teaching Licensure, requires additional admission requirements beyond the standard criteria for acceptance to Ohio Northern University. Students must request acceptance into the Center for Teacher Education (CTE) once they have successfully completed Praxis I exams, have a 2.5 overall GPA, and have met specific CTE course and field experience requirements.

Special Programs
Internships and Study Abroad
The English Department requires internships for the Journalism and Professional Writing majors, but internship opportunities that provide hands-on professional experience are available to students in all department majors. Faculty advisers recommend that English majors take advantage of study abroad options and Washington Center internships where possible.

Publications
Additionally, students in all five major tracks are required to have experience working on department publications and are encouraged to work on more than one to gain diverse publication experience and create an expanded portfolio.

Conferences
Students submit top papers and projects from their classes to the Sigma Tau Delta national conference and to other student and professional conferences. Faculty members take student editors and other groups to state and national conferences. Language Arts Education majors are required to attend two professional conferences for graduation. Travel to these conferences is supported by department funding.

Major Course Requirements
Neither 1000-level English courses (excluding 1001 and 1611) nor ENGL 2041 count toward any major, minor, or option in the department, nor does any major course with a grade below “C.”

All majors include a senior capstone project for which students prepare a professional project or paper with a view to publication in a 3000- or 4000-level course under the guidance of the instructor. In ENGL 4461, they formally present their projects to department faculty, students and families in a professional conference setting in the department.

The student may complete two majors or a major and a minor within the department so long as there is no more than 30% duplication of courses within the second major or minor. In addition, the department encourages complementary majors, minors, or options in other disciplines, including specifically a recommended option or minor in business.

Creative Writing Major (37 credit hours)

ENGL 0011 Enrichment (0)
ENGL 2011 Introduction to Creative Writing (3)
ENGL 2101 Pro Seminar: English Studies (3)
ENGL 2111 American Literature 1 (3)
or
ENGL 2121 American Literature 2 (3)
ENGL 2131 British Literature 1 (3)
or
ENGL 2141 British Literature 2 (3)
ENGL 4461 Capstone Presentations (1)
Select three additional literature courses (at least two courses must be at the 3000- or 4000-level)

Select 12 credits (at least one course must be at the 4000-level):
ENGL 3401 Intermediate Poetry Writing (3)
ENGL 3411 Intermediate Fiction Writing (3)
ENGL 3421 Screenwriting (3)
ENGL 4401 Advanced Poetry Writing (3)
ENGL 4411 Advanced Fiction Writing (3)
ENGL 4421 Nonfiction Writing (3)
TATH 3821 Playwriting (3)

Select 3 credits:
ENGL 2521* Journal Publishing Practicum (1-3)
ENGL 2531* Web Publishing Practicum (1-3)
ENGL 2541* Screenwriting Workshop (1-3)
ENGL 2561* Newspaper Practicum (1-3)
ENGL 2511* Magazine Practicum (1-3)
ENGL 2551* Creative Writing Workshop (1-3)
ENGL 2561* Department Newsletter (3)

*Workshops and practica have variable credit of 1-3 hours (taken for more than 1 credit at the instructor’s discretion) and may be repeated.

English Department Newsletter is taken for 3 credit hours. Only 6 hours of practicum, workshop and newsletter credits will count toward graduation.
**Journalism Major** (73+ credit hours)

Journalism requires a second major, minor, concentration, or option of at least 18+ credit hours. These 18+ credit hours are reflected in the 73+ credit hours required for the major.

ENGL 0011 Enrichment (0)
ENGL 1001 Introduction to Literature (3)
ENGL 1611 News Writing (3)
ENGL 2001 Grammar in Context (3)
ENGL 2101 Pro Seminar: English Studies (3)
ENGL 2201 Layout and Design (3)
ENGL 2501 Newspaper Practicum (1)*
ENGL 2921 Photojournalism (3)
ENGL 3551 Feature Writing (3)
ENGL 3441 Introduction to Convergent Publishing (3)
ENGL 3721 Advanced Reporting (Capstone) (3)
ENGL 3801 Literary Journalism (Capstone) (3)
ENGL 4461 Capstone Presentation (1)
ENGL 4501 Communications Law and Ethics (3)
ENGL 4701 Editing (3)
ENGL 4711 History of Journalism (3)
ENGL 4811 Internship (JRN) (3)

Select one additional 3000- or 4000-level ENGL literature course (3 credits).

Select one:
CAEM 1501 Introduction to Mass Media (3)
CAEM 2561 Multimedia Writing (3)
CAPR 1301 Introduction to Public Relations (3)
CAPR 2361 Public Relations Writing (3)
DSCN 1201 Introductory Visual Communication Design (3)
ENGL 2051 Writing in the Professions (3)
ENGL 4991 Independent Study Journalism (3)
TECH 1421 Web Design and Development (3)

*Newspaper Practicum must be taken for a minimum of 1 credit hour for 6 semesters. The course has variable credit of 1 to 3 credit hours (with instructor’s permission), but only the hours required will count toward graduation.

**Language Arts Education Major** (92 credit hours)

Successful completion of this major meets the curriculum and experience requirements for the Adolescent Young Adult (7-12) Teaching Licensure.

ENGL 0011 Enrichment (0)
ENGL 1001 Introduction to Literature (3)
ENGL 2101 Pro Seminar: English Studies (3)
ENGL 2001 Grammar in Context (3)
ENGL 2251 Children’s and Young Adult Literature (3)
ENGL 3001 LAE Portfolio (1)
ENGL 3511 English Language (3)
ENGL 4121 Shakespeare Studies (3)
ENGL 4461 Capstone Presentation (1)

Select one:
ENGL 1611 News Writing (3)
ENGL 2011 Introduction to Creative Writing (3)

Select one:
ENGL 2071 Topics in Poetry (3)
ENGL 2081 Topics in Drama (3)
ENGL 2091 Topics in Fiction (3)

Select three:
ENGL 2111 American Literature 1 (3)
ENGL 2121 American Literature 2 (3)
ENGL 2131 British Literature 1 (3)
ENGL 2141 British Literature 2 (3)

Select one:
ENGL 2111 American Literature 1 (3)
ENGL 2121 American Literature 2 (3)
ENGL 2131 British Literature 1 (3)
ENGL 2141 British Literature 2 (3)

Select one:
ENGR 2071 Topics in Poetry (3)
ENGR 2081 Topics in Drama (3)
ENGR 2091 Topics in Fiction (3)

**AYA Licensure (Center for Teacher Education Requirements)**

CACS 2151 Classroom Communication (3)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience 1 (1)
EDUC 1521 Five-Day Field Experience 2 (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4521 Integrated Language Arts Methods (3)
EDUC 4721 Student Teaching/AYA (12)
ENGL 1221/1231 Writing Seminar (3)
PSYC 2171 Adolescent Psychology (3)

**Literature Major** (38 credit hours)

ENGL 0011 Enrichment (0)
ENGL 1001 Introduction to Literature (3)
ENGL 2101 Pro Seminar: English Studies (3)
ENGL 3511 English Language (3)
ENGL 4121 Shakespeare Studies (3)
ENGL 4461 Capstone Presentation (1)

Select one:
ENGL 2501 Newspaper Practicum (1-3)
ENGL 2511 Magazine Practicum (1-3)
ENGL 2521 Journal Publishing Practicum (1-3)
ENGL 2531 Web Publishing Practicum (1-3)
ENGL 2571 Research Practicum (1-3)

Select three:
ENGL 2111 American Literature 1 (3)
ENGL 2121 American Literature 2 (3)
ENGL 2131 British Literature 1 (3)
ENGL 2141 British Literature 2 (3)

Select one:
ENGR 2071 Topics in Poetry (3)
ENGR 2081 Topics in Drama (3)
ENGR 2091 Topics in Fiction (3)
Select one:
ENGL 2191 Topics in World Literature (3)
ENGL 2251 Children’s and Young Adult Literature (3)
ENGL 2631 Women’s Literature (3)
ENGL 2741 American Multicultural Literature (3)
ENGL 3201 European Literature (3)
ENGL 3301 Postcolonial Literature (3)
ENGL 4321 Studies in Comparative Literature (3)

Select two:
ENGL 3101 Topics in Medieval Literature (3)
ENGL 3191 Renaissance and Jacobean Literature (3)
ENGL 3221 Restoration & 18th Century Literature (3)
ENGL 3261 Post-World War I British Literature (3)
ENGL 3341 American Literature pre-1865 (3)
ENGL 3351 American Literature post-1865 (3)
ENGL 3641 British Novel (3)
ENGL 3651 American Novel (3)
ENGL 3811 Modernist and Contemporary Poetry (3)
ENGL 3901* Special Topics in English (3)
ENGL 4051 Studies in Literary and Cultural Theory (3)
ENGL 4101 Chaucer (3)
ENGL 4231 British Romanticism (3)
ENGL 4241 Victorian Period (3)
ENGL 4311 Studies in American Literature (3)
ENGL 4901* Special Topics in English (3)
ENGL 4971 Independent Study in Literature (1-3)

Any additional 3-hour ENGL course

*ENGL 3901 and 4901 Special Topics and ENGL 4971 may fill Genres, Cultures or Historical requirements depending on topic. They may be repeated if the topic varies.

Professional Writing Major (61+ credit hours)

Professional writing requires a second major, minor, concentration, or option of at least 18+ credit hours. These 18+ credit hours are reflected in the 61+ credit hours required for the major.

ENGL 0011 Enrichment (0)
ENGL 1001 Introduction to Literature (3)
ENGL 2001 Grammar in Context (3)
ENGL 2051 Writing in the Professions (3)
ENGL 2101 Pro Seminar: English Studies (3)
ENGL 2201 Layout and Design (3)
ENGL 3441 Introduction to Convergent Publishing (3)
ENGL 4051 Studies in Literary and Cultural Theory (3)
or
ENGL 4521 Rhetorical Theory (3)
ENGL 4461 Capstone Presentation (1)
ENGL 4701 Editing (3)
ENGL 4821 Internship (PW) (3)

Any additional 3000- or 4000-level ENGL literature course (3)

Select 3 credit hours:
ENGL 2501 Newspaper Practicum (1-3)
ENGL 2521 Journal Publishing Practicum (1-3)
ENGL 2531 Web Publishing Practicum (1-3)
ENGL 2511 Magazine Practicum (1-3)

Select three:
ENGL 1611 News Writing (3)
ENGL 2901* Special Topics in Writing (3)
ENGL 3411 Fiction Writing (3)
ENGL 3421 Screenwriting (3)
ENGL 3781 Journal Publishing (3)
ENGL 3801 Literary Journalism (3)
ENGL 4401 Advanced Poetry Writing (3)
or
ENGL 4411 Advanced Fiction Writing (3)
ENGL 4421 Nonfiction Writing (3)
ENGL 4901* Special Topics (in Writing) (3)
CAEM 2561 Multimedia Writing (3)
CAPR 1301 Introduction to Public Relations (3)
CAPR 2361 Public Relations Writing (3)
TECH 1421 Web Design and Development (3)

*The Special Topics course may be taken, with instructor permission, when the subject area is writing.

Minor Course Requirements

The student completing an English major may also complete a minor
within the department so long as there is no more than 30% duplication of major courses within the minor. All courses required for the minor must be completed with a grade of “C” or higher.

Creative Writing Minor (22 credit hours)
ENGL 2101 Introduction to Creative Writing (3)
ENGL 2011 Creative Writing Workshop (1-3)
ENGL 2201 Creative Writing Workshop (1-3)
ENGL 2511* Advanced Fiction Writing (3)
ENGL 2521 Advanced Poetry Writing (3)
ENGL 4421 Nonfiction Writing (3)
TATH 3821 Playwriting (3)

Select 1 credit:
ENGL 3401 Intermediate Poetry Writing (3)
ENGL 3411 Intermediate Fiction Writing (3)
ENGL 3421 Screenwriting (3)
ENGL 4401 Advanced Poetry Writing (3)
ENGL 4411 Advanced Fiction Writing (3)
ENGL 4421 Nonfiction Writing (3)
TATH 3821 Playwriting (3)

*Courses marked with a single asterisk have variable credit of 1-3 hours (at the instructor’s discretion) and may be repeated, but only 6 credits may count for graduation.

** The course marked with a double asterisk has fixed credit of 3 hours, but only 1 credit counts for the minor.

Journalism Minor (24 credit hours)
ENGL 1611 News Writing (3)
ENGL 2201 Layout and Design (3)
ENGL 2501* Newspaper Practicum (1-3)
ENGL 2921 Photojournalism (3)
ENGL 3551 Feature Writing (3)
or
ENGL 3721 Advanced Reporting (3)
ENGL 4701 Editing (3)

Select two:
CAEM 2561 Multimedia Writing (3)
CAPR 2361 Public Relations Writing (3)
DSGN 1201 Introductory Visual Communication Design (3)
TECH 1421 Web Design and Development (3)
ENGL 2051 Writing in the Professions (3)
ENGL 2561 English Department Newsletter (3)
ENGL 3801 Literary Journalism (3)

*The course marked with an asterisk has variable credit of 1 to 3 credit hours (with instructor’s permission), but it must be taken for a minimum of 1 credit hour each for 3 semesters. Only these hours will count toward graduation.

ENGLISH 75
Select three:

- ENGL 2561*
- ENGL 2531*
- ENGL 2521*
- ENGL 2511*
- ENGL 2501*

Select 3 credit hours:

- ENGL 4701
- ENGL 2201
- ENGL 2051

Professional Writing Minor (21 credit hours)

- ENGL 2051 Writing in the Professions (3)
- ENGL 2201 Layout and Design (3)
- ENGL 4701 Editing (3)

Select 3 credit hours:

- ENGL 2501* Newspaper Practicum (1-3)
- ENGL 2511* Magazine Publishing Practicum (1-3)
- ENGL 2521* Journal Publishing Practicum (1-3)
- ENGL 2531* Web Publishing Practicum (1-3)
- ENGL 2561* English Department Newsletter (3)

Select three:

- CAEM 2561 Multimedia Writing (3)
- CAPR 1301 Introduction to Public Relations (3)
- ENGL 4901** Special Topics (3)
- TECH 1421 Web Design and Development (3)

*Courses marked with a single asterisk have variable credit of 1 to 3 credit hours (with instructor permission). The course must be taken for a minimum of 1 credit hour each for three semesters. Only the hours required for the major will count toward graduation.

**Courses marked with a double asterisk may be taken when subject area is writing, with instructor permission.

Subject - English (ENGL)

0011 - Enrichment
0 Credits

Enrichment of the curriculum for English majors through required attendance at designated cultural and academic extracurricular events. Must be completed twice each academic year by all English majors. Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times.

1001 - Introduction to Literature
3 Credits

Approaches to analyzing, interpreting, and writing about literature. Offered fall and spring semesters.

1221 - Writing Seminar
3 Credits

Introduction to college-level writing skills, including critical reading, the formulation of arguments, researching and incorporating outside sources, and writing essays. Required of all students. Meets university first-year writing requirement. Placement: students with ACT Reading and English scores of 24 or below will place into ENGL 1221. Students who placed into ENGL 110 but have not successfully passed ENGL 111 should take ENGL 1221. Offered fall and spring semesters.

1231 - Writing Seminar
3 Credits

Introduction to college-level writing skills, including critical reading of challenging texts, advanced argumentation, researching and incorporating outside sources, and writing essays. Meets university first-year writing requirement. Placement: students with ACT Reading and English scores of 25 or above will place into ENGL 1231. Offered fall and spring semesters.

1411 - Intensive College Composition 1
3 Credits

Academic English skills for students whose native language is not English, with a focus on grammar and sentence-level structures leading to fully-developed paragraphs and short essays. This intensive course meets five hours per week. Enrollment determined by ONU Writing Placement Exam administered during International Student Orientation. ENGL 1411 and ENGL 1421 together satisfy the general education first-year writing requirement. Students must earn a C or better to advance to ENGL 1421. Offered fall semester.

1421 - Intensive College Composition 2
3 Credits

Continuation of ENGL 1411 with additional emphasis on academic writing including documentation of sources and research writing. This intensive course meets five hours per week. ENGL 1411 and ENGL 1421 together satisfy the general education first-year writing requirement. Students must earn a C or better in ENGL 1411 to enroll in this course. Offered spring semester. Prerequisite(s): ENGL 1411 Minimum Grade of C.
1511 - College Composition 1
3 Credits
Academic English skills for students whose native language is not English, with emphasis on reading and writing. Enrollment determined by ONU Writing Placement Exam administered during International Student Orientation. ENGL 1511 and ENGL 1521 together satisfy the general education first-year writing requirement. Students must earn a C or better to advance to ENGL 1521. A score of 3.5 or higher on the ONU Writing Placement Exam is required to enroll in this course. Offered fall semester.

1521 - College Composition 2
3 Credits
Continuation of ENGL 1511 with additional emphasis on academic writing including documentation of sources and research writing. ENGL 1511 and ENGL 1521 together satisfy the general education first-year writing requirement. Students must earn a C or better to satisfy the general education first-year writing requirement. Students must earn a C or better in ENGL 1511 to enroll in this course. Offered spring semester. Prerequisite(s): ENGL 1511 Minimum Grade of C

1611 - News Writing
3 Credits
Introduction to the basics of news reporting, including interviewing techniques and other methods of news gathering, organizing information, and copy editing. (Taken in conjunction with ENGL 2501 - Newspaper Practicum.) Offered fall semester.

2001 - Grammar in Context
3 Credits
English grammatical structures and their rhetorical effects. Offered alternate fall semesters.

2011 - Introduction to Creative Writing
3 Credits
Introduction to creative writing techniques and texts in multiple genres. Offered spring semester.

2041 - Great Works
3 Credits
Major literary texts covering a range of historical periods and genres. A general education course with an emphasis on writing. Offered fall and spring semesters. Prerequisite(s): ENGL 1221 or ENGL 1231, ENGL 111.

2051 - Writing in the Professions
3 Credits
The functions, uses, history, and practice of writing in professional situations, with a focus on practical understanding of fundamental rhetorical concepts. Assignments include print and online writing, research, and documentation projects in various professional situations with emphasis on grammatical correctness, concision and clarity, and the revision process. Offered alternate fall semesters. Prerequisite(s): ENGL 1221 or ENGL 1231 or ENGL 111.

2071 - Topics in Fiction
3 Credits
Exploration of thematic and stylistic elements in fiction from a variety of cultures and periods. Offered alternate spring semesters.

2081 - Topics in Drama
3 Credits
Exploration of thematic and stylistic elements in dramatic literature from a variety of cultures and periods. Offered alternate spring semesters.

2091 - Topics in Poetry
3 Credits
Exploration of thematic and stylistic elements in poetry from a variety of cultures and periods. Offered alternate spring semesters.

2101 - Proseminar: English Studies
3 Credits
Overview of theoretical and practical approaches to interpreting and writing about texts. Offered fall semester. Prerequisite(s): ENGL 1221 or ENGL 1231.

2111 - American Literature 1
3 Credits
The early period of American literature (1492-1870s), including such genres as exploration and spiritual narratives, revolutionary political writing, fiction, and poetry, taking into account social and historical context. Offered alternate fall semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

2121 - American Literature 2
3 Credits
The early modern, modern, and contemporary periods of American literature (1870s to the present), including such movements as regionalism, realism, naturalism, modernism, and postmodernism in a variety of genres - mainly poetry, fiction, and drama - in a rapidly changing social milieu. Offered alternate spring semesters. Prerequisite(s): ENGL 111, ENGL 1221, or ENGL 1231.

2131 - British Literature 1
3 Credits
A survey of British literature from the Anglo-Saxon period through Neoclassicism in the eighteenth century, focusing on major and minor authors as reflective of both continuity and radical change in literary forms and cultural contexts. Offered alternate fall semesters. Prerequisite(s): ENGL 111, ENGL 1221, or ENGL 1231.

2141 - British Literature 2
3 Credits
A survey of British literature from late eighteenth-century Romanticism to the end of the twentieth century, with continuing emphasis on literary themes and forms within changing cultural contexts. Offered alternate spring semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

2191 - Topics in World Literature
3 Credits
Approaches to reading world literatures in a variety of cultural and literary contexts. This course satisfies the Arts and Sciences Non-Western requirement. Offered alternate spring semesters.

2201 - Layout and Design
3 Credits
Design principles used in the printing industry and on the web, as well as software publication tools in a computer classroom setting. Issues specific to English Department programs. Open to English Department majors; others by permission of the department. Offered spring semester.

2251 - Children’s and Young Adult Literature
3 Credits
Literature specifically suited for children and adolescents. The readings selected from various genres will be studied using the same critical approaches that are traditionally used to analyze literature for adults. Offered fall semester. Prerequisite(s): ENGL 111, ENGL 1221, or ENGL 1231.

2501 - Newspaper Practicum
1 to 3 Credits
Journalism activities on the Northern Review. One to six credits, depending on role, to be determined by department. Course may be repeated 8 times, but only six hours will count toward graduation. Graded S/U. Offered fall and spring semesters.

2511 - Magazine Publishing Practicum
1 to 3 Credits
Publication activities on the ONU creative writing journal Polaris. One to six credits, depending on role, to be determined by the department. Course may be repeated 8 times, but only six hours will count toward graduation. Graded S/U. Offered fall and spring semesters.

2521 - Journal Publishing Practicum
1 to 3 Credits
Workshop experience for English majors in technical and management skills related to the publication of professional journals. One to three credits, depending on role, to be determined by department. Course may be repeated 8 times, but only six hours will count toward graduation. Graded S/U. Offered fall and spring semesters.

ENGLISH
2531 - Web Publishing Practicum
1 to 3 Credits
Publication activities on the ONU electronic magazine eMedia. One to six credits, depending on role, to be determined by department. Course may be repeated 8 times, but only six hours will count toward graduation. Graded S/U. Offered fall and spring semesters.

2541 - Screenwriting Workshop
1 to 3 Credits
Weekly workshop for the exploration of all aspects of screenwriting. Suitable for all levels of experience. Variable credit of one to three hours (at the instructor’s discretion). May be repeated 8 times, but only six hours count toward graduation. Offered fall and spring semesters.

2551 - Creative Writing Workshop
1 to 3 Credits
Weekly workshop. An introduction to multiple creative writing genres and techniques with an emphasis on practice through prompts and other activities. Suitable for all levels of experience. Variable credit of one to three hours (at the instructor’s discretion). May be repeated 8 times, but only six hours count toward graduation. Offered fall and spring semesters.

2561 - English Department Newsletter
1 to 3 Credits
Creation of the annual department newsletter; involves interviews, writing articles, layout and design. English majors only and with instructor approval. Offered spring semester. This course may be repeated 1 time for 3 additional hours.

2571 - Research Practicum
1 to 3 Credits
Practical experience in using such research skills as documentation, editing, and preparing manuscripts. Student will work with faculty member as research assistant. One to three credits, depending on role, to be determined by department. May be repeated, but only six hours will count toward graduation. Offered fall and spring semesters.

2601 - Introduction to Shakespeare
3 Credits
Representative plays and poetry from the entire span of Shakespeare’s career and from each of the genres. May be repeated as content varies. Offered alternate spring semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

2631 - Women’s Literature
3 Credits
Selected works by or about women in English or in translation, drawn from a variety of genres in all historical eras, viewed from various critical perspectives, including feminist and historical/cultural theories. Offered alternate fall semesters.

2741 - American Multicultural Literature
3 Credits
American multicultural literature with emphasis on aesthetic value and cultural context. Offered alternate fall semesters.

2901 - Special Topics
3 Credits
May be repeated as the topic varies. With Department approval. Offered alternate spring semesters. This course is repeatable.

2921 - Photojournalism
3 Credits
Focuses on the art of news photography, and covers basic instruction in photography and lighting, as well as the types of photography found in the news, specifically sports coverage, feature shots, straight news. Camera provided. Open to English Department majors. Others by permission of the department. Offered alternate fall semesters.

3001 - LAE Portfolio
1 Credit
Construction of two professional portfolios in Language Arts Education. Graded S/U.

3101 - Topics in Medieval Literature
3 Credits
Exploration of themes in and cultural contexts of medieval literature. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3191 - Renaissance and Jacobean Literature
3 Credits
Major writers, themes, movements, or genres from 1485 to 1660, including such figures as Marlowe, Jonson, Spenser, Donne, and Milton. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3201 - European Literature
3 Credits
The Western tradition in literature, including representative continental literature in translation from the Classical Greek era to the present. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3221 - Restoration & 18th Century Literature
3 Credits
Major works of English prose and drama between 1660 and 1789, with concentration on a few writers such as Dryden, Behn, Congreve, Addison & Steele, Richardson, Swift, Pope, and Sheridan. Offered alternate spring semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

3261 - Post-World War I British Literature
3 Credits
British literature from the 1900 to the present, with concentration on a few selected writers. Offered alternate fall semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3301 - Postcolonial Literature
3 Credits
Major works in world literatures written in English from such regions as India, Anglophone Africa, Australia, and the Caribbean, with attention to cultural context. This course satisfies the Arts and Sciences non-Western requirement. Offered alternate fall semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3341 - American Literature pre-1865
3 Credits
American literature from 1492 to the 1870s, with concentration on a few selected writers or themes in the context of literary and social influences. Offered alternate fall semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3351 - American Literature post-1865
3 Credits
American literature from the 1870s to the present, with a concentration on a few selected writers or themes in the context of literary and social influences. Offered alternate fall semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.
3401 - Intermediate Poetry Writing
3 Credits
The discipline and technique of poetry writing and analysis. Workshop and discussion setting. Requires permission of the instructor. Offered alternate fall semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

3411 - Intermediate Fiction Writing
3 Credits
The discipline and technique of fiction writing and analysis. Workshop and discussion setting. Offered alternate fall semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

3421 - Screenwriting
3 Credits
The theory and practice of screenwriting in a workshop setting. Permission of instructor required. Offered alternate spring semesters. Prerequisite(s): ENGL 111, ENGL 1221 or ENGL 1231.

3441 - Introduction to Convergent Publishing
3 Credits
This course is a hands-on introduction to two of the most widely used pagination and image manipulation software packages in publishing today: In Design CSS and Adobe Photoshop CSS. Students will also explore web page design as it pertains to publishing. Offered alternate spring semesters. Prerequisite(s): ENGL 244 or ENGL 2201.

3511 - English Language
3 Credits
History of the English language, developments in American and world English, and changes in vocabulary, grammar, phonology, and dialects. Offered alternate fall semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3551 - Feature Writing
3 Credits
Understanding and practice in writing soft news. Class assignments may profile people who make the news; explain events that move or shape the news; analyze what is happening in the world, nation, or community; teach an audience how to do something; suggest better ways to live; examine trends; or entertain. Offered alternate spring semesters. Prerequisite(s): ENGL 241 or ENGL 1611.

3641 - British Novel
3 Credits
Representative novels from the early development of the genre in the eighteenth century to romantic and social novels of the nineteenth and experimental novels of the twentieth centuries. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3651 - American Novel
3 Credits
Selected novels from the eighteenth century to the present in the context of diverse literary and social influences. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3721 - Advanced Reporting (Capstone)
3 Credits
Advanced journalism reporting techniques, research tools, and formats used by newspapers in covering public policy issues. Offered alternate fall semesters. Prerequisite(s): ENGL 241 or ENGL 1611.

3781 - Journal Publishing
3 Credits
Hands-on opportunity to learn about scholarly journal publication. Issues of budgeting, layout, and design, creation of style manuals, copy editing and other responsibilities of an editor. Offered alternate spring semesters. Prerequisite(s): ENGL 204 or ENGL 2041 or ENGL 1001 or any other 200 or 2000-level literature class, minimum grade of C.

3801 - Literary Journalism (Capstone)
3 Credits
The journalist as a creator of literature: the transformation of significant literary figures from working journalists to award-winning fiction writers and the writing techniques they employ. Includes such authors as Hemingway, Hersey, Wolfe, Breslin and Thompson. Offered alternate fall semesters. Prerequisite(s): ENGL 241 or ENGL 1611 Minimum Grade of C.

3811 - Modernist and Contemporary Poetry
3 Credits
Exploration and contextualization of major writers, poems, and movements in 20th-century American and European poetry. Offered alternate fall semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

3901 - Special Topics in English
3 Credits
May be repeated as the topic varies. Department approval required. Offered alternate spring semesters. This course is repeatable.

4051 - Studies in Literary and Cultural Theory
3 Credits
The academic and professional interpretation of literary and multimedia texts in their social, cultural, and historical contexts. Offered alternate spring semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4101 - Chaucer
3 Credits
The poetry of Chaucer, with special emphasis on the Canterbury Tales, Troilus and Criseyde, and reading and understanding Middle English. Offered alternate fall semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4121 - Shakespeare Studies
3 Credits
Close reading and analysis of Shakespeare’s plays with their historical context, using a variety of critical approaches. May be repeated as content varies. Offered alternate fall semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4231 - British Romanticism
3 Credits
Revolutionary changes in British literature between 1790 and 1832, including such innovative thinkers and writers as Blake, the Wordsworths, Coleridge, Byron, Keats, the Shelleys, Wollstonecraft, Radcliffe, and Scott. Offered alternate fall semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4241 - Victorian Period
3 Credits
British literature between 1832 and 1901, with an emphasis on cultural and historical contexts. Offered alternate fall semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).
4311 - Studies in American Literature
3 Credits
A major writer, genre, or theme in American literature, with attention to cultural context. Offered alternate spring semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4321 - Studies in Comparative Literature
3 Credits
Issues of special interest to English majors about literary texts from ancient times to the present that highlight differences between Western and non-Western literatures. Offered alternate spring semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4401 - Advanced Poetry Writing
3 Credits
The discipline and technique of advanced poetry writing and analysis, with an introduction to publication possibilities. Workshop and discussion setting. May be continued as ENGL 4961 - Independent Study in Writing. Offered alternate spring semesters. Prerequisite(s): ENGL 341 or ENGL 3401.

4411 - Advanced Fiction Writing
3 Credits
The discipline and technique of writing fiction, with an introduction to publication possibilities. Workshop and discussion setting. May be continued as ENGL 4961 - Independent Study in Writing. Offered alternate spring semesters. Prerequisite(s): ENGL 341 or ENGL 3401.

4421 - Nonfiction Writing
3 Credits
A literary approach to the reading and writing of non-fiction essays. Offered alternate spring semesters. Prerequisite(s): ENGL 210 or ENGL 2101.

4461 - Capstone Presentation
1 Credit
Oral presentation of the project completed in a designated 3000-4000 level course as a capstone project. Offered fall and spring semester.

4501 - Communications Law and Ethics
3 Credits
A survey of contemporary ethical, legal, and diversity issues confronting the media; the press as a cultural force in society. Offered alternate spring semesters.

4521 - Rhetorical Theory
3 Credits
The history and theory of rhetoric and its practice in contemporary public discourse and media. Offered alternate spring semesters. Prerequisite(s): (ENGL 210 or ENGL 2101, minimum grade of C) and (ENGL 204 or ENGL 2041 or ENGL 1001 or any 200 or 2000-level literature class, minimum grade of C).

4701 - Editing
3 Credits
Editing techniques and concerns critical to producing polished writing on a variety of levels, from corporate communications to book publishing. Offered fall semester.

4711 - History of Journalism
3 Credits
Survey of American journalism history and principles. Concentration on the development of a free press from colonial period to present day with special emphasis on the various heroes and villains of the media including Day, Pulitzer, Hearst, Murrow, and Murdock. Offered alternate spring semesters. Prerequisite(s): ENGL 241 or ENGL 1611.

4811 - Journalism Internship
1 to 3 Credits
Provides practical experience outside the classroom and enhances the students professional interests. Courses appropriate for the internship required. Graded S/U. Offered fall and spring semesters. This course is repeatable for a total of 15 hours.

4821 - Professional Writing Internship
1 to 3 Credits
Provides practical experience outside the classroom and enhances the students professional interests. Courses appropriate for the internship required. Graded S/U. Offered fall and spring semesters. This course is repeatable for a total of 15 hours.

4901 - Special Topics
3 Credits
May be repeated as the topic varies. Department approval required. Offered fall and spring semesters. This course is repeatable.

4961 - Independent Study in Creative Writing
1 to 3 Credits
May be repeated as the topic varies. Department approval required. Offered fall and spring semesters. This course is repeatable.

4971 - Independent Study in Literature
1 to 3 Credits
May be repeated as the topic varies. Department approval required. Offered fall and spring semesters. This course is repeatable.

4981 - Independent Study in Professional Writing
1 to 3 Credits
May be repeated as the topic varies. Department approval required. Offered fall and spring semesters. This course is repeatable.

4991 - Independent Study in Journalism
1 to 3 Credits
May be repeated as the topic varies. Department approval required. Offered fall and spring semesters. This course is repeatable.

DEPARTMENT OF HISTORY, POLITICS, AND JUSTICE

Professors Lomax, Loughlin, J. Scott; Associate Professors Alexander, D. Smith, E. Wilson (Chair); Assistant Professors Crawford, Geistman, Nsia-Pepra; Visiting Assistant Professors Schuck, R. Waters, H. Wilson

Mission Statement
The mission of the Department of History, Politics and Justice is to assist students' development into self-reliant individuals. The department places special emphasis on the development of diverse ideas within the historical, political, legal, and geographical realm and furthers students' understanding of the world through the development and enhancement of critical and analytical reasoning skills.

Professional Memberships
The department is a member of the Academy of Criminal Justice Sciences, the American Correctional Association, the American Geographical Society, the American Historical Association, and the American Political Science Association.

 Majors, Minors and Degrees Offered
Criminal Justice Major (BA)
History Major (BA)
Political Science Major/American Politics Concentration (BA)
Political Science Major/International Politics Concentration (BA)
Social Studies Major (BA)
Asian Studies Minor
Criminal Justice Minor
Geography/Area Studies Minor
Geography/Geographic Information Systems (GIS) Minor
History Minor
Political Science Minor
Public History and Museum Studies Minor

Licensure Offered
Adolescent Young Adult (AYA) Social Studies Teaching Licensure (grades 7-12)

Special Programs
Archaeological Field School
The department conducts an Archaeological Field School. It is an ongoing educational program that maximizes student participation and learning at an active archaeological site. Field School is a "teaching through doing" course. It features site work, formal lectures, and informal discussions on archaeology, archaeological methods, and the application of anthropological theory to archaeological discoveries.

Internships and Other Experiential Education
Public service internships are available at all levels of government, including the Ohio and federal legislatures. Public history internships include work in museums and in archival management in addition to research positions with professional historians. Many students intern with private businesses and non-profit organizations. The department also offers students the opportunity to participate in The Washington Center for Internships and Academic Seminars or the Washington Semester program sponsored by American University. A student may apply three credit hours of internship to selected majors and minors and as many as fifteen total credit hours of departmental internship to the Bachelor of Arts degree.

Students annually participate in the National Model United Nations in New York City and the American Mock Trial program in Chicago, Illinois, and St. Paul, Minnesota. A student may apply three credit hours of Model United Nations to the political science/international politics major and up to nine credit hours to the Bachelor of Arts degree. A student may apply three credit hours of Mock Trial to the criminal justice or political science majors and up to nine credit hours to the Bachelor of Arts degree.

Honorary
The department has active chapters of Alpha Phi Sigma, the national criminal justice honorary; Phi Alpha Theta, the national history honorary; Phi Beta Delta, the national honorary for international scholars; Pi Sigma Alpha, the national political science honorary; and Studia Socialia Americae, the national social studies honor society.

Study Abroad
The department participates in numerous study-abroad programs. Students majoring in history are encouraged to consider direct exchanges at University of Joensuu, the University of Wales, Lampeter, or the University of Debrecen, Hungary. Political science and criminal justice majors are directed toward Glasgow Caledonian University, University of Debrecen, or the University of Joensuu. Students interested in Asian Studies are encouraged to study in Hanyang University as well as other programs in Korea, China, and Taiwan. Ohio Northern also participates in several study abroad consortia that allow students to pursue study abroad in every part of the world.

Prelaw Program
Ohio Northern University has developed a unique prelaw program that offers to superior students an excellent opportunity to prepare for a career in law. Prelaw students have access to individual prelaw advisers, who encourage students to enroll in courses that encourage and develop (1) comprehension and expression in words, (2) critical understanding of the human institutions and values with which the law deals, and (3) critical and analytical thinking. The Prelaw Advising Committee sponsors a course that introduces students to legal studies and a Law School Admissions Test (LSAT) preparatory workshop. Prelaw advisers also assist students with applications for admission to law schools.

Students in the prelaw program will gain automatic admission to the Ohio Northern University College of Law if they (1) maintain an undergraduate grade point average of at least 3.40/4.00; (2) score in at least the 75th percentile on the LSAT; (3) pass the character and fitness review by the Admissions Committee of the College of Law, and (4) pursuant to ABA Admissions Standard 501, are deemed by the law school admissions committee to appear capable of satisfactorily completing its program and being admitted to the bar. To take advantage of an automatic admission, a student must enroll in the College of Law in the fall semester immediately following the date that the student receives an undergraduate degree from Ohio Northern.

Major Course Requirements
Every course required for a major must be completed with a grade of "C" or higher. The capstone requirement for majors in this department is met by successful completion of Senior Thesis 1 and 2 in the appropriate major. To pursue a dual major or a major and a minor, students must complete all requirements for each separate major and minor.

Criminal Justice Major (56 credit hours)
Criminal justice prepares students for careers in law enforcement, corrections, probation and parole, juvenile justice, crime analysis, and courts administrations. A highly interdisciplinary major, criminal justice focuses on the political, administrative, sociological, and psychological aspects of crime and the criminal justice system. A minor in geography/GIS provides direction for the criminal justice major and develops practical skills that are of increasing value in the workplace. In addition, students may also pursue course work in forensic science offered in cooperation with the Department of Biological and Allied Health Sciences. All criminal justice majors must complete an internship.

HSPS 1001 History, Politics and Justice Orientation (1)

CJ 1211 Introduction to Criminal Justice (3)
CJ 2001 CJ Systems: The Police (3)
CJ 2101 CJ Systems: The Courts (3)
CJ 2201 CJ Systems: Corrections (3)
CJ 3xx1/4xx1 CJ elective 1, 2 (3)
CJ 3xx1/4xx1 CJ elective 1, 2 (3)
CJ 4711 Public Service Internship2 (3)
CJ 4981 Senior Thesis 1 (1)
CJ 4991 Senior Thesis 2 (2)

Other required courses:
GEOG 2481 Data Analysis (4)
ISR 2531 Data Analysis (4)
PLSC 2011 American Politics (3)
PSYC 3xx1/4xx1 Psychology (3)
SOC 1051 Sociology (3)
SOC 2611 Criminology (3)

Complete two departmentally approved, major-appropriate courses from the following:
PLSC 2xx1/3xx1 PLSC elective (3)
PSYC 3xx1/4xx1 PSYC elective (3)
SOC 3xx1/4xx1 SOC elective (3)

Notes:
1Weekend Seminar (CJ 3021) is a 1 credit hour course that students may repeat as the topic varies. The student may apply exactly 3 credit hours of CJ 3021 to CJ elective credit. The student may apply exactly 3 credit hours of PLSC 4761 to CJ elective credit.
2The criminal justice major requires a total of 600 on-site hours of Public Service Internship (CJ 4711). The student must enroll in at least 1 credit hour of Public Service Internship for each internship experience. The student may apply exactly 3 credit hours of CJ 4711 to CJ elective credit upon the approval of the Internship Committee.

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Forensic Science Option (33 credit hours) Only criminal justice majors may declare the forensic science option. Every course required for this option must be completed with a grade of "C" or higher.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 1311</td>
<td>Biology 1: Cells and Molecules (4)</td>
</tr>
<tr>
<td>BIOL 1321</td>
<td>Biology 2: Form and Function (4)</td>
</tr>
<tr>
<td>BIOL 2101</td>
<td>Genetics (4)</td>
</tr>
<tr>
<td>BIOL 2171</td>
<td>Molecular Biology (3)</td>
</tr>
<tr>
<td>BIOL 2191</td>
<td>Forensic Biology 1 (4)</td>
</tr>
<tr>
<td>BIOL 2311</td>
<td>Anatomy and Physiology 1 (3)</td>
</tr>
<tr>
<td>BIOL 2591</td>
<td>Forensic Crime Scene Investigation (4)</td>
</tr>
<tr>
<td>BIOL 3521</td>
<td>Integrated Cell and Molecular Laboratory (2)</td>
</tr>
<tr>
<td>CHEM 1201</td>
<td>Chemistry - Health Sciences (5)</td>
</tr>
</tbody>
</table>

History Major (40 credit hours)

A major in history prepares students for careers in teaching, law, journalism, information management, government service, business, and any other profession that requires verbal skill and analytical reasoning. A history major in combination with a minor in public history/museum studies prepares students to move into entry level positions as a museum curator, museum administrator, or public historian.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSPS 1001</td>
<td>History, Politics and Justice Orientation (1)</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Western Civilization 1 (3)</td>
</tr>
<tr>
<td>HIST 1111</td>
<td>Western Civilization 2 (3)</td>
</tr>
<tr>
<td>HIST 2041</td>
<td>Historiography (3)</td>
</tr>
<tr>
<td>HIST 2141</td>
<td>United States to 1877 (3)</td>
</tr>
<tr>
<td>HIST 2151</td>
<td>United States since 1877 (3)</td>
</tr>
<tr>
<td>HIST 3xx1-4xx1</td>
<td>US history elective¹ (3)</td>
</tr>
<tr>
<td>HIST 3xx1-4xx1</td>
<td>European history elective¹ (3)</td>
</tr>
<tr>
<td>HIST 3xx1-4xx1</td>
<td>Non-Western history elective¹ (3)</td>
</tr>
<tr>
<td>HIST 4981</td>
<td>Senior Thesis 1 (1)</td>
</tr>
<tr>
<td>HIST 4991</td>
<td>Senior Thesis 2 (2)</td>
</tr>
</tbody>
</table>

Other required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 2011</td>
<td>Introduction to American Government (3)</td>
</tr>
</tbody>
</table>

Complete one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 2261</td>
<td>World Regional Geography (3)</td>
</tr>
<tr>
<td>HSPS 3211</td>
<td>Europe in Transition (3)</td>
</tr>
<tr>
<td>HSPS 3221</td>
<td>Asia in Transition (3)</td>
</tr>
<tr>
<td>HSPS 3231</td>
<td>Africa in Transition (3)</td>
</tr>
<tr>
<td>HSPS 3241</td>
<td>The Middle East in Transition (3)</td>
</tr>
<tr>
<td>HSPS 3251</td>
<td>Latin America in Transition (3)</td>
</tr>
</tbody>
</table>

Note:

¹A student may take HSPS and GGHS courses for HIST elective credit.

Political Science Major (47-53 credit hours)

A major in political science with a concentration in either American politics or international politics prepares students for careers in law, journalism, information management, government service, and business. The concentration that a student chooses will reflect his or her career goals and interests. The student must complete the major courses, the other required courses and either the American politics concentration or the international politics concentration to complete the political science major. The credit hours listed above include the credit hours required for the concentration.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSPS 1001</td>
<td>History, Politics and Justice Orientation (1)</td>
</tr>
<tr>
<td>PLSC 2011</td>
<td>Introduction to American Politics (3)</td>
</tr>
<tr>
<td>PLSC 2201</td>
<td>Introduction to International Relations (3)</td>
</tr>
<tr>
<td>PLSC 2211</td>
<td>Introduction to Comparative Politics (3)</td>
</tr>
<tr>
<td>PLSC 4581</td>
<td>Western Political Thought 1 (3)</td>
</tr>
<tr>
<td>PLSC 4591</td>
<td>Western Political Thought 2 (3)</td>
</tr>
<tr>
<td>PLSC 4981</td>
<td>Senior Thesis 1 (1)</td>
</tr>
<tr>
<td>PLSC 4991</td>
<td>Senior Thesis 2 (2)</td>
</tr>
</tbody>
</table>

Other required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 1311</td>
<td>Introduction to Statistical Reasoning (3)</td>
</tr>
<tr>
<td>ISR 2531</td>
<td>Research Methods (3)</td>
</tr>
<tr>
<td>ISR 2541</td>
<td>Data Analysis (4)</td>
</tr>
</tbody>
</table>

American Politics Concentration (21 hours)

The student must complete one 6 credit hour Experiential/Research Elective and the Academic Elective courses to complete the concentration. The student may not apply to the Academic Electives any credit hours that have been applied to the Experiential/Research Elective.

A. Experiential/Research Elective:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 4711</td>
<td>Public Service Internship¹ (6)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Study Abroad² (6)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Research Facility course³ (3)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Research Facility course³ (3)</td>
</tr>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 1 (3)</td>
</tr>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 2 (3)</td>
</tr>
</tbody>
</table>

B. Academic Electives¹, 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>American Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>American Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>American Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>American Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>American Politics Elective (3)</td>
</tr>
</tbody>
</table>

International Politics Concentration (27 hours)

The student must complete one 6 credit hour Experiential/Research Elective, the Academic Elective courses, and second-year language competency to complete the concentration. The student may not apply to the academic electives any credit hours that have been applied to the Experiential/Research Elective.

A. Experiential/Research Elective:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 4711</td>
<td>Public Service Internship¹ (6)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Study Abroad² (6)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Research Facility course³ (3)</td>
</tr>
<tr>
<td>XXXX 3xx1-4xx1</td>
<td>Research Facility course³ (3)</td>
</tr>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 1 (3)</td>
</tr>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 2 (3)</td>
</tr>
</tbody>
</table>

B. Academic Electives¹, 5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>International Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>International Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>International Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>International Politics Elective (3)</td>
</tr>
<tr>
<td>PLSC 3xx1-4xx1</td>
<td>International Politics Elective (3)</td>
</tr>
</tbody>
</table>

C. Second-year competency in a modern language

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 1 (3)</td>
</tr>
<tr>
<td>MLNG 2xx1</td>
<td>Intermediate Language 2 (3)</td>
</tr>
</tbody>
</table>

Notes:

¹The student must complete a total of 600 on-site hours of Public Service Internship (PLSC 4711). The student must enroll in at least 1 credit hour of Public Service Internship for each internship experience. Students who complete a full-time internship at The Washington Center may apply up to 6 credit hours of PLSC 4711 to the Experiential/Research Elective. With prior departmental approval, the student may apply 3 hours of Seminar - The Washington Center (PLSC 4721) to the Academic Electives. A student who selects study abroad or research facility to complete the Experiential/Research Elective may apply 3 credit hours of Public Service Internship (PLSC 4711) to the Academic Electives.

²The department must approve 6 credit hours of 3xx1-4xx1 level coursework from among the courses that the student has completed at the study abroad site to complete the Study Abroad Experiential/Research Elective.
2. The department must grant prior approval of the research facility courses with which the student intends to complete the Experiential/Research Elective.

3. The student completing the American politics concentration may fulfill one Academic Elective course requirement with 3 credit hours of Mock Trial (PLSC 4761). HSPS and GGPS courses that satisfies the American politics elective attribute may be taken for PLSC elective credit.

3. The student completing the international politics concentration may fulfill one Academic Elective course requirement with 3 credit hours of Model United Nations (PLSC 4751). HSPS and GGPS courses that satisfies the International Politics elective attribute may be taken for PLSC elective credit.

Social Studies Major (105 credit hours)

The Social Studies major with other required coursework meets the curriculum and experience requirements for the Integrated Social Studies (grades 7-12) teaching license for the state of Ohio. There are special departmental advisors for teacher licensure. Completion of the social studies major also completes the requirements for a second major in history.

HISTORY, POLITICS, AND JUSTICE

PSYC 1001  Psychology (3)
SOC 1051   Sociology (3)

Complete one:
BIZ 2021  Microeconomic Foundations for Bus. Planning (3)
BIZ 2031  Macroeconomic Foundations for Bus. Planning (3)
Criminal Justice Minor (24 credit hours)
CJ 1211 Introduction to Criminal Justice (3)
CJ 2001 CJ Systems: The Police (3)
CJ 2101 CJ Systems: Corrections (3)
GEOG 2481 Introduction to GIS (3)
SOC 1051 Sociology (3)
SOC 2611 Criminology (3)
STAT 1311 Introduction to Statistical Reasoning (3)
PLSC 3541 Judicial Process, Behavior, and Impact (3)

Geography/Area Studies Minor (24 credit hours)
GEOG 1001 Introduction to Geography: Methods and Materials (3)
GEOG 2261 World Regional Geography (3)
GEOG 2371 Physical Geography (3)
GEOG 2611 Spatial Methods 1 (3)

Complete two:
HSPS 3211 Europe in Transition (3)
HSPS 3221 Asia in Transition (3)
HSPS 3231 Africa in Transition (3)
HSPS 3241 The Middle East in Transition (3)
HSPS 3251 Latin America in Transition (3)
HSPS 4161 Russia and the Near Abroad (3)

Complete two:
GEOG 2481 Introduction to GIS (3)
GEOG 2401 Political Geography (3)
GEOG 2421 Population Geography (3)
GGHS 3xx1 Historical geography elective (3)
PLSC 4751 Model UN (3)

Geography/Geographic Information Systems (GIS) Minor (24 credit hours)
GEOG 1001 Geography/Methods & Materials (3)
GEOG 2261 World Regional Geography1 (3)
GEOG 2371 Physical Geography2 (3)
GEOG 2481 Introduction to GIS (3)
GEOG 2611 Spatial Methods 1 (3)
GEOG 2681 Cartography (3)
 or 
GEOG 4001 Introduction to Remote Sensing (3)
GEOG 3481 Applied GIS (3)
GEOG 4711 Public Service Internship2 (3)

Notes:
1With the approval of the academic advisor, the student may substitute one Geography Special Topics course (GEOG 3931 or GEOG 4931) or one Seminar in Geography (GEOG 4941) for World Regional Geography (GEOG 2261) or for Physical Geography (GEOG 2371).
2The student must complete a one-term internship. The student must enroll in at least 1 credit hour of Public Service Internship (GEOG 4711) for each internship experience.

History Minor (21 credit hours)
HIST 1101 Western Civilization 1 (3)
HIST 1111 Western Civilization 2 (3)
HIST 2041 Historiography (3)
HIST 2141 United States to 1877 (3)
HIST 2151 United States since 1877 (3)
HIST 3xx1-4xx1 Non-Western elective (3)
HIST 3xx1-4xx1 History elective1 (3)

1A student may take HSPS and GGHS courses for HIST elective credit.

Political Science Minor (21 credit hours)
PLSC 2011 Introduction to American Politics (3)
PLSC 2201 Introduction to International Relations (3)
or
PLSC 2211 Introduction to Comparative Politics (3)
PLSC 3xx1-4xx1 Political science elective1 (3)

PLSC 3xx1-4xx1 Political science elective1 (3)
PLSC 3xx1-4xx1 Political science elective1 (3)
PLSC 4581 Western Political Thought 1 (3)
or
PLSC 4591 Western Political Thought 2 (3)

1HSPS and GGPS courses may be taken for political science elective credit.

Public History and Museum Studies Minor (21 credit hours)

A student must be a history major or an art major to declare the public history and museum studies minor. The student must complete the core and either the managerial concentration or the curatorial concentration to complete the minor in public history and museum studies.

HIST 2301 Introduction to Museums and Archives (3)
HIST 3081 Material Culture (3)
HIST 3201 Advanced Public History (3)
HIST 3301 Advanced Local History (3)
HIST 4121 Archaeology Field School (3)
or
HIST 4711 Public Service Internship1 (3)

Managerial Concentration: Complete two:
CAPR 1301 Introduction to Public Relations (3)
MGMT 4771 Non-Profit Management (3)
PLSC 3661 Public Administration (3)
TAAD 2311 Arts Marketing/Audience Development (3)

Curatorial Concentration: Complete two:
HIST 3011 Introduction to Family History and Genealogy (3)
JRN 2201 Layout and Design (3)
SOC 2501 Cultural Anthropology (3)
TECH 1421 Web Design (3)

1A student must complete 3 credit hours of Public Service Internship (HIST 4711). The student must enroll in at least 1 credit hour of Public Service Internship (HIST 4711) for each internship experience.

Subject - Criminal Justice (CJ)

1211 - Introduction To Criminal Justice
3 Credits
Concepts, issues, substance, structures of the American criminal justice system, causes of criminal behavior, theories of law and punishment, and the roles of various actors within the system.

2001 - Criminal Justice Systems: The Police
3 Credits
Historical, philosophical and legal basis of police institutions, practices and procedures. Issue oriented course. Discussion topics will vary with prevailing policing issues.

2101 - Criminal Justice Systems: The Courts
3 Credits
Prosecution and defense in criminal cases. Constitutional rules that apply to criminal cases at trial and under appeal. The concept of due process. The rights and limitations of the state and the defense under the Bill of Rights. Preliminary hearings, arraignment, trials, sentencing, and appeals.

2201 - Criminal Justice Systems: Corrections
3 Credits
Historical, philosophical and legal basis of correctional procedures and institutions. Probation and parole. Issue oriented course. Discussion topics will vary with prevailing corrections issues.
3021 - Nature Center Seminar In Criminal Justice
3 Credits
Weekend seminar at the Metzger Nature Center on a wide range of topics in criminal justice. May be repeated as topic varies. A Nature Center use fee is charged. This course is repeatable.

3401 - Comparative Criminal Justice
3 Credits
Comparison of the American criminal justice system with international systems from the common, civil, socialist, and Islamic legal traditions. Comparative analysis of police, courts, corrections, and legal definitions of crime. Transnational crime.

3431 - Substantive Criminal Law
3 Credits

3451 - Women In Criminal Justice
3 Credits

3551 - Minorities In Criminal Justice
3 Credits
Racial and ethnic minorities in the American criminal justice system. Minority and ethnic group members as offenders, victims of crime, and criminal justice professionals. Impact of racism, prejudice, and discrimination.

3561 - Juvenile Justice
3 Credits

3601 - Criminal Investigation
3 Credits

3901 - Special Topics In Criminal Justice
3 Credits
May be repeated as topic varies. This course is repeatable.

4011 - The Death Penalty
3 Credits
Examination of the Eighth Amendment and the death penalty. Major United States Supreme Court decisions that relate to the death penalty. Theoretical and practical perspectives on the death penalty. Historical development of the death penalty. Capital trials, the appeals process, methods of execution, and the doctrine of proportionality. Comparisons between male and female capital offenders. Rules that govern insane and juvenile capital offenders. The costs of executions.

4101 - Criminal Behavior
3 Credits
Use of the descriptions and explanations that criminals themselves provide to understand how people become criminals. The roles that social and peer groups, social environment, and learning play in the process. Theoretical and policy implications of criminal behavior.

4111 - Serial Killers
3 Credits
The historical origins of the concept of serial killers. The methods, motives, and psychological background of American serial killers. The culture of serial killers. Theories to explain serial killing. The concept and application of profiling.

4121 - Domestic Violence
3 Credits

4211 - Crime And The Media
3 Credits
 Representations of crime and the criminal justice system in the media. How media representations affect society and the criminal justice system. How the media construct reality, influence attitudes and perceptions of crime and criminality, and affect criminal cases.

4621 - Issues In Criminal Justice
3 Credits
Intensive study of selected topics related to criminal justice. May be repeated as topic varies. This course is repeatable.

4711 - Public Service Internship Program
1 to 15 Credits
Field experience in the area of public service. Student works in a close relationship with public offices and officials or approved private agencies and firms. Student must enroll in at least 1 credit hour of Public Service Internship per internship experience. A full time Public Service Internship requires 600 hours of on-site work. Student may apply up to 15 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process; 2.75 GPA; junior or senior status required. This course may be repeated 15 times. This course is repeatable for a total of 15 hours.

4721 - Seminar - The Washington Center Seminar
3 Credits
Requires prior departmental approval.

4901 - Special Topics In Criminal Justice
3 Credits
May be repeated as topic varies. Formerly PLSC 490. This course is repeatable.

4941 - Seminar In Criminal Justice
3 Credits
May be repeated as topic varies. This course is repeatable.

4961 - Independent Study In Criminal Justice
1 to 3 Credits
Approval of department chair required prior to registration. This course is repeatable.

4981 - Senior Thesis
1 Credit
Topic selection and development of bibliography and outline for senior thesis under the direction of a departmental faculty member. First part of departmental Capstone course for majors in Criminal Justice. Required of all Criminal Justice majors. Enrollment at least two semesters before the semester of expected graduation. Junior status, major in Criminal Justice required. Formerly PLSC 488. Prerequisite(s): ISR 2531 and ISR 2541.

4991 - Senior Thesis 2
2 Credits
Completion of senior thesis under the direction of a departmental faculty member and a second reader. Second part of departmental Capstone course for majors in Criminal Justice. Required of all Criminal Justice majors. Enrollment at least one semester before the semester of expected graduation. Junior status; major in Criminal Justice required. Prerequisite(s): CJ 4981.
Subject - Geography (GEOG)

1001 - Introduction To Geography: Methods And Materials
3 Credits
Methods and tools that geographers use to study the complex relationship between place and space. The major academic subdisciplines of geography, including physical geography, political geography, cartography, population geography, historical geography, and GIS.

1901 - Special Topics In Geography
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

2261 - World Regional Geography
3 Credits
Regional survey of the non-Western world. Examination of the leading cultural, economic, historical, political, and environmental features of the non-Western world. Confers IR-CP elective credit.

2371 - Physical Geography
3 Credits
Basic concepts in physical geography. The atmosphere, the biosphere, the lithosphere, and the hydrosphere. Processes driving physical systems on the earth, interactions among physical systems, human interaction with the physical environment. Basic physical geographic processes and the global geographic patterns. Formerly GEOG 237.

2401 - Political Geography
3 Credits

2421 - Population Geography
3 Credits
Spatial variations in the distribution, composition, migration, and growth of populations in relation to the nature of places. Demography from a geographical perspective.

2481 - Introduction To Geographic Information Systems
3 Credits
Fundamentals of geographic information systems (GIS). Basic cartographic principles, general geography concepts and spatial analysis, and hardware and software elements of GIS. Lab exercises in various applications of GIS technology to engineering, political science, health, environmental science, business, government, and criminal justice. GIS terminology, raster and vector data structures, data sources and accuracy, methods of data acquisition, conversion, input, and working with spatial databases. Working knowledge of Windows operating system required. Exercises require work in the computer lab outside class hours.

2551 - Spatial Methods 1
3 Credits
Introduction to the application of quantitative and qualitative methods in geography. Quantitative methods, including descriptive statistics; descriptive spatial statistics; normal, Poisson, and binomial probabilities. Introduction to qualitative methods, including interviewing, observation, document analysis, and visual analysis.

2561 - Spatial Methods 2
3 Credits
Intermediate application of quantitative and qualitative methods in geography. Quantitative methods used by geographers, including multivariate analysis, factor analysis, and spatial modeling. Continues discussion on qualitative methods used by geographers. Prerequisite(s): GEOG 2551.

2681 - Cartography
3 Credits
The art and science of making maps. The history of map-making, elements of map construction, and properties of map projections. How to construct different kinds of thematic maps and manipulate geographic data to illustrate characteristics of distribution, concentration, or other geographic patterns that promote interpretation of the earth's features. Exercises require work in the computer lab outside class hours. Offered alternate years.

2901 - Special Topics In Geography
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

3021 - Nature Center Seminar In Geography
1 Credit
Weekend seminar at the Metzger Nature Center on a wide range of topics in geography. May be repeated as topic varies. A Nature Center use fee is charged. This course is repeatable.

3481 - Applied Geographic Information Systems
3 Credits
Advanced discussion of spatial interpolations, error, and uncertainty, Global Positioning Systems (GPS), and spatial model-building. Advanced knowledge of GIS theory and science. Computer lab projects geared toward the relevant major. Exercises require work in the computer lab outside class hours. Offered alternate years. Prerequisite(s): GEOG 2481.

3901 - Special Topics In Geography
1 to 3 Credits
May be repeated as topic varies. Formerly GEOG 393. This course is repeatable.

4001 - Introduction To Remote Sensing
3 Credits
Principles and application of remote sensing. The fundamental characteristics of electromagnetic radiation, and energy-atmosphere interactions. The design of remote sensing instruments. Techniques to extract problem-solving information from remote sensing data. Emphasis on digital image-processing techniques and the algorithms involved in measurement, analysis, and interpretation of electromagnetic energy collected by remote sensing instruments. Prerequisite(s): GEOG 248.

4711 - Public Service Internship Program
1 to 15 Credits
Field experience in the area of public service. Student works in a close relationship with public offices and officials or approved private agencies and firms. Student must enroll in at least 1 credit hour of Public Service Internship per internship experience. A full time Public Service Internship requires 600 hours of on-site work. Student may apply up to 15 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process; 2.75 GPA; junior or senior status required. This course may be repeated 15 times. This course is repeatable for a total of 15 hours.

4721 - Seminar - The Washington Center Seminar
3 Credits
Requires prior departmental approval.

4901 - Special Topics In Geography
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

4941 - Seminar In Geography
3 Credits
May be repeated as topic varies. This course is repeatable.

4961 - Independent Study In Geography
1 to 3 Credits
Approval of department chair required prior to registration. This course is repeatable.
Subject - Geography and Criminal Justice (GGCJ)
3521 - Spatial Analysis In Criminal Justice
3 Credits
Spatial aspects of criminal justice. Geographies of crime, policing, and related topics.

3921 - Special Topics In Geography And Criminal Justice
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

Subject - Geography and History (GGHS)
3531 - Historical Geography
3 Credits
Spatial aspects of history. Geographies of historical events and trends and spatial analysis of the past. May be repeated once as topic varies.

3931 - Special Topics In Geography And History
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

Subject - Geography and Political Science (GGPS)
3541 - Geography For Marketing
3 Credits
Geographies of markets, analysis of the location of markets, spatial and temporal trends, mapping markets, and GIS.

3941 - Special Topics In Geography And Marketing
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

Subject - History (HIST)
0041 - Teacher Licensure Orientation
0 Credits
Introduction to the National Council for the Social Studies Ten Themes for Teaching and requirements for teacher licensure. The Ohio State Board of Education requires this course for Social Studies licensure. Graded S/U. Major in Social Studies required. A Nature Center use fee is charged. Must be enrolled in one of the following Fields of Study: Social Studies

1011 - Western Civilization 2
3 Credits
Ideas, attitudes, and institutions basic to civilization as it developed in the West from the seventeenth century to the present.

1151 - World Civilizations 1
3 Credits
The emergence, development, and interactions of civilizations in Africa, Asia, Europe, and the Americas, from the Neolithic Revolution to 1400 CE.

1161 - World Civilizations 2
3 Credits
The development and interactions of Western and non-Western civilizations from 1400-present.

1201 - Public History
3 Credits
Fundamentals of public history. Investigation, examination, and study of museums and historical societies, historic preservation, material culture, popular culture, and family and ethnic group history. Readings, discussions, demonstrations, and fieldwork. Student who completes HIST 1201 may not enroll in HIST 3201.

1301 - Local History
3 Credits
Significant aspects of local history for reference and teaching purposes. Investigation, examination, and study of topics and trends in local history theory and practice. Readings, discussions, demonstrations, and fieldwork. Student who completes HIST 1301 may not enroll in HIST 3301.

1401 - America Rising
3 Credits
America rose from isolated colonies to an economic juggernaut between 1600 and the 1890s. The course will consider the effect of European colonization, interaction with Native Americans, colonial struggles leading to independence, the creation of a new republic, the Antebellum Period, the Civil War, and the rise of industrial America. Special consideration given to the struggle over definition of the new republic and its conflict over slavery.

1411 - The American Century
3 Credits
Already an economic power at the end of the 19th century, the United States achieved the status of superpower in the wake of the second World War. This course will consider what Time publisher, Henry Luce famously called the ’American Century.’ Special consideration given to the debate over the meaning of ‘America’ and over the nation’s role in the world. Covers the period from the Spanish American War in 1898 to Francis Fukuyama’s declaration of the triumph of American-style liberal democracy and free market capitalism in the 1990s.

1901 - Special Topics In History
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

2041 - Historiography
3 Credits
Methods for researching and writing history from textual sources. Examination of major theories and schools of historical writing. Requires a fully documented research paper written predominantly from primary sources. Fulfills the research methods requirement for History and Social Studies majors.

2141 - United States History To 1877
3 Credits
American colonies and United States from 1492 to 1877. Emphasis is placed on the formation of American political, economic, and social attitudes, their application in the early Republic, the Civil War, and Reconstruction.

2151 - United States History Since 1877
3 Credits
The United States since the end of Reconstruction. Major topics include the role played by the US in global affairs and US domestic policy.

2301 - Introduction To Museums And Archives
3 Credits
Theoretical, administrative, and curatorial aspects of museum and archival management and practice. Topics include the growth of museums and archives, the development of private and public institutions, and the manner in which museum and archival collections are gathered, catalogued, utilized, stored, and made available for research, educational and exhibition purposes. Students gain proficiency in PastPerfect.

2901 - Special Topics In History
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.
3001 - Myth In History
3 Credits
Analysis of the nature and function of myth in historical societies. Case studies in the mythologies of the ancient Near East, Greece, Rome, northern Europe, the Americas, Australia, and the Pacific.

3021 - Nature Center Seminar In History
1 Credit
Weekend seminar at the Metzger Nature Center on a wide range of topics in history. May be repeated as topic varies. A Nature Center use fee is charged. This course is repeatable.

3071 - Introduction To Family History And Genealogy
3 Credits
Genealogical research and practice for understanding family history and social development. Exploration of family records; local, state, and federal records; church records; census records; land and probate records and documents; school records; immigration lists and naturalization records; and miscellaneous records to document specific ethnic origins. Offered alternate years.

3081 - Material Culture
3 Credits
Material culture as a means of understanding history and the built environment. Interdisciplinary trends in theory and methodology. The importance of material culture analysis to understand issues such as consumption, fashion, gender, technology, built form, and popular contemporary culture. Offered alternate years.

3131 - East Asia To 1800
3 Credits
Historical evolution of imperial authority in China and Japan. Cultural institutions in China, Japan, Korea and southeast Asia. Cultural interactions between those nations. The beginnings of European penetration into the East. Offered alternate years.

3141 - East Asia Since 1800
3 Credits

3201 - Public History
3 Credits
Fundamentals of public history. Investigation, examination, and study of museums and historical societies, historic preservation, material culture, popular culture, and family and ethnic group history. Readings, discussions, demonstrations, and fieldwork. Requires extensive readings and a research project. Intended for History majors and minors and Social Studies majors. Student who completes HIST 1201 may not enroll in HIST 3201.

3301 - Local History
3 Credits
Significant aspects of local history for reference and teaching purposes. Investigation, examination, and study of topics and trends in local history theory and practice. Readings, discussions, demonstrations, and fieldwork. Requires extensive readings and a research project. Intended for History majors and minors and Social Studies majors. Student who completes HIST 1301 may not enroll in HIST 3301.

3401 - Colonial North America
3 Credits
Colonial North American colonies c. 1550-1763. The land, English and French institutions and interactions, relations with Amerindians, slavery, religious diversity, economic enterprise, and politics.

3411 - Western Expansion
3 Credits

3421 - The Constitutional Era In United States History
3 Credits

3451 - African American History
3 Credits
The history of the African-American experience from the African beginnings to the present-day.

3611 - 20th Century United States Political History
3 Credits
Evolution of U.S. government during the 20th century. Delineation of political eras. How the roles of the three branches of the federal government have changed and how domestic and foreign crises have shaped political and institutional responses and changes.

3621 - 20th Century United States Cultural History
3 Credits
Changes in U.S. culture through World War I, the 1920s, the Great Depression, World War II, and the shaky post-war peace. Emphasis on how these events affected cultural creation and evolution.

3701 - The Ancient World
3 Credits
The political, social, economic, and cultural development of the Near Eastern, Greek, and Roman civilizations of antiquity.

3711 - Medieval Europe
3 Credits
The political, social, economic, and cultural development of Europe from the decline of the Roman Empire to the beginning of the Renaissance, with special attention to the emergence of institutions that shaped the modern world.

3731 - The Age Of Revolutions
3 Credits
The American and French Revolutions, Latin American revolutions, the Revolutions of 1830, 1848, and 1870, and the Industrial Revolution. Uncovers parallel patterns and divergences in the organized political violence of the modern Western world. Revolutions in culture, customs, agriculture, industry, science, society, religion, and philosophy as well as political revolutions and revolutionary conflicts.

3741 - Russia To 1905
3 Credits
Russia from its origins to 1905. The Kievan Rus, the Mongols, Muscovy, and imperial Russia under the Romanovs. Examines geography, the conflict of cultures, the development of social, political and religious institutions, and serfdom.

3791 - Topics In Modern Europe
3 Credits
Various topics that provide added depth in various areas of modern European history and allow professors to utilize their areas of expertise more fully. May be repeated as topic varies.

3901 - Special Topics In History
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4121</td>
<td>Field School in Archaeology</td>
<td>3</td>
<td>Basic archaeology and archaeological field work. Curriculum includes survey and excavation; basic geophysical survey methods; preparation of field notes and documentation; and instruction in other fundamental field skills. A Nature Center use fee is charged.</td>
</tr>
<tr>
<td>4211</td>
<td>Fascism</td>
<td>3</td>
<td>Origins and nature of fascism. Contrasts the regimes and leaders in Italy and Germany with those in Spain, France, and elsewhere. Utilizes biographical, descriptive, analytical, and theoretical approaches. Examines fascist leaders, including Mussolini, Hitler, Franco, Ptain, and Pern as well as activists, journalists, and intellectual such as Codreanu, Drieu la Rochelle, Dat, Herv, Doriot, and Ezra Pound.</td>
</tr>
<tr>
<td>4221</td>
<td>Hitler And Nazism</td>
<td>3</td>
<td>Personal, intellectual, and political biography of Adolf Hitler in the context of his times. Uses original photo documentation to examine Hitler’s early life and the pre- and post-WWI historical and intellectual milieu out of which Nazism emerged. Considers the Nazi regime before and during WWII not as a military account of that war.</td>
</tr>
<tr>
<td>4231</td>
<td>The Holocaust</td>
<td>3</td>
<td>Origins, nature, and implications of the Holocaust. Consideration of the general problem of modern anti-Semitism. Current representations of the Holocaust as keys to understanding the generation of historical meaning in the modern world. Employs documentaries, docudramas, and original photo documentation from Germany, Austria, and important sites in Eastern Europe, including Poland, Hungary, and Ukraine.</td>
</tr>
<tr>
<td>4301</td>
<td>Military And Society</td>
<td>3</td>
<td>The evolving relationship between warfare and the societies that wage wars, from the Middle Ages to the 20th century. The values, attitudes, purposes, and methods that have given direction and shape to military operations in the Western world.</td>
</tr>
<tr>
<td>4311</td>
<td>The Crusades</td>
<td>3</td>
<td>The origins, operations, and effects of the crusading movements of the Middle Ages. The impact of the crusades on the relationship between Christendom and Islam.</td>
</tr>
<tr>
<td>4331</td>
<td>Civil War And Reconstruction</td>
<td>3</td>
<td>Origins, operations, and effects of the American Civil War. Team taught course.</td>
</tr>
<tr>
<td>4341</td>
<td>World War I</td>
<td>3</td>
<td>Origins, operations, devastation, and longer-term effects of the war. Biographies, letters, posters, poetry, novels, films, documentaries, and military history. WWI as much as a revolution as a war, from which emerged communism, fascism, Nazism, and an acceleration of modernist and post-modern currents.</td>
</tr>
<tr>
<td>4351</td>
<td>World War II</td>
<td>3</td>
<td>Origins, operations, and effects of the war that defined the 20th century. The military, political, and social forces that the war unleashed. Presentation of World War II in the popular culture.</td>
</tr>
<tr>
<td>4361</td>
<td>Cold War</td>
<td>3</td>
<td>Capitalism vs. communism in a race for global dominance. Political and cultural trends in the events of half a century of East-West conflict. Team taught course.</td>
</tr>
<tr>
<td>4371</td>
<td>Vietnam War</td>
<td>3</td>
<td>The origins, operations, and effects of the wars in Vietnam, from 1945 to the present.</td>
</tr>
<tr>
<td>4401</td>
<td>Sport And Society</td>
<td>3</td>
<td>History of the rise of sport in America from Colonial Period to the present. Influence of sport on society and of society on sport. Examine influence of technology, economics, politics, race, class, and gender on sport.</td>
</tr>
<tr>
<td>4411</td>
<td>Baseball in American Culture</td>
<td>3</td>
<td>Origins and history of baseball from 1840s to the present. Social, political, and economic forces that shaped the game and American culture during that period along with baseball’s importance to our history and in the popular culture.</td>
</tr>
<tr>
<td>4421</td>
<td>Football in America</td>
<td>3</td>
<td>Origins and history of football from 1860s to the present. Social, political, and economic forces that shaped the game and American culture. The rise of professional football from obscurity to the most followed sport in America.</td>
</tr>
<tr>
<td>4511</td>
<td>History of Law</td>
<td>3</td>
<td>Evolution of law as an instrument of dispute resolution and social control. Development of the civil law tradition and the English common law tradition to the seventeenth century.</td>
</tr>
<tr>
<td>4711</td>
<td>Public Service Internship Program</td>
<td>1 to 15</td>
<td>Field experience in the area of public service. Student works in a close relationship with public offices and officials or approved private agencies and firms. Student must enroll in at least 1 credit hour of Public Service Internship per internship experience. A full time Public Service Internship requires 600 hours of on-site work. Student may apply 3 credit hours of HIST 4711 to an HIST Elective major requirement. Student may apply up to 15 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process; 2.75 GPA; junior or senior status required. This course may be repeated 15 times. This course is repeatable for a total of 15 hours.</td>
</tr>
<tr>
<td>4721</td>
<td>Seminar - The Washington Center Seminar</td>
<td>3</td>
<td>Requires prior departmental approval.</td>
</tr>
<tr>
<td>4901</td>
<td>Special Topics In History</td>
<td>1 to 3</td>
<td>May be repeated as topic varies. This course is repeatable.</td>
</tr>
<tr>
<td>4941</td>
<td>Seminar In History</td>
<td>3</td>
<td>May be repeated as topic varies. This course is repeatable.</td>
</tr>
<tr>
<td>4961</td>
<td>Independent Study In History</td>
<td>1 to 3</td>
<td>Approval of department chair required prior to registration. This course is repeatable.</td>
</tr>
<tr>
<td>4981</td>
<td>Senior Thesis 1</td>
<td>1</td>
<td>Topic selection and development of bibliography and outline for senior thesis under the direction of a departmental faculty member. First part of departmental Capstone course for majors in History or Social Studies. Required of all History and Social Studies majors. Enrollment at least two semesters before the semester of expected graduation. Junior status; major in History or Social Studies required. Prerequisite(s): HIST 2041 .</td>
</tr>
</tbody>
</table>
4991 - Senior Thesis 2
2 Credits
Completion of senior thesis under the direction of a departmental faculty member and a second reader. Second part of departmental Capstone course for majors in History or Social Studies. Required of all History and Social Studies majors. Enrollment at least one semester before the semester of expected graduation. Junior status; major in History or Social Studies required. Formerly HIST 498. Prerequisite(s): HIST 4981.

Subject - History, Political Science and Criminal Justice (HSPS)

1001 - Orientation - Department of History, Politics and Justice
1 Credit
Introduction to the faculty, programs, procedures, and opportunities in the Department of History, Politics and Justice. Exploration of the practical and intellectual dimensions of academic life at Ohio Northern University.

1901 - Special Topics In History and Politics
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

2211 - Europe In Transition
3 Credits
European history, politics, and culture from the end of World War II. The Cold War, European Integration, and accelerating globalization. Post-war migrations, immigration, and the periodic challenges from the political extremes. Cultural and intellectual trends. Growing religious and ethnic tensions, especially as they pertain to terrorism. Student who completes HSPS 2211 may not enroll in HSPS 2211.

2221 - Asia In Transition
3 Credits
Transformation of political systems, economic systems, societies, culture, art, religion, and the family in Asia since World War II. Student who completes HSPS 2221 may not enroll in HSPS 3221.

2231 - Africa In Transition
3 Credits
The transition of sub-Saharan Africa from traditional society to modernity and from colonialism to independence and state building. Political, economic, social, cultural trends since World War II. Requires integration of readings, audio-visual presentations, discussions, and lectures. Student who completes HSPS 2231 may not enroll in HSPS 3231.

2241 - The Middle East In Transition
3 Credits
The political, economic, social, cultural, and intellectual development of Southwest Asia and North Africa since World War II. The clash of Western and non-Western power centers in the region. The rise of political Islam. Requires a research project. Student who completes HSPS 2241 may not enroll in HSPS 3241.

2251 - Latin America In Transition
3 Credits
The oscillation of Latin America between dictatorship and democracy, the transition from rural to urban societies, and the evolving relationship between Latin America and the world. Political, social, economic, and cultural trends since World War II. Requires integration of readings, audio-visual presentations, discussions, and lectures. Student who completes HSPS 2251 may not enroll in HSPS 3251.

2901 - Special Topics In History And Politics
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

3021 - Nature Center Seminar In History And Politics
1 Credit
Weekend seminar at the Metzger Nature Center on a wide range of interdisciplinary topics in history, politics, and government. May be repeated as topic varies. A Nature Center use fee is charged. Formerly HSPS 302. This course is repeatable.

3211 - Europe In Transition
3 Credits
European history, politics, and culture from the end of World War II. The Cold War, European Integration, and accelerating globalization. Post-war migrations, immigration, and the periodic challenges from the political extremes. Cultural and intellectual trends. Growing religious and ethnic tensions, especially as they pertain to terrorism. Requires a research project. Student who completes HSPS 3211 may not enroll in HSPS 2211. International Politics Elective.

3221 - Asia In Transition
3 Credits
Transformation of political systems, economic systems, societies, culture, art, religion, and the family in Asia since World War II. Requires a research project. Student who completes HSPS 3221 may not enroll in HSPS 2221. International Politics Elective.

3231 - Africa In Transition
3 Credits
The transition of sub-Saharan Africa from traditional society to modernity and from colonialism to independence and state building. Political, economic, social, cultural trends since World War II. Requires integration of readings, audio-visual presentations, discussions, and lectures. Requires a research project. Student who completes HSPS 3231 may not enroll in HSPS 2231. International Politics Elective.

3241 - The Middle East In Transition
3 Credits
The political, economic, social, cultural, and intellectual development of Southwest Asia and North Africa since World War II. The clash of Western and non-Western power centers in the region. The rise of political Islam. Requires a research project. Student who completes HSPS 3241 may not enroll in HSPS 2241. International Politics Elective.

3251 - Latin America In Transition
3 Credits
The oscillation of Latin America between dictatorship and democracy, the transition from rural to urban societies, and the evolving relationship between Latin America and the world. Political, social, economic, and cultural trends since World War II. Requires integration of readings, audio-visual presentations, discussions, and lectures. Requires a research project. Student who completes HSPS 3251 may not enroll in HSPS 2251. International Politics Elective.

3901 - Special Topics In History And Politics
1 to 3 Credits
May be repeated as topic varies. Formerly HSPS 392. This course is repeatable.

4161 - Russia And The Near Abroad
3 Credits
Comparative study of the transition from autocratic to democratic political systems in the region formerly dominated by the Soviet Union. From Tsarist Russia and the Communist period to present-day efforts of democratization. International Politics Elective. Formerly PLSC 416.

4521 - American Foreign Relations
3 Credits
Analytical and conceptual overview of the nature of American foreign policy decision-making. Uses case studies to uncover the variables at play in recent American foreign policy. International Politics Elective.

4531 - Spy vs. Spy: Espionage, 1947-Present
3 Credits
4711 - Public Service Internship Program
1 to 15 Credits
Field experience in the area of public service. Student works in a close relationship with public offices and officials or approved private agencies and firms. Student must enroll in at least 1 credit hour of Public Service Internship per internship experience. A full time Public Service Internship requires 600 hours of on-site work. Student may apply 3 credit hours of HSPS 4711 to an HIST Elective major requirement. Student may apply up to 15 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process: 2.75 GPA; junior or senior status required. This course may be repeated 15 times. This course is repeatable for a total of 15 hours.

4721 - Seminar - The Washington Center Seminar
3 Credits
Requires prior departmental approval.

4901 - Special Topics In History And Politics
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

4941 - Seminar In History And Politics
3 Credits
May be repeated as topic varies. This course is repeatable.

4961 - Independent Study In History And Politics
1 to 3 Credits
Approval of department chair required prior to registration. This course is repeatable.

4981 - Senior Thesis 1
1 Credit
Topic selection and development of bibliography and outline for interdisciplinary senior thesis and under the direction of a departmental faculty member. First part of departmental Capstone course for double majors in History and Political Science who elect to enroll in this course to meet the Capstone requirement. Enrollment at least two semesters before the semester of expected graduation. Junior status; double major in History and Political Science required. Prerequisite(s): HIST 2041 or (ISR 2531 and ISR 2541).

4991 - Senior Thesis 2
2 Credits
Completion of interdisciplinary senior thesis under the direction of a departmental faculty member and a second reader. Second part of departmental Capstone course for double majors in History and Political Science who elect to enroll in this course to meet the Capstone requirement. Enrollment one semester before the semester of expected graduation. Senior status; double major in History and Political Science required. Prerequisite(s): HIST 4981.

Subject - Leadership Studies (LEAD)

4901 - Foundations Of Leadership
2 Credits
Leadership and how it works. Theories, definitions and models of leadership. Participants interview a contemporary leader, analyze that leader's style, and complete a personal vision statement. Junior standing and above.

4911 - Techniques And Dynamics Of Leadership
2 Credits
Effective techniques and the discernable dynamics of leadership. Leading in groups, team building, problem solving and negotiation, leadership in crises, and getting a foothold in the real world. Participants will be involved in a civic engagement project or an alternate leadership project and report on the same. Junior standing and above.

4921 - Issues In Contemporary Leadership
2 Credits
Effective leadership in the contemporary setting. The use of personal leadership to improve communities. Leadership in an era of social, cultural, racial and gender diversity. Balancing commitments to career, family and community. The future of leadership. Participants will link with an experienced leader for participatory mentoring and report on their experience. Junior standing and above.

4991 - Leadership Practicum
1 to 2 Credits
Field experience in leadership. Significant involvement in a civic project or a major leadership role on campus. Maintenance of a journal that reflects the involvement and reactions to the experience. Additional requirements may be included in the contract. Requires approval of the Leadership Studies Committee and the instructor. May be repeated as topic varies. Junior standing and above. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

Subject - Political Science (PLSC)

1901 - Special Topics In Political Science
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

2011 - Introduction To American Politics
3 Credits
Constitutional underpinnings, political behavior, processes, and institutions of American national politics.

2201 - Introduction To Comparative Politics
3 Credits
The relations of states, governments, political movements, and international organizations in the global context. Political actors and their objectives in a world of limited resources. Global collective responses to global problems. Competition between rich and poor nations and between major and minor powers in terms of the collective good. Formerly HSPS 107.

2211 - Introduction To Comparative Politics
3 Credits
Comparative study of political institutions and processes and individual and group behavior. Interrelationships among the historical, cultural, social, and economic characteristics of national political systems. Comparative governmental structures and patterns of mass political behavior.

2901 - Special Topics In Political Science
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

3021 - Nature Center Seminar In Political Science
1 Credit
Weekend seminar at the Metzger Nature Center on a wide range of topics in politics and government. May be repeated as topic varies. A Nature Center use fee is charged. This course is repeatable.

3061 - Environmental Law
3 Credits
American legal system used to preserve the nation's environment. Significant environmental laws and policies developed for implementation. American Politics Elective. Formerly HSPS 306.

3101 - State And Local Politics
3 Credits
Legal underpinnings, political behavior, processes, and institutions of American states and localities. American Politics Elective.

3201 - Topics In American Politics
3 Credits
May be repeated as topic varies. This course is repeatable.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3211</td>
<td>Political Parties And Interest Groups</td>
<td>3</td>
<td>Formations, maintenance, and influence of interest groups and political parties in the United States. American Politics Elective.</td>
</tr>
<tr>
<td>3231</td>
<td>Mass Media And Politics</td>
<td>3</td>
<td>Historical development and contemporary operation of the mass media as they relate to the American political system. American Politics Elective.</td>
</tr>
<tr>
<td>3241</td>
<td>Film And Politics</td>
<td>3</td>
<td>Historical development and contemporary role of films that relate to political processes and institutions. American Politics Elective.</td>
</tr>
<tr>
<td>3251</td>
<td>Popular Culture In American Politics</td>
<td>3</td>
<td>Historical development and contemporary role of popular culture in American politics. American Politics Elective.</td>
</tr>
<tr>
<td>3301</td>
<td>Comparative Politics Of Democracies</td>
<td>3</td>
<td>Comparison of the politics of democracies. The impact of political culture and the operations of governmental institutions, parties, and interest groups on public policy-making. International Politics Elective.</td>
</tr>
<tr>
<td>3311</td>
<td>Comparative Politics In The Developing World</td>
<td>3</td>
<td>Comparison of contemporary politics in developing and non-Western societies. The impact of cultural fragmentation, modernization, social unrest, and rising expectations on the stability and effectiveness of governmental institutions and processes. International Politics Elective.</td>
</tr>
<tr>
<td>3411</td>
<td>Human Rights</td>
<td>3</td>
<td>Philosophical, political, and legal bases of international human rights. The ongoing debate over universality, cultural relativity and human rights, humanitarian intervention and sovereignty, and specific foreign policy choices. Strategies designed to advance human rights and accountability, including the use of military force and the development of international criminal courts, truth commissions, and other forms of transitional justice. International Politics Elective.</td>
</tr>
<tr>
<td>3421</td>
<td>Conflict Analysis And Resolution</td>
<td>3</td>
<td>Underlying causes of conflicts. Dynamics that lead to open expression and escalation of conflict. The strategic choices of adversaries. The intractability of intense conflict. Methods of prevention, negotiation, and third-party intervention that support accommodation, de-escalation, settlement, and transformation. International Politics Elective.</td>
</tr>
<tr>
<td>3441</td>
<td>Wars In Africa</td>
<td>3</td>
<td>Causes and types of war in Africa. Processes of resolution and management of civil wars by interested stakeholders. Global responses, underlying principles for such responses, and their effectiveness. Obstacles to the resolution of civil wars in Africa. International Politics Elective.</td>
</tr>
<tr>
<td>3501</td>
<td>Constitutional Law And Government</td>
<td>3</td>
<td>Social and political forces that shaped constitutional political theory. The interaction of law and politics through the Reconstruction era. Relationship of the Supreme Court with respect to Congress, the executive, states, and emergency powers. American Politics Elective.</td>
</tr>
<tr>
<td>3511</td>
<td>Constitutional Law And Civil Liberties</td>
<td>3</td>
<td>Late nineteenth, twentieth, and twenty-first-century decisions of the Supreme Court pertaining to civil liberties, civil rights, and criminal justice. American Politics Elective.</td>
</tr>
<tr>
<td>3541</td>
<td>Judicial Process, Behavior, And Impact</td>
<td>3</td>
<td>The roles of lawyers, judges, and juries in the judicial process. The organization and operation of federal and state trial courts. The decision-making process of federal and state appellate courts. The voting behavior of federal and state appellate judges. The impact of appellate court decisions on society and on the operations of criminal justice agencies. American Politics Elective.</td>
</tr>
<tr>
<td>3661</td>
<td>Public Administration</td>
<td>3</td>
<td>Bureaucrats as actors in the American political system, their sources of power, and their relationship to elected public officials. American Politics Elective.</td>
</tr>
<tr>
<td>3671</td>
<td>Policy Analysis</td>
<td>3</td>
<td>Basic dynamics and problems of policymaking and the widely used analytical approaches to public policy. American Politics Elective.</td>
</tr>
<tr>
<td>3881</td>
<td>International Law And Organizations</td>
<td>3</td>
<td>Factors and forces that determine the policies of nation-states with respect to international cooperation. The structure, operation, and legal setting of international politics. The role of IGOs and NGOs. The evolving international legal order. International Politics Elective.</td>
</tr>
<tr>
<td>3901</td>
<td>Special Topics In Political Science</td>
<td>1 to 3</td>
<td>May be repeated as topic varies. This course is repeatable.</td>
</tr>
<tr>
<td>4111</td>
<td>Congress</td>
<td>3</td>
<td>Structure and operation of Congress. American Politics Elective.</td>
</tr>
<tr>
<td>4581</td>
<td>Western Political Thought 1</td>
<td>3</td>
<td>Western political theory from Plato, Aristotle, and the Stoics through Machiavelli, the Reformation, and the Wars of Religion. Examines the political and theoretical elements of pre-modern thought.</td>
</tr>
<tr>
<td>4591</td>
<td>Western Political Thought 2</td>
<td>3</td>
<td>Western political theory from the Enlightenment through John Rawls. Examines the political and theoretical implications of constitutionalism, contract theory, conservatism, idealism, romanticism, liberalism, utilitarianism, Marxism, anarchism, socialism, elite theories, social Darwinism, racism, anti-Semitism, fascism, feminism, environmentalism, and libertarianism. Confers American Politics elective credit if not used for Major Course credit. Formerly HSPS 459.</td>
</tr>
</tbody>
</table>
4711 - Public Service Internship Program
1 to 15 Credits
Field experience in the area of public service. Student works in a close relationship with public offices and officials or approved private agencies and firms. Student must enroll in at least 1 credit hour of Public Service Internship per internship experience. A full time Public Service Internship requires 600 hours of on-site work. Student may apply up to 15 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process; 2.75 GPA; junior or senior status required. This course may be repeated 15 times. This course is repeatable for a total of 15 hours.

4721 - Seminar - The Washington Center Seminar
3 Credits
Requires prior departmental approval.

4751 - Model United Nations
1 to 2 Credits
Preparation to participate in regional Model United Nations conferences and the National Model United Nations conference in New York City. An integrated simulation of key operations of the United Nations. Travel to New York City in the spring. Student may apply 3 credit hours of Model United Nations to the Political Science/International Politics major (Academic Component). Student may apply up to 9 credit hours of Model United Nations to the BA degree. Open to any major. This course may be repeated 5 times. This course is repeatable for a total of 9 hours.

4761 - Mock Trial
1 to 2 Credits
Preparation to participate in regional and national mock trial competitions held at various sites throughout the United States. Preparation of both civil and criminal cases, including opening and closing arguments, direct and cross examination of witnesses, and objections. Student may apply 3 credit hours of Mock Trial to the Criminal Justice major or to the Political Science/American Politics major (Academic Component). Student may apply up to 9 credit hours of Mock Trial to the BA degree. Confers up to 3 hours of American Politics Elective credit. Open to any major. This course may be repeated 5 times. This course is repeatable for a total of 9 hours.

4901 - Special Topics In Political Science
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

4911 - Special Topics In American Politics
1 to 3 Credits
May be repeated as topic varies. This course may be repeated 97 times. This course is repeatable.

4921 - Special Topics In International Relations
1 to 3 Credits
May be repeated as topic varies. This course is repeatable.

4931 - Special Topics In Comparative Politics
1 to 3 Credits
May be repeated as topic varies. This course may be repeated 97 times. This course is repeatable.

4941 - Seminar In Political Science
3 Credits
May be repeated as topic varies. This course is repeatable.

4961 - Independent Study In Political Science
1 to 3 Credits
Approval of department chair required prior to registration. This course is repeatable.

4981 - Senior Thesis 1
1 Credit
Topic selection and development of bibliography and outline for senior thesis under the direction of a departmental faculty member. First part of departmental Capstone course for majors in Political Science. Required of all Political Science majors. Enrollment at least two semesters before the semester of expected graduation. Junior status; major in Political Science required. Prerequisite(s): ISR 2531 and ISR 2541.

4991 - Senior Thesis 2
2 Credits
Completion of senior thesis under the direction of a departmental faculty member and a second reader. Second part of departmental Capstone course for majors in Political Science. Required of all Political Science majors. Enrollment at least one semester before the semester of expected graduation. Junior status; major in Political Science required. Prerequisite(s): PLSC 4981.

DEPARTMENT OF HUMAN PERFORMANCE AND SPORT SCIENCES

Associate Professors Hofman, Keller, Swanson, Wilson, M.; Assistant Professors Beaschler (Chair), Durand, Ridenour, Rohan, Simmons, Terrell, West, Wilson, K., Witte; Instructor Bergman; Lecturers Batman, Bostelman, Ewald, P., Lehman, J., Paul, Maus, Rhodes, Scheutzow

Mission Statement
The Department of Human Performance and Sport Sciences prepares professionals for teaching, service, research, and/or leadership roles in educational institutions, business and industry, and other agencies. We strive to provide diverse, comprehensive, and life-long learning, while encouraging an appreciation of the importance of health, fitness and sport and their contribution to quality of life.

Vision Statement
The Department of Human Performance and Sport Sciences will continue its commitment to high quality undergraduate education and to achieving meaningful student learning outcomes through active engagement in the teaching-learning interchange, scholarly and creative pursuits, leadership and service to others.

Accreditation
The program in exercise physiology is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP) and the Committee on the Accreditation of Exercise Sciences (CoAES). The program in athletic training is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

Major, Minors and Degrees Offered
Athletic Training Major (BA, BS)
Exercise Physiology Major (BA, BS)
Health Education Major (BA, BS)
Physical Education Major (BA, BS)
Sport Management Major (BA, BS)
Exercise Physiology Minor

Licensure Offered
Multi-age Health Licensure (PK-12)
Multi-age Physical Education Licensure (PK-12)
Admission Requirements
Students, including transfers, must be accepted into the athletic training education program through a competitive admissions process. The formal admittance process occurs at the conclusion of the first semester or at the conclusion of the second semester for students entering mid-year, space permitting. Students must meet specific academic and technical standards prior to admittance including a health assessment and vaccination verification. A student desiring to transfer from another college or university must follow the university procedures outlined in the course catalog. Specific athletic training courses may receive transfer credit, but they will only be accepted for graduation if there is documented evidence from the transfer institution that the courses include the same educational competencies and proficiencies as the course(s) they are replacing. Specific requirements may be obtained from the Department of Human Performance and Sport Sciences or the athletic training education program director.

Major Course Requirements
Students must earn a grade of ‘C’ or higher in all courses completed for the major.

Department Requirements
Students must maintain a minimum accumulative 2.00 GPA in order to remain eligible for internships, practicum and clinical experience assignments. Students who have been assigned to an internship, practicum or clinical and who have dropped below an accumulative 2.00 GPA will be immediately removed from that assignment and will not be reassigned or clinical and who have dropped below an accumulative 2.00 GPA will be immediately removed from that assignment and will not be reassigned to a internship, practicum or clinical until their GPA rises to the minimum accumulative 2.00.

Students are responsible for all costs associated with off-campus internship, practicum or clinical experience, including, but not limited to, travel to and from the facility or affiliated sites, a criminal background check (BCI and/or FBI), a health assessment, or drug testing, as required by the facility.

Athletic Training Major (77 credit hours)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTR 1001</td>
<td>Basic Athletic Training (3)</td>
<td></td>
</tr>
<tr>
<td>ATTR 1011</td>
<td>Basic Athletic Training Lab (1)</td>
<td></td>
</tr>
<tr>
<td>ATTR 1101</td>
<td>Professional Emergency Care (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 1201</td>
<td>Adv Wt. Control/Sports Nutrition (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2101</td>
<td>Advanced Strength and Conditioning w/ Lab (3)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2301</td>
<td>Pre-Season AT Clinical (1)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2401</td>
<td>AT Clinical Level 1 (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2451</td>
<td>AT Clinical Level 2 (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2601</td>
<td>Eval Tech of AT 1 (3)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2651</td>
<td>Eval Tech of AT 2 (3)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2801</td>
<td>Athletic Taping and Bracing (1)</td>
<td></td>
</tr>
<tr>
<td>ATTR 3101</td>
<td>Therapeutic Modalities in Athletic Training (4)</td>
<td></td>
</tr>
<tr>
<td>ATTR 3201</td>
<td>Exercise Rehab in AT (4)</td>
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</tr>
<tr>
<td>ATTR 3301</td>
<td>Psychosocial Factors of AT (2)</td>
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<tr>
<td>ATTR 3401</td>
<td>AT Clinical Level 3 (2)</td>
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<tr>
<td>ATTR 3451</td>
<td>AT Clinical Level 4 (2)</td>
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<tr>
<td>ATTR 3501*</td>
<td>Off-campus AT Clinical Experience (0)</td>
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<tr>
<td>ATTR 4101</td>
<td>Medical Considerations (even years) (3)</td>
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<tr>
<td>ATTR 4201</td>
<td>Trends in Athletic Training (odd years) (3)</td>
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</tr>
<tr>
<td>ATTR 4401</td>
<td>AT Clinical Level 5 (2)</td>
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</tr>
<tr>
<td>ATTR 4451</td>
<td>AT Clinical Level 6 (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 4601</td>
<td>Senior Seminar in Athletic Training (3)</td>
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Other required courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 2311</td>
<td>Anatomy and Physiology 1 (3)</td>
<td></td>
</tr>
<tr>
<td>BIOL 2321</td>
<td>Anatomy and Physiology 2 (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 2201</td>
<td>Kinesiology (3)</td>
<td></td>
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<tr>
<td>EXPH 2301</td>
<td>Exercise Physiology (4)</td>
<td></td>
</tr>
<tr>
<td>EXPH 3201</td>
<td>Research and Design (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 4801</td>
<td>Exercise Pathophysiology (3)</td>
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Other non-major required courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1201</td>
<td>Introduction Biology (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1341</td>
<td>Human Anatomy and Histology (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1361</td>
<td>Human Anatomy and Histology Lab (1)</td>
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</tr>
</tbody>
</table>

Note:
* The credit received for this clinical is given through either AT Clinical 3, 4, 5, or 6 (ATTR 3401, 3451, 4401, 4451), one of which is taken concurrently with the off-campus clinical course.

Exercise Physiology Major (69-75 credit hours)
Student majoring in exercise physiology must complete one of two concentrations: clinical/research or corporate fitness/personal training. The 69-75 credit hours listed above includes the 49 credit hours of common courses plus the 26 credit hours required for the clinical/research concentration or the 20 credit hours required for the corporate fitness/personal training concentration.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 1001</td>
<td>Introduction to Exercise &amp; Health (3)</td>
<td></td>
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<tr>
<td>EXPH 2101</td>
<td>Sports Nutrition and Supplementation (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 2201</td>
<td>Kinesiology (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 2301</td>
<td>Exercise Physiology (4)</td>
<td></td>
</tr>
<tr>
<td>EXPH 3101</td>
<td>Exercise Testing and Prescription I (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 3151</td>
<td>Exercise Testing and Prescription II (3)</td>
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<tr>
<td>EXPH 3201</td>
<td>Research and Design (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 3301</td>
<td>Exercise Management of Chronic Disease (3)</td>
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</tr>
<tr>
<td>EXPH 3401</td>
<td>Exercise Physiology Practicum I (1)</td>
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<tr>
<td>EXPH 4101</td>
<td>Administration of Health Promotion Programs (3)</td>
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</tr>
<tr>
<td>EXPH 4201</td>
<td>ECG Analysis and Interpretation (3)</td>
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<tr>
<td>EXPH 4401</td>
<td>Exercise Physiology Practicum II (1)</td>
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</table>

Other required courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ATTR 1101</td>
<td>Professional Emergency Care (2)</td>
<td></td>
</tr>
<tr>
<td>ATTR 2101</td>
<td>Advanced Strength and Conditioning w/Lab (3)</td>
<td></td>
</tr>
</tbody>
</table>

Other non-major required courses
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1201</td>
<td>Introductory Biology (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1341*</td>
<td>Human Anatomy and Histology (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1361*</td>
<td>Human Anatomy and Histology Lab (1)</td>
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</tr>
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</table>

*Grade of D or better required.

Clinical/Research Concentration (26 credit hours)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 2321</td>
<td>Anatomy and Physiology 2 (3)</td>
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<tr>
<td>BIOL 3021</td>
<td>Human Anatomy (4)</td>
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<tr>
<td>EXPH 4801</td>
<td>Exercise Pathophysiology (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 4851</td>
<td>Exercise Biochemistry (3)</td>
<td></td>
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<tr>
<td>EXPH 4501</td>
<td>Exercise Physiology Internship (12)</td>
<td></td>
</tr>
<tr>
<td>EXPH 4601</td>
<td>Senior Seminar in Exercise Physiology (1)</td>
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</table>

Corporate Fitness/Personal Training Concentration (20 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHED 3401</td>
<td>Motor Learning (3)</td>
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<tr>
<td>EXPH 4501</td>
<td>Exercise Physiology Internship (12)</td>
<td></td>
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<tr>
<td>EXPH 4601</td>
<td>Senior Seminar in Exercise Physiology (1)</td>
<td></td>
</tr>
<tr>
<td>EXPH 4701</td>
<td>Personal Training I (2)</td>
<td></td>
</tr>
<tr>
<td>EXPH 4751</td>
<td>Personal Training II (2)</td>
<td></td>
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</tbody>
</table>

Health Education Major (40 credit hours)

In addition to the 40 credit hours required for the health education major, students must complete the 38 credit hours required for teacher licensure.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HLED 1101</td>
<td>Personal Health Problems (3)</td>
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<tr>
<td>HLED 1201</td>
<td>School and Community Health (2)</td>
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<tr>
<td>HLED 2101</td>
<td>AIDS and Other STD’s (3)</td>
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</table>

Other required courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTR 1101</td>
<td>Professional Emergency Care (2)</td>
<td></td>
</tr>
<tr>
<td>EXPH 1001</td>
<td>Introduction to Exercise and Health (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 2101</td>
<td>Sports Nutrition and Supplementation (3)</td>
<td></td>
</tr>
<tr>
<td>EXPH 2301</td>
<td>Exercise Physiology (4)</td>
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<tr>
<td>PHED 1001</td>
<td>HPE Foundations (3)</td>
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<tr>
<td>PHED 3301</td>
<td>Test and Measurements of HPE (3)</td>
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<tr>
<td>SPMG 3101</td>
<td>Organization/Administration in Sport (3)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1201</td>
<td>Introductory Biology (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 1341</td>
<td>Human Anatomy and Histology (3)</td>
<td></td>
</tr>
</tbody>
</table>
Required education courses (38 credit hours)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience I (1)
EDUC 1521 Five-Day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4601 Health Methods (3)
EDUC 4701 Student Teaching/EC/MC (6)
EDUC 4721 Student Teaching/AYA (6)

Physical Education Major (48 credit hours)
In addition to the 48 credit hours required for the physical education major, students must complete the 38 credit hours required for teacher licensure.

PHED 1001 HPE Foundations (3)
PHED 2101 Ind. Skill Development in Sports (3)
PHED 2201 Team Concepts in Physical Education (3)
PHED 3001 Practicum in Teaching Physical Education (1)
PHED 3101 Adapted Physical Education (3)
PHED 3201 Elementary School Physical Education (3)
PHED 3301 Test and Measurements of HPE (3)
PHED 3401 Motor Learning (3)

Other required courses
ATTR 1101 Professional Emergency Care (2)
BIOL 1201 Introductory Biology (4)
BIOL 1341 Human Anatomy and Histology (4)
BIOL 1361 Human Anatomy and Histology Lab (1)
BIOL 2311 Anatomy and Physiology 1 (3)
EXPH 1001 Introduction to Exercise and Health (3)
EXPH 2201 Kinesiology (3)
EXPH 2301 Exercise Physiology (4)
SPMG 3101 Organization/Administration in Sport (3)

Required education courses (38 credit hours)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience I (1)
EDUC 1521 Five-Day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4611 Integrated Methods of PE (3)
EDUC 4701 Student Teaching/EC/MC (6)
EDUC 4721 Student Teaching/AYA (6)

Sport Management Major (66 credit hours)
SPMG 1001 Introduction to Sport Management (3)
SPMG 2101 Social/Psychological Issues in Sport (3)
SPMG 2201 Promotions/Marketing in Sport (3)
SPMG 2301 Facility/Event Management in Sport (3)
SPMG 3001 Sport Facilities Management Practicum (1)
SPMG 3051 Team Promotions Practicum (1)
SPMG 3101 Organization/Administration in Sport (3)
SPMG 3201 Finance/Economics in Sport (3)
SPMG 4101 Ethics in Sport (3)
SPMG 4201 Legal Issues in Sport (3)
SPMG 4501 Internship in Sport Management (12)
SPMG 4601 Senior Seminar in Sport Management (1)

Other required courses
ABUS 2221 Principles of Entrepreneurship (3)
BIZ 2111 Financial Accounting Foundations for Business Planning (3)
CACS 1111 Presentation Speaking (3)
CACS 3451 Organizational Communication (3)
CAPR 1301 Introduction to Public Relations (3)
CAPR 2361 Public Relations Writing (3)
BIZ 2511 Marketing (3)
BIZ 2331 Behavioral Management (3)

Minor Course Requirements
Students must earn a grade of 'C' or higher in all courses completed for the minor.

Exercise Physiology Minor (38 credit hours)
EXPH 1001 Introduction to Exercise and Health (3)
EXPH 2201 Kinesiology (3)
EXPH 2301 Exercise Physiology (4)
EXPH 3101 Exercise Testing and Prescription I (3)
EXPH 3151 Exercise Testing and Prescription II (3)
EXPH 3301 Exercise Management of Chronic Disease (3)

Other required courses
ATTR 1101 Professional Emergency Care (2)
ATTR 2101 Advanced Strength and Conditioning w/Lab (3)
BIOL 1201 Introductory Biology (4)
BIOL 1341* Human Anatomy and Histology (3)
BIOL 1361 Human Anatomy and Histology Lab (1)
BIOL 2311* Anatomy and Physiology I (3)

Note:
*Grade of 'C' or better not required

Subject - Activities (ACTV)

1001 - Lifetime, Fitness and Wellness
1 Credit
The course evaluates one's current health levels, fitness levels, and attitudes toward living a healthy lifestyle. This experience provides the knowledge base for health and fitness, and enables the students to implement healthy living factors and personalized fitness prescriptions into each of their lifestyles, both now and in the future. Learning experiences include some lecture and physical activity on a daily basis. Offered fall and spring semesters. May not be enrolled in one of the following Colleges: Pharmacy, Engineering

Subject - Water Activities (AQUA)

2101 - Lifeguarding
1 Credit
To develop knowledge and skills to aid in the prevention of aquatic accidents and an ability to give assistance to victims. The American Red Cross Advanced lifeguarding certificate/emblem may be obtained by passing an examination. Fee required. Offered fall semester.

2111 - Water Safety Instruction
2 Credits
To develop knowledge and skills to teach swimming and water safety skills, methods and techniques. Successful completion of the course will lead to American Red Cross Water Safety Instruction certification. Offered spring semester.
Subject - Athletic Training (ATTR)

1001 - Basic Athletic Training
3 Credits
The prevention, recognition and care of athletic injuries as well as common principles associated with the athletic training profession. For ATTR majors only. Must be taken in conjunction with ATTR 1011 Basic Athletic Training Lab. Offered fall and spring semesters.

1011 - Basic Athletic Training Lab
1 Credit
Lab focusing on skills associated with athletic training including but not limited to: taping, examination and screening procedures, wound care, etc. Taken in conjunction with ATTR 1001. Offered fall and spring semesters.

1101 - Professional Emergency Care
2 Credits
To provide the citizen responder with the knowledge and practical skills necessary to help sustain life, reduce pain and minimize the consequences of injury or sudden illness until EMS arrives. Skills in first aid and advanced assessment and care including AEDs, BVM, stabilization, transportation and special resuscitation techniques. American Red Cross First Aid Responding to Emergencies and CPR for the Professional Rescuer certifications may be obtained by students who pass written and skill examinations. Course can be taken only once for graduation credit. Course may be repeated once for recertification as space permits. (Fee) Offered fall and spring semesters. This course may be repeated 1 time. This course is repeatable for a total of 2 hours.

2 Credits
Addresses nutritional requirements for athletes and physically active population. Analyze principles of weight control, including body fat, caloric requirements, effects of exercise and fluid loss/replacement. Recognize disordered eating habits and illnesses associated with poor nutritional habits and implement proper referral procedures. Offered fall semester.

2101 - Advanced Strength & Conditioning w/ Lab
3 Credits
Addresses physiological response to exercise, proper and safe methods and techniques of strength training, testing of strength and conditioning, interpreting testing data, and developing proper strength and conditioning programs for various individuals and groups. Proper performance and instruction of strength and conditioning methods will be addressed. Formerly known as HPES 207. Offered spring semester. Prerequisite(s): BIOL 2311.

2301 - Pre-Season AT Clinical
1 Credit
On-campus clinical field experience in pre-season football, soccer or volleyball prior to the start of the academic year. Offered fall semester. Prerequisite(s): ATTR 1001 and ATTR 1011 and ATTR 1101 and ATTR 1201 This course may be repeated 3 times. This course is repeatable for a total of 3 hours.

2401 - AT Clinical Level 1
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 1001 and ATTR 1011 and ATTR 1101 and ATTR 1201. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

2451 - AT Clinical Level 2
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 2451 and ATTR 2651 and ATTR 2101 and BIOL 2321 and EXPH 2301. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

2601 - Eval Tech of AT 1
3 Credits
General overview of the injury evaluation process including medical terminology and SOAP note writing. Practical application of lower extremity anatomy, neurovascular, pathology, injury evaluation and diagnosis. Offered fall semester.

2651 - Eval Tech of AT 2
3 Credits
Practical application of upper extremity anatomy, neurovascular, pathology, injury evaluation and diagnosis. Offered spring semester. Prerequisite(s): ATTR 2601.

2801 - Athletic Taping and Bracing
1 Credit
Athletic taping and bracing principles and techniques associated with specialized taping, wrapping, bracing and padding selected joints and body parts. Additional focus will be on concepts regulating design, application, construction, maintenance and reconditioning of immobilization devices. Graded S/U. Offered fall semester.

3101 - Therapeutic Modalities in Athletic Training
4 Credits
A review of therapeutic modalities used in the athletic training and other rehabilitation settings. To include indications and contraindications as well as the practical application of these modalities as they relate to the healing process. Offered fall semester. Prerequisite(s): ATTR 2651 and EXPH 2301.

3201 - Exercise Rehab in AT
4 Credits
Basic components of a comprehensive rehabilitation program. Concentrates on techniques used in the restoration of flexibility, strength, endurance and functional activity. Selection of therapeutic exercises for injuries and corrective surgeries sustained by the athlete and others actively involved in sports activities. Offered spring semester. Prerequisite(s): ATTR 3101.

3301 - Psychosocial Factors of AT
2 Credits
The psychological and sociocultural factors relative to an athletic population as well as the roles and functions of various health care providers responsible for professional care. Strategies for identifying problems, intervening and making appropriate referrals are presented. Offered spring semester. Prerequisite(s): ATTR 3401.

3401 - AT Clinical Level 3
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 2451 and ATTR 2651 and ATTR 2101 and BIOL 2321 and EXPH 2301. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

3451 - AT Clinical Level 4
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 3401. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.
3501 - Off Campus AT Clinical Experience
0 Credits
Taken concurrently with ATTR 3401; ATTR 3451; ATTR 4401 or ATTR 4451 indicating involvement in an off-campus clinical experience at a local high school and/or outpatient sports medicine/rehabilitation clinic. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 2451 and ATTR 2651 and ATTR 2101 and BIOL 2321 and EXPH 2301. Corequisite(s): ATTR 3401, ATTR 3451, ATTR 4401, ATTR 4451.

4101 - Medical Considerations
3 Credits
Etiology, recognition, evaluation, treatment and referral of general medical conditions and disabilities. Focus on assessment of body systems. Pharmacological applications relevant to treatment of injuries and illnesses common to athletes. Offered alternate fall semesters. Prerequisite(s): ATTR 2451 and ATTR 2651 and ATTR 2101 and EXPH 2301.

4201 - Trends in Athletic Training
3 Credits
Current topical issues affecting Athletic Training Profession include organization and administration topics, legal issues, and selected health issues that are present in the athletic population. Offered alternate fall semesters. Prerequisite(s): ATTR 2451.

4401 - AT Clinical Level 5
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 3451 and ATTR 3201. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

4451 - AT Clinical Level 6
1 to 2 Credits
On-campus clinical experience rotation as assigned by the athletic training staff. Under the supervision of an approved clinical instructor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): ATTR 4401. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

4601 - Senior Seminar in Athletic Training
3 Credits
Professional preparation for athletic training students taking the BOC exam. Review of athletic training domains, exam simulations, mock interviews, professional presentations, ethical situations, and practical application of psychomotor skills will be emphasized. Offered spring semester. Prerequisite(s): ATTR 4401 and EXPH 3201.

Subject - Exercise Physiology (EXPH)

1001 - Introduction to Exercise & Health
3 Credits
Examination of basic physiological, fitness and health concepts utilized to promote a healthy, active lifestyle. Topics discussed include exercise prescriptions, health and fitness benefits of exercise, adaptations to exercise training, disease prevention and weight management. Laboratory experiences will focus on basic exercise measurements of health and fitness parameters. Offered fall semester.

2101 - Sports Nutrition and Supplementation
3 Credits
Examination of the role of macro/micronutrients, ergogenic aids and nutritional supplements in exercise performance. Offered fall semester. Prerequisite(s): EXPH 1001.

2201 - Kinesiology
3 Credits
Practical analysis of human movement patterns with emphasis on a muscle’s action and appropriate strengthening and stretching techniques for the human body. Additional course concepts include Functional Movement Screening (FMS) techniques and Gait analysis via utilization of Dartfish motion analysis software. Offered spring semester. Prerequisite(s): BIOL 2311.

2301 - Exercise Physiology
4 Credits
The physiological basis and application of exercise physiology adaptations to exercise training, fitness and health. Laboratory experiences will expose students to common exercise physiology techniques and evaluations used to assess physical conditioning. Offered spring semester. Prerequisite(s): BIOL 2311.

3101 - Exercise Testing and Prescription I
3 Credits
Basic and advanced exercise testing, evaluation and programming in healthy and diseased populations. Emphasis will be placed on designing exercise prescriptions using American College of Sports Medicine guidelines. Offered fall semester. Prerequisite(s): EXPH 2301.

3151 - Exercise Testing and Prescription II
3 Credits
Basic and advanced exercise testing, assessment and interpretation of cardiovascular, respiratory and muscular changes associated with training, aging and disease. Formerly known as HPES 262. Offered spring semester. Prerequisite(s): EXPH 3101.

3201 - Research and Design
3 Credits
The development, design and critical analysis of scientific research. Topics discussed include scientific research problem development, literature databases and search strategies, experimental design, research methodology and statistical analysis. Offered fall and spring semesters.

3301 - Exercise Management of Chronic Disease
3 Credits
Research and design of exercise programming strategies appropriate for select populations. Course topics include but are not limited to: exercise considerations for cardiovascular, pulmonary, metabolic, immunological, neuromuscular, and orthopedic patients as well as adolescents, pregnant women, and geriatric patients. Offered fall semester. Prerequisite(s): EXPH 2301.

3401 - Exercise Physiology Practicum I
1 Credit
This course will engage the student in practical exercise experience in adult exercise programming. Students will design and implement an exercise program for an ONU faculty/staff needing exercise assistance for one semester. Offered fall semester. Prerequisite(s): EXPH 2201 and EXPH 2301.

4101 - Administration of Health Promotion Programs
3 Credits
A study of the design implementation, organization, administration and evaluation of health promotion programs; consists of competencies and strategies in administrative tasks, programming, facilities, equipment, marketing, sales, finance and liability. Offered spring semester.

4201 - ECG Analysis and Interpretation
3 Credits
Basic electrocardiographic analysis and interpretation of ECGs in healthy and diseased populations. Offered spring semester. Prerequisite: EXPH 2301.
4401 - Exercise Physiology Practicum II
1 Credit
This course will engage the student in practical exercise experience in adult exercise programming. Students will design and implement an exercise program for an ONU faculty/staff needing exercise assistance for one semester. Offered spring semester.

4501 - Exercise Physiology Internship
12 Credits
Participation in a broad based, off-campus experience designed for fitness development or health promotion program under the supervision of the University as well as a work site supervisor. Offered fall and spring semesters. Prerequisite(s): EXPH 3151 Corequisite(s): EXPH 4601 This course may be repeated 4 times. This course is repeatable for a total of 12 hours.

4601 - Senior Seminar in Exercise Physiology
1 Credit
Discussion and analysis of the field setting, practice and organization. Includes monitoring and evaluation of the internships. To be taken concurrently with an Exercise Physiology Internship. Offered fall and spring semesters. Prerequisite(s): EXPH 3151.

4701 - Personal Training I
2 Credits
This course immerses the student into a personal training experience by partnering the student with a volunteer adult participant needing assistance with exercise programming. Students will complete pre-exercise participation methods such as conducting a client interview, establishing fitness goals, determining risk-benefit ratio, and assessing anthropometric, fitness, and functional movement capability of his/her volunteer participant. All results will culminate into the creation of an exercise program that will be implemented with the volunteer participant during the semester. Finally, students will participate in course seminar sessions to examine exercise strategies and current trends in the personal training profession. Formerly known as HPES 362. Offered fall semester. Prerequisite(s): EXPH 2201 and EXPH 3151.

4751 - Personal Training II
2 Credits
This course immerses the student into a personal training experience by partnering the student with a volunteer adult participant needing assistance with exercise programming. Students will complete pre-exercise participation methods such as conducting a client interview, establishing fitness goals, determining risk-benefit ratio, and assessing anthropometric, fitness, and functional movement capability of his/her volunteer participant. All results will culminate into the creation of an exercise program that will be implemented with the volunteer participant during the semester. Finally, students will participate in course seminar sessions to examine exercise strategies and current trends in the personal training profession. Formerly known as HPES 363. Offered spring semester. Prerequisite(s): EXPH 2201 and EXPH 3151.

4801 - Exercise Pathophysiology
3 Credits
The etiology of health-related disease development (i.e. coronary heart and artery disease, hypertension, diabetes, and hyperlipidemia) and the pharmacological agents prescribed to manage these disease states. Formerly known as HPES 441. Offered fall semester. Prerequisite(s): EXPH 2301.

4851 - Exercise Biochemistry
3 Credits
The examination of energy metabolism and ATP production at rest and during exercise. The major biochemical pathways, enzymes, intermediates and control of carbohydrate, fat and protein metabolism will be discussed. Biochemical pathways covered include glycolysis and gluconeogenesis, beta oxidation and fat biosynthesis, protein and amino acid metabolism, the urea cycle and the glucose alanine cycle, and mitochondrial respiration and the electron transport chain. Offered fall semester. Prerequisite(s): EXPH 2301.

Subject - Health Education (HLED)

1101 - Personal Health Problems
3 Credits
A theoretical and practical treatment of the concepts of disease prevention and health promotion. Course content includes topics such as emotional health; aging and death; alcohol, tobacco, and drug abuse; physical fitness; nutrition and dieting; consumer health; chronic and communicable diseases; human sexuality; and stress management. Offered fall semester.

1201 - School & Community Health
2 Credits
Focus on skills and knowledge in identifying and understanding the relationship of the environment to the students habits and health concerns which directly impact school and future success. Observation and understanding of target populations with an emphasis on protecting and improving the health of identified target groups through needs assessment, program planning, program implementation, and program evaluation through effective community action plans. Understanding and implementation of strategies for health professionals that can be used in working with populations regarding successful health change, attitudes, and behaviors. Offered fall semester.

2101 - AIDS & Other STDs
3 Credits
An introductory, non-technical examination of the biological/medical, social, psychological, and other ethical aspects of AIDS and other sexually transmitted diseases. Topics include: history of AIDS; treatment and prevention of HIV/AIDS and STDs; medical aspects of HIV/AIDS; HIV testing; counseling of HIV/AIDS positive individuals; AIDS education within school systems; women and HIV/AIDS; legal and ethical aspects of HIV/AIDS; and living with HIV/AIDS. Offered spring semester.

Subject - Physical Education (PHED)

1001 - HPE Foundations
3 Credits
The course is an introductory course into the major of Physical Education. It deals with the foundation areas of history, philosophy, psychology, physiology, and sociology of human movement and sport. The course will identify professional opportunities within physical education and sport, look at current issues, and the future direction of physical education and related fields. HPSS or related field majors only. Offered fall semester.

2101 - Ind. Skill Development in Sports
3 Credits
The fundamental skills, methods and techniques in teaching the following individual and dual sports: tennis, bowling, golf, weight lifting, badminton, track and field. Offered fall semester.

2201 - Team Concepts in Physical Education
3 Credits
The fundamental skills, methods, and techniques in teaching team sports including but not limited to: basketball, volleyball, soccer, baseball/softball, hockey, team handball and touch football. Offered spring semester.

3001 - Practicum in Teaching Physical Education
1 Credit
Required of all Physical Education majors, preferably in their junior year. Involves assisting in service classes. Permission of department chair required. Offered fall semester.

3101 - Adapted Physical Education
3 Credits
For the professionals who are concerned with physical activities for people with disabilities; to develop an understanding of the various disabling conditions and to explore methods of adapting physical activities to meet the needs of the atypical student in the physical education classroom or in the clinical setting. Offered spring semester. Prerequisite(s): BIOL 1341.
3201 - Elementary School Physical Education
3 Credits
The objectives, methods, and techniques of teaching physical education in the elementary school are emphasized in this course. The need for physical activity and practical application of theories are emphasized. Offered fall semester.

3301 - Test & Measurements of HPE
3 Credits
The fundamental considerations of measurement and evaluation in the areas of health and physical education will be studied in this class. Students will learn to administer and design both written and skills tests. Students will study the validity, reliability, and objectivity of normative and criterion related tests. Special emphasis will be placed on application to health and physical education. Offered spring semester.

3401 - Motor Learning
3 Credits
Motor Learning - studies the factors affecting the learning of motor skills. You will be presented with practical knowledge of the processes and variables that influence the rate, level, and retention of skill acquisition. The student will ultimately be able to develop a sound theoretical basis for instruction, coaching and performance enhancement. Formerly known as HPES 271. Offered spring semester.

Subject - Sport Management (SPMG)

1001 - Introduction to Sport Management
3 Credits
Initial introduction to basic concepts, career preparation, professional opportunities, and professional skills necessary to be successful in a career in sport management are explored. Offered fall semester.

2101 - Social/Psychological Issues in Sport
3 Credits
Analysis of the social significance and interrelationship that social history, values, and power structures in and outside of sports influence individual and societal beliefs, attitudes, and practices in sports. Specific focus on the topics of youth, deviance and violence, gender/orientation, race and ethnicity, religion, social class, and future of sports in society are also explored. Offered spring semester.

2201 - Promotions/Marketing in Sport
3 Credits
The practice of marketing, promotions and sales in the sport marketplace. Introductions to event management, print and broadcast media advertising, marketing strategies, and a class project. Offered fall semester.

2301 - Facility/Event Management in Sport
3 Credits
Explore issues related to facility and event management unique to the sport environment while developing an understanding of successful practices and procedures for managing sport and event enterprises. Focus on the skills necessary for sport and event managers needed for successful human and capital resource management, as well as the financial viability and sustainability of sport facilities. Offered spring semester.

3001 - Sport Facilities Management Practicum
1 Credit
Designed to give Sport Management majors the opportunity to experience facilities management through involvement with the sports facilities at the University. Offered fall and spring semesters.

3051 - Team Promotions Practicum
1 Credit
Designed to give Sport Management majors the opportunity to acquire promotional experience through involvement with a sport team at the University. Offered fall and spring semesters.

3101 - Organization/Administration in Sport
3 Credits
Examination of the philosophy, principles, problems, policies and procedures essential in the organization and administration of meaningful programs in health education, physical education, and sports studies. Offered fall semester.

3201 - Finance/Economics in Sport
3 Credits
The application of economic and financial theories applied to the sports industry both in the professional and the amateur sports markets. The critical and objective evaluation of economic and financial issues that arise in the sports industry. Increase knowledge of various sports markets, while emphasizing the role economics plays in determining outcomes in these markets. Offered spring semester.

4101 - Ethics in Sport
3 Credits
Develops an awareness of the complexities concerning sports litigation, primarily in the focus of educational institutions. To use this new knowledge to assist their professional growth in the field. To have a clear understanding of the law and its fundamental elements. Offered spring semester.

4201 - Legal Issues in Sport
3 Credits
Develops an awareness of the complexities concerning sports litigation, primarily in the focus of educational institutions. To use this new knowledge to assist their professional growth in the field. To have a clear understanding of the law and its fundamental elements. Offered fall semester.

4501 - Internship in Sport Management
12 Credits
Specially planned sport management work throughout the semester to provide direct employment experience. Emphasis is on the practical application of theory and knowledge in developing professional skills. May be repeated but only 12 credit hours will count toward graduation. To be taken with the Sport Management Senior Seminar to assist the students with the integration of field work and classroom learning. Junior status and permission of department chair required. Offered fall and spring semesters. Corequisite(s): SPMG 4601. This course may be repeated 4 times. This course is repeatable for a total of 12 hours.

4601 - Senior Seminar in Sport Management
1 Credit
Discussion and analysis of the field setting, practice and organization. Includes monitoring and evaluation of the internships. To be taken concurrently with Sport Management Internship. Offered fall and spring semesters.

Subject - Varsity Sports (VARS)

1001 - Cross Country (Men) - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.

1011 - Cross Country (Women) - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.

1021 - Football - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.

1031 - Soccer (Men) - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.

1041 - Soccer (Women) - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.
INSTITUTE FOR SOCIAL RESEARCH

Contact: Durkin (Director)

Ohio Northern University's Institute for Social Research offers a unique opportunity for students in several of the University's undergraduate programs. The Institute performs surveys, needs assessments, policy evaluations, and other social research tasks as required by public and private agencies in the region.

The institute offers exceptional students opportunities to observe and assist in social, political, and geographical research. Students are assigned increasing levels of responsibility as an important adjunct to their education as social scientists.

ISR 1861, 2861, 3861, and 4861 may count toward students' primary or secondary major, but only 3 credit hours will count for the major and only 9 credit hours will count towards the degree.

Regular course offerings in the Institute for Social Research include a two-semester sequence (ISR 2531 and 2541) in conducting social science investigations. One course focuses on data collection and research methodology, while the second concentrates on the analysis of data and statistical procedures.

Subject - Institute for Social Research (ISR)

1861 - Social Research Practicum 1
1 Credit
Participation in the Institute for Social Research under the direction of a faculty member. Permission required. Offered fall and spring semesters.

2531 - Research Methods
3 Credits
Major research techniques including surveys, observation, interviews, use of available data and experiments. Other topics include techniques for sampling, for measurement, and for research. Offered fall semester.

2541 - Data Analysis
4 Credits
Concepts and procedures for understanding social science data. Covers both descriptive and inferential statistics, as well as qualitative data analysis. Includes the use of statistical software and emphasizes interpretation of results. Offered spring semester. Prerequisite(s): (STAT 1311 minimum grade of C).

2861 - Social Research Practicum 2
1 Credit
Participation in the Institute for Social Research. Work as part of a team, under the direction of a faculty member in the Institute of Social Research. Offered fall and spring semesters. Prerequisite(s): (ISR 1861 Minimum Grade of C).

3861 - Social Research Practicum 3
1 Credit
Participation in the Institute for Social Research, including some leadership responsibilities under the direction of a faculty member. Offered fall and spring semesters. Prerequisite(s): (ISR 2861 Minimum Grade of C).

4861 - Social Research Practicum 4
1 Credit
Participation in the Institute for Social Research under the direction of a faculty member. Student assumes responsibility as a project director or assistant project director. Offered fall and spring semesters.

1051 - Volleyball - Varsity
1 Credit
Graded S/U. Offered fall semester. This course may be repeated 4 times.

2001 - Basketball (Men) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2011 - Basketball (Women) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2021 - Indoor Track (Men) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2031 - Indoor Track (Women) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2041 - Swimming & Diving (Men) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2051 - Swimming & Diving (Women) - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

2061 - Wrestling - Varsity
1 Credit
Graded S/U. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 4 hours.

3001 - Baseball - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3011 - Golf (Men) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3021 - Golf (Women) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3031 - Outdoor Track (Men) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3041 - Outdoor Track (Women) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3051 - Softball - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3061 - Tennis (Men) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.

3071 - Tennis (Women) - Varsity
1 Credit
Graded S/U. Offered spring semester. This course may be repeated 4 times.
### Overview Statement
Courses are offered in mathematics and statistics to complement almost all disciplines in the university. In addition, the department cooperates with the Center for Teacher Education in program planning for licensure for those desiring to teach high school or middle school mathematics.

### Accreditation
The teacher licensure program in mathematics is nationally accredited by the National Council of Teachers of Mathematics.

### Majors, Minors and Degrees Offered

<table>
<thead>
<tr>
<th>Major/Minor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Mathematics Major</td>
<td>(BA, BS)</td>
</tr>
<tr>
<td>Mathematics Major</td>
<td>(BA, BS)</td>
</tr>
<tr>
<td>Mathematical Statistics Major</td>
<td>(BA, BS)</td>
</tr>
<tr>
<td>Applied Mathematics Minor</td>
<td></td>
</tr>
<tr>
<td>Applied Statistics Minor</td>
<td></td>
</tr>
<tr>
<td>Mathematics Minor</td>
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</tbody>
</table>

### Licensure Offered
Adolescent Young Adult (7-12) Mathematics Licensure

### Special Programs
Department Faculty are active in several professional organizations, providing students with opportunities for research, presentations, and professional experience.

### Major Course Requirements
All required courses in major subject area must be completed with a grade of ‘C’ or higher. All required courses outside of the major subject area must be completed with a grade of ‘D’ or higher.

### Applied Mathematics Major (46 credit hours)
Applied mathematics is an interdisciplinary major. A student in this major must design a program of study in consultation with his/her Mathematics and Statistics Department advisor. Such a program of study must explicitly list the mathematics and the application area electives the student will take.

**Select at least one course from two of the following three categories:**

- **Algebraic Mathematics:**
  - MATH 3061 Discrete Mathematics (3)
  - MATH 3411 Abstract Algebra 1 (3)
  - MATH 3421 Abstract Algebra 2 (3)
  - MATH 4411 Number Theory with Applications (3)

- **Analytic Mathematics:**
  - MATH 3611 Real Analysis 1 (3)
  - MATH 3621 Real Analysis 2 (3)
  - MATH 4611 Numerical Analysis (3)

- **Decision Support Mathematics:**
  - MATH 3221 Operations Research (3)
  - MATH 3601 Mathematical Programming (3)
  - MATH 4651 Probability Theory (3)

### Other required courses
Three departmentally approved major-appropriate courses (9 credit hours) in a specific application area outside of the department.

**Mathematical Statistics Major** (48 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1951</td>
<td>Freshman Seminar (1)</td>
</tr>
<tr>
<td>MATH 1631</td>
<td>Calculus 1 (4)</td>
</tr>
<tr>
<td>MATH 1641</td>
<td>Calculus 2 (4)</td>
</tr>
<tr>
<td>MATH 2631</td>
<td>Calculus 3 (4)</td>
</tr>
<tr>
<td>MATH 2691</td>
<td>Foundations and Problem Solving (3)</td>
</tr>
<tr>
<td>MATH 3261</td>
<td>Linear Algebra (3)</td>
</tr>
<tr>
<td>MATH 3951</td>
<td>Junior Seminar (1)</td>
</tr>
<tr>
<td>MATH 4651</td>
<td>Probability Theory (3)</td>
</tr>
<tr>
<td>MATH 4661</td>
<td>Mathematical Statistics (3)</td>
</tr>
<tr>
<td>MATH 4951</td>
<td>Senior Seminar (1)</td>
</tr>
<tr>
<td>STAT 1561</td>
<td>Statistics for Professionals 1 (3)</td>
</tr>
<tr>
<td>STAT 2561</td>
<td>Statistics for Professionals 2 (3)</td>
</tr>
<tr>
<td>STAT 3501</td>
<td>Applied Regression and Correlation Analysis (3)</td>
</tr>
</tbody>
</table>

Select at least 4 courses from the following two categories with at least two courses from Fundamental Statistics:

- **Fundamental Statistics:**
  - STAT 3511 Categorical Data Analysis (3)
  - STAT 3521 Analysis of Variance with Experimental Design (3)
  - STAT 3531 Survey Sampling Methods (3)

- **Advanced Statistics:**
  - MATH 3611 Real Analysis 1 (3)
  - MATH 3621 Real Analysis 2 (3)
  - STAT 3571 Data Management and Statistical Computing (3)
  - STAT 3541 Nonparametric Statistical Methods (3)
  - STAT 3551 Applied Probability (3)
  - STAT 3901 Special Topics in Statistics (3)
  - STAT 4561 Introduction to Stochastic Processes (3)
  - STAT 4571 Linear Statistical Models (3)

### Mathematics Major (49-90 credit hours)
Students majoring in mathematics must complete one of two concentrations: advanced mathematical studies or teacher licensure. The 49-90 credit hours listed above includes the 27 credit hours of common courses plus the 22 credit hours required for the advanced mathematical studies concentration or the 63 credit hours required for the teacher licensure concentration.

- **Mathematics Major (49-90 credit hours):**
  - MATH 1951 Freshman Seminar (1)
  - MATH 1631 Calculus 1 (4)
  - MATH 1641 Calculus 2 (4)
  - MATH 2631 Calculus 3 (4)
  - MATH 2691 Foundations and Problem Solving (3)
  - MATH 3261 Linear Algebra (3)
  - MATH 3411 Abstract Algebra 1 (3)
  - MATH 3611 Real Analysis 1 (3)
  - MATH 3951 Junior Seminar (1)
  - MATH 4951 Senior Seminar (1)
Advanced Mathematical Studies Concentration (22 credit hours) Students planning on graduate study in mathematics should fulfill the requirements in this concentration.

MATH 2651 Differential Equations (4)
MATH 3x61-4xx1 Mathematics elective (3)
MATH 3x61-4xx1 Mathematics elective (3)
MATH 3421 Abstract Algebra 2 (3)
MATH 3601 Mathematical Programming (3)
MATH 3621 Real Analysis 2 (3)
MATH 4651 Probability Theory (3)

Teacher Licensure Concentration (63 credit hours) Students completing this concentration will have met the Ohio curriculum and experience requirements for the Adolescent Young Adult (7-12) Integrated Mathematics Teaching License. See the Department of Education for details on this concentration.

MATH 2011 History of Mathematics (3)
MATH 2651 Differential Equations (4)
MATH 3011 Mathematics for Secondary Teachers (3)
MATH 3601 Mathematical Programming (3)
MATH 4211 Foundations of Geometry (3)
STAT 1561 Statistics for Professionals 1 (3)

Required education courses
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience I (1)
EDUC 1521 Five-Day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4541 Integrated Mathematics Methods (3)
EDUC 4721 Student Teaching – AYA (12)

Required general education courses
CACS 2151 Classroom Communication (3)
PSYC 2171 Adolescent Psychology (3)

Minor Course Requirements
A student may earn at most one minor from the Department of Mathematics and Statistics. A student may earn an applied statistics minor with either a mathematics or an applied mathematics major. No other major-minor combination within the department is allowed. All courses required for a minor must be completed with a grade of 'C' or higher.

Applied Mathematics Minor (22 credit hours)
MATH 1631 Calculus 1 (4)
MATH 1641 Calculus 2 (4)
MATH 2631 Calculus 3 (4)
MATH 2651 Differential Equations (4)

Select at least two:
MATH 3061 Discrete Math (3)
MATH 3221 Operations Research (3)
MATH 3631 Complex Variables (3)
MATH 3651 Partial Differential Equations (3)
MATH 4411 Number Theory w/ Applications (3)
MATH 4611 Numerical Analysis (3)
MATH 4651 Probability Theory (3)
STAT 3501 Applied Regression and Correlation Analysis (3)
STAT 3551 Applied Probability (3)
STAT 4561 Intro to Stochastic Processes (3)
STAT 4571 Linear Statistical Models (3)

Applied Statistics Minor (18 credit hours)
STAT 1561 Statistics for Professionals 1 (3)
STAT 2561 Statistics for Professionals 2 (3)

Select at least two courses (6 credit hours) from Fundamental Statistics:
STAT 3501 Applied Regression and Correlation Analysis (3)
STAT 3511 Categorical Data Analysis (3)
STAT 3521 Analysis of Variance with Experimental Design (3)
STAT 3531 Survey Sampling Methods (3)

Select at least one additional course (3 credit hours) from Fundamental Statistics or Advanced Statistics:
Advanced Statistics:
STAT 3541 Nonparametric Statistical Methods (3)
STAT 3551 Applied Probability (3)
STAT 3571 Data Management and Statistical Computing (3)
STAT 3901 Special Topics in Statistics (3)
STAT 3911 Special Topics in Statistics (3)
STAT 4561 Introduction to Stochastic Processes (3)

Select at least one additional departmentally approved quantitative course (3 credit hours).

Note:
1Pharmacy students may substitute STAT 1761 for STAT 1561.

Mathematics Minor (24-25 credit hours)
MATH 1631 Calculus 1 (4)
MATH 1641 Calculus 2 (4)
MATH 2631 Calculus 3 (4)
MATH 2691 Foundations and Problem Solving (3)

Select one:
MATH 3261 Linear Algebra (3)
MATH 2651 Differential Equations (4)

Select at least two:
MATH 2651-4xx1 Math elective (3)
MATH 3061-4xx1 Math elective (3)
Note:
1The following cannot be used as electives: MATH 3011, 3951, 4401, and 4951.

Subject - Mathematics (MATH)

1201 - Mathematics for Liberal Arts
3 Credits
This is a mathematics course for non-math, non-science majors. It provides an opportunity for students to see mathematics used in ways not emphasized in traditional courses. It covers a variety of topics which may include, but is not limited to, problem solving, set theory, logic, graph theory, number systems, number theory, modeling, consumer mathematics, apportionment, voting methods, and counting techniques. Two years high school algebra required. Offered fall and spring semesters.

1251 - College Algebra
3 Credits
The real number system, exponents, polynomials, factoring, rational expressions, equations and inequalities, functions and their graphs, polynomial and rational functions. Two years high school algebra required. Not open for credit to students who have received a grade of C or better in any higher numbered course. Offered fall and spring semesters.

1401 - Functions for Science and Technology
3 Credits
Functions and their graphs, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, analytic geometry. Not open to any student who has received a grade of C or higher in any calculus course. Offered fall and spring semesters. Prerequisite(s): MATH 1251.
1431 - Calculus for Science and Technology
3 Credits
Applying mathematical techniques to problems in science and technology, including analysis, formulation, and problem solutions. Techniques of differentiation, max/min problems, and elementary techniques of integration. Not open to students who have received a grade of C or higher in any other calculus course. Offered fall and spring semesters. Prerequisite(s): MATH 1401.

1461 - Calculus for Life Sciences
3 Credits
Concepts of differentiation and integration applied to algebraic, exponential, and logarithmic functions. Offered fall and spring semesters. Prerequisite(s): MATH 1251.

1611 - Calculus w/Precalculus 1
4 Credits
A fast-paced review of algebraic and trigonometric functions. Limit of a function, continuity, the derivative, and the antiderivative. Introduction to definite and indefinite integrals and the Fundamental Theorem of Calculus. Two years high school algebra and one-half year high school trigonometry required. Formerly MATH 157. Offered fall semester.

1621 - Calculus w/Precalculus 2
4 Credits
Continued development of differentiation techniques, extrema, Mean Value Theorem, curve plotting, other applications of the derivative, continued development of integration techniques and their applications, and calculus of exponentials and logarithms. Formerly MATH 159. Offered spring semester. Prerequisite(s): MATH 1611.

1631 - Calculus 1
4 Credits
Limit of a function, continuity, the derivative, extrema, Mean Value Theorem, curve plotting, applications of the derivative, introduction to integration and its applications. Two years high school algebra and one-half year high school trigonometry required. Formerly MATH 163. Offered fall and spring semesters.

1641 - Calculus 2
4 Credits
Inverse functions; logarithmic, exponential, inverse trig, hyperbolic and inverse hyperbolic functions; sequences and series; Taylor series; parametric curves; polar coordinates; conic sections. Formerly MATH 165. Offered fall and spring semesters. Prerequisite(s): (MATH 1621 or MATH 1631).

1661 - Fundamental Mathematics 1
3 Credits
Problem solving skills and techniques, elementary set theory, whole numbers, integers, theory of arithmetic, and introductory number theory. Formerly MATH 172. Offered fall semester.

1671 - Fundamental Mathematics 2
3 Credits
Rational and real numbers, introduction to the fundamentals of counting, probability and statistics, geometric figures, measurement, congruence, symmetry, constructions, transformations, and similarity. Formerly MATH 173. Offered spring semester.

1901 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 190. This course is repeatable.

1911 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 190. This course is repeatable.

1951 - Freshman Seminar
1 Credit
Familiarization with mathematics and statistics department, requirements for majors, planning a program of courses, university catalog, career planning, and problem-solving.

2011 - History of Mathematics
3 Credits
An introduction to the history and origin of mathematics, restricted principally to mathematics through elementary calculus. A chronological study of some mathematicians and their contributions to mathematical thought. Formerly MATH 245. Offered spring semester. Prerequisite(s): (MATH 1431 or MATH 1461 or MATH 1621 or MATH 1631).

2631 - Calculus 3
4 Credits
Vectors and vector valued functions, planes and lines in space, multivariate functions, differential and integral calculus of multivariate functions. Formerly MATH 263. Offered fall and spring semesters. Prerequisite(s): MATH 1641.

2651 - Differential Equations
4 Credits
Matrices and vector spaces; bases and dimension; first and second order linear differential equations with applications, LaPlace transforms. Formerly MATH 275. Offered fall and spring semesters. Prerequisite(s): MATH 1641.

2691 - Foundations of Mathematics with Problem Solving
3 Credits
A hands-on introduction to problem solving strategies and techniques of formal proof. Formerly MATH 294. Offered spring semester. Prerequisite(s): MATH 1641 Minimum Grade of C.

2901 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 290.

2911 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 290.

2921 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 290.

2931 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 290.

2971 - Independent Study in Mathematics
1 to 3 Credits
Formerly MATH 297. This course may be repeated 2 times.

3011 - Mathematics for Secondary Teachers
3 Credits
To include topics from problem solving, probability, number theory, number systems, trigonometry, mathematical induction, geometry, graph theory, and discrete mathematics. Formerly MATH 301. Offered alternate fall semesters. Prerequisite(s): MATH 2691 Minimum Grade of C.

3061 - Discrete Mathematics
3 Credits
An introduction to discrete mathematical structures: sets, logic, combinatorics, relations and digraphs, functions, integers and related algorithms, partially ordered sets, lattices and Boolean algebras, Karnaugh maps, elementary graph theory. Formerly MATH 336. Offered fall and spring semesters. Prerequisite(s): MATH 1631 Minimum Grade of C.
### 3221 - Operations Research

3 Credits  
Linear programming, simplex method, duality, sensitivity analysis, PERT/CPM. Standard O.R. applications including transportation, maximum flow, and shortest path problems, among others. Formerly MATH 332. Offered alternate spring semesters. Prerequisite(s): MATH 2651 Minimum Grade of C or MATH 3261 Minimum Grade of C.

### 3241 - Topology

3 Credits  
Metrics and metric spaces, topological spaces, topological invariants. Examples in real space and more general topological spaces. Formerly MATH 324. Offered alternate spring semesters. Prerequisite(s): MATH 2691 Minimum Grade of C.

### 3261 - Linear Algebra

3 Credits  
Finite and infinite dimensional vector spaces over a field, linear transformations, inner product spaces, and canonical forms. Formerly MATH 372. Offered fall semester. Prerequisite(s): MATH 2691 Minimum Grade of C or MATH 3061 Minimum Grade of C.

### 3411 - Abstract Algebra 1

3 Credits  
An introduction to algebraic structures; groups, rings and fields. Formerly MATH 311. Offered fall semester. Prerequisite(s): MATH 2691 Minimum Grade of C.

### 3421 - Abstract Algebra 2

3 Credits  
A continued study of groups, rings, and fields. Formerly MATH 312. Offered alternate spring semesters. Prerequisite(s): MATH 3411 Minimum Grade of C.

### 3601 - Mathematical Programming

3 Credits  
Programming concepts and techniques. Programming applications using MATLAB, Visual Basic for Applications, or a programmable calculator. Introduction to Maple. Use of Equation Editors. Formerly MATH 360. Offered spring semester. Prerequisite(s): MATH 2651 Minimum Grade of C or MATH 3261 Minimum Grade of C.

### 3611 - Real Analysis 1

3 Credits  
Real numbers, sequences, limits of functions, continuous functions. Formerly MATH 352. Offered fall semester. Prerequisite(s): MATH 2691 Minimum Grade of C.

### 3621 - Real Analysis 2

3 Credits  
Continuous functions. Differentiation, derivative theorems, Taylor's formula. The Riemann integral and properties of integrals. Formerly MATH 353. Offered alternate spring semesters. Prerequisite(s): MATH 3611 Minimum Grade of C.

### 3631 - Complex Variables

3 Credits  
Complex algebra, complex calculus, analytic functions, infinite series over the complex plane, theory of residues, conformal mapping. Formerly MATH 363. Offered alternate spring semesters. Prerequisite(s): MATH 2631 Minimum Grade of C.

### 3651 - Partial Differentiable Equations

3 Credits  
First-order equations: the method of characteristics and systems of first-order equations. Second-order equations: the Cauchy-Kowalewskaya theorem, canonical forms of second-order equations, Fourier series, Fourier integrals, boundary-value and initial-value problems. Formerly MATH 362. Offered alternate spring semesters. Prerequisite(s): MATH 2631 Minimum Grade of C and MATH 2651 Minimum Grade of C.

### 3901 - Special Topics in Mathematics

1 to 3 Credits  
Permission of Instructor Required. Formerly MATH 390.

### 3911 - Special Topics in Mathematics

1 to 3 Credits  
Permission of Instructor Required. Formerly MATH 390.

### 3921 - Special Topics in Mathematics

1 to 3 Credits  
Permission of Instructor Required. Formerly MATH 390.

### 3931 - Special Topics in Mathematics

1 to 3 Credits  
Permission of Instructor Required. Formerly MATH 390.

### 3951 - Junior Seminar

1 Credit  
Career options. Graduate and professional school options. Attendance at department seminars and capstone presentations. Self-evaluation of progress in the major. Preparation for MATH 4951 - Senior Seminar including selection of senior capstone advisor and research topic. Formerly MATH 370. Offered spring semester.

### 4211 - Foundations of Geometry

3 Credits  
An axiomatic approach to geometry including the concepts of incidence, ordering, separation, and congruence in incidence, affine, Euclidean, and non-Euclidean geometries. Formerly MATH 421. Offered alternate fall semesters. Prerequisite(s): MATH 2691 Minimum Grade of C.

### 4401 - Mathematics Internship

1 to 8 Credits  
Formerly MATH 470.

### 4411 - Number Theory w/Applications

3 Credits  
An introduction to number theory, modular arithmetic and finite fields, with applications to pseudo-random sequences, cryptography and coding theory. Formerly MATH 411. Offered alternate spring semesters. Prerequisite(s): MATH 2691 Minimum Grade of C.

### 4611 - Numerical Analysis

3 Credits  
Review of programming concepts using MATLAB or other programming software. Errors that occur in representing numbers on a computer and approximating solutions; methods for locating roots of a non-linear equation; interpolation, numerical differentiation; and numerical integration. Numerical solution of differential equations and of systems of linear algebraic equations. Splines. Formerly MATH 461. Offered alternate spring semesters. Prerequisite(s): MATH 2651 Minimum Grade of C and MATH 3601 Minimum Grade of C.

### 4651 - Probability Theory

3 Credits  
Axioms of probability theory; Discrete and continuous random variables; multivariate distributions; functions of random variables; Central Limit Theorem. Formerly MATH 480. Offered alternate fall semesters. Prerequisite(s): MATH 2631 Minimum Grade of C.

### 4661 - Mathematical Statistics

3 Credits  
Sampling distributions; Central Limit Theorem; point and confidence interval estimation; hypothesis testing. Formerly MATH 481. Offered alternate spring semesters. Prerequisite(s): MATH 4651 Minimum Grade of C.

### 4901 - Special Topics in Mathematics

1 to 3 Credits  
Permission of Instructor Required. Formerly MATH 490.
1921 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 490.

1922 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 490.

1931 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 190.

2001 - Statistics for Scientists and Engineers
3 Credits
Basic statistical techniques; random variables and their distributions; statistical inference (point estimation, confidence intervals, hypothesis testing); statistical study designs; linear regression and analysis of variance methods. Formerly STAT 280. Offered fall semester. Prerequisite(s): MATH 1641 Minimum Grade of C.

2051 - Statistics for Professionals 2
3 Credits
Review of inferential statistics; categorical data analysis (including goodness-of-fit tests and contingency table analysis); simple linear regression and correlation; multiple regression analysis; analysis of variance; analysis of covariance; statistical study designs. Formerly STAT 256. Offered fall and spring semesters. Prerequisite(s): STAT 1561 Minimum Grade of C.

2091 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 290. Prerequisite(s): STAT 2561 Minimum Grade of C.

2291 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 290.

2391 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 290.

2491 - Independent Study
1 to 3 Credits
Formerly MATH 497. This course may be repeated 2 times.

2501 - Statistics for Professionals 1
3 Credits
Descriptive and graphical methods for univariate and bivariate data; probability concepts; binomial and normal distributions; statistical inference; point estimation, confidence intervals, hypothesis testing. Formerly STAT 242. Offered fall and spring semesters. Prerequisite(s): Two years of high school algebra.

2502 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 490.

2561 - Statistics for Professionals 2
3 Credits
Formerly MATH 494. This course may be repeated 2 times.

2601 - Special Topics in Mathematics
1 to 3 Credits
Permission of Instructor Required. Formerly MATH 490.

2651 - Senior Seminar
1 Credit
The student prepares a paper and gives a presentation based on the work done in both MATH 3951 - Senior Seminar and this course. Formerly MATH 493. Offered fall and spring semesters. Prerequisite(s): MATH 3951 Minimum Grade of C.

2661 - Seminar in Mathematics
1 to 3 Credits
Formerly MATH 494.

2691 - Independent Study
1 to 3 Credits
Formerly MATH 497. This course may be repeated 2 times.

Subject - Statistics (STAT)

1311 - Introduction to Statistical Reasoning
3 Credits
Descriptive and graphical methods for univariate and bivariate data; probability concepts; binomial and normal distributions; statistical inference; point estimation, confidence intervals, hypothesis testing. Formerly STAT 142. Offered fall and spring semesters. Prerequisite(s): Two years of high school algebra.

1561 - Statistics for Professionals 1
3 Credits
Describing data graphically and numerically; describing bivariate data; probability concepts; random variables and probability distributions (both discrete and continuous); sampling distributions; statistical inference (point estimation, confidence intervals, hypothesis testing) for a single mean and the difference between two means; statistical study designs. Formerly STAT 156. Offered fall and spring semesters. Prerequisite(s): Two years of high school algebra.

1761 - Statistics for Pharmacy
3 Credits
Describing data graphically and numerically; describing bivariate data; probability concepts; random variables and probability distributions (both discrete and continuous); sampling distributions; statistical inference (point estimation, confidence intervals, hypothesis testing) for single means and proportions, and the difference between two means and proportions; statistical study designs. Prerequisite(s): MATH 1401 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

1901 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 190. Prerequisite(s): STAT 1311 Minimum Grade of C or STAT 1561 Minimum Grade of C.

1911 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 190. Prerequisite(s): STAT 1311 Minimum Grade of C or STAT 1561 Minimum Grade of C.

1921 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 190.

3501 - Applied Regression and Correlation Analysis
3 Credits
Simple linear regression and correlation data analysis methods; multiple regression methods; analysis of variance; analysis of covariance; statistical study designs. Formerly STAT 281. Offered fall semester. Prerequisite(s): STAT 2561 Minimum Grade of C.

3511 - Categorical Data Analysis
3 Credits
Statistical inference with regard to categorical variables, including goodness-of-fit tests, contingency table analysis, Fisher exact test, and logistic regression models. Formerly STAT 351. Offered alternate spring semesters. Prerequisite(s): STAT 2561 Minimum Grade of C.

3521 - Analysis of Variance w/ Experimental Design
3 Credits
Single factor analysis of variance, multiple comparisons, two and multiple factor analysis of variance, completely randomized designs, randomized block designs, analysis of covariance, random effects models, additional experimental designs. Formerly STAT 352. Offered alternate spring semesters. Prerequisite(s): STAT 2561 Minimum Grade of C.

3551 - Survey Sampling Methods
3 Credits
Statistical methods pertaining to survey sampling, with an emphasis on human populations, including simple random sampling, stratified sampling, cluster sampling, systematic sampling, and the use of demographic information to reduce margins of error. Formerly STAT 353. Offered alternate spring semesters. Prerequisite(s): STAT 2561 Minimum Grade of C.
3541 - Nonparametric Statistical Methods
3 Credits
Review of parametric inferential methods; nonparametric hypothesis testing (including Wilcoxon rank-sum, Wilcoxon signed-rank, sign, Kruskal-Wallis, Friedman); nonparametric point and confidence interval estimation; rank correlation; randomization and permutation tests. Formerly STAT 354. Prerequisite(s): STAT 2561 Minimum Grade of C.

3551 - Applied Probability
3 Credits
Combinational analysis; discrete probability distributions; exponential distribution; Poisson distribution; normal distribution; DeMoivre-LaPlace limit theorem; random variables and their properties; laws of large numbers; generating functions; random walk and ruin problems; Markov chains. Formerly STAT 355. Prerequisite(s): (STAT 1561 Minimum Grade of C or STAT 2501 Minimum Grade of C or MATH 4651 Minimum Grade of C) and (MATH 1461 Minimum Grade of C or MATH 1621 Minimum Grade of C or MATH 1631 Minimum Grade of C).

3571 - Data Management and Statistical Computing
3 Credits
Use of statistical software packages such as SAS, SPSS, or Excel. Topics include data management, data analysis, graphical displays and computer simulation. Formerly STAT 350. Prerequisite(s): STAT 2561 Minimum Grade of C.

3901 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 390. Prerequisite(s): STAT 2561 Minimum Grade of C

3911 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 390. Prerequisite(s): STAT 2561 Minimum Grade of C

3921 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 390.

3931 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 390.

4561 - Introduction to Stochastic Processes
3 Credits
Random variables and stochastic processes; Markov chains and their properties (discrete and continuous); other important stochastic processes and their properties; elementary stochastic calculus. Formerly STAT 356. Prerequisite(s): (STAT 2501 Minimum Grade of C or MATH 4651 Minimum Grade of C) and (MATH 2651 Minimum Grade of C or MATH 3061 Minimum Grade of C).

4571 - Linear Statistical Models
3 Credits
Review of linear algebra; linear statistical models, including regression and analysis of variance models, from a vector space perspective; Bivariate and multivariate normal distributions. Prerequisite(s): (STAT 1561 Minimum Grade of C or STAT 2501 Minimum Grade of C or MATH 4651 Minimum Grade of C) and (MATH 3061 Minimum Grade of C or MATH 2651 Minimum Grade of C).

4901 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Permission of instructor required. Formerly STAT 490.

4911 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Permission of instructor required. Formerly STAT 490.

4921 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 490.

4931 - Special Topics in Statistics
1 to 3 Credits
Permission of Instructor Required. Formerly STAT 490.

DEPARTMENT OF MODERN LANGUAGES

Professors Dufault (Chair), T. Finn, Walter; Associate Professor Sen; Assistant Professor Kempen; Visiting Instructor Poelzler-Kamatali; Lecturers Angulo-Valera, H. Johns, Morikawa, Sulayman

Mission Statement
The mission of the Department of Modern Languages is to provide students with abundant opportunities to learn to speak, understand, read, and write languages other than their own, and to advance communication with different cultures through study of their literature and art, history, and experiences of themselves as a part of humanity. To this end, our instructors incorporate innovative technology and teaching methods that enhance interpersonal communication skills while promoting in-depth knowledge of the diverse peoples of our global community.

Statement of Purpose
Language study is an indispensable step toward understanding our world’s complexity and constitutes an irreplaceable part of a humanities education. It offers opportunities and perspectives unavailable to those limited to one language while providing a basis for mutual knowledge and respect among individuals and nations. Language study builds skills essential to successfully facilitating a multitude of human interactions graduates will encounter in every field of study and professional life.

Accreditation
The foreign language teaching licensure programs in French, German and Spanish are approved by the state of Ohio. The Teacher Education Program is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Majors, Minors and Degrees Offered
French Major (BA)
German Major (BA)
Spanish Major (BA)
French Minor
German Minor
Spanish Minor

Licensure Offered
Multi-age (PK-12) Foreign Language: French Licensure
Multi-age (PK-12) Foreign Language: German Licensure
Multi-age (PK-12) Foreign Language: Spanish Licensure

Admission Requirements
Students pursuing teacher licensure must request acceptance into the Center for Teacher Education. For specific requirements, refer to the ONU Department of Education.

Special Programs

Study Abroad
As a member of several study-abroad organizations, Ohio Northern University offers students the opportunity to study and complete internships in a large number of countries in Europe, Latin America, Africa, and Asia. While abroad for a summer, one, or two semesters, students earn ONU credit and greatly enhance their linguistic and cultural expertise. These programs are a basis for the capstone experience required of all Modern Languages majors.


### Fulfillment of BA Degree Requirements

Students pursuing a BA degree must demonstrate at least first-year proficiency in a foreign language. To do so, students must complete at least an Elementary 2 modern language course. However, students receive additional credit by starting at a higher level and earning at least a ‘C’ (see chart below). To determine entry into the appropriate course level, students may complete a placement test and consult with faculty in the Modern Languages Department. The department strongly recommends that students begin foreign language study during their first year.

<table>
<thead>
<tr>
<th>Courses offered</th>
<th>Credit hours</th>
<th>Start here and earn at least a ‘C’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1011 Elementary 1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1021 Elementary 2</td>
<td>3</td>
<td>Receive credit for this course, plus 3 more hours (for 1011)</td>
</tr>
<tr>
<td>2011 Intermediate 1</td>
<td>3</td>
<td>Receive credit for this course, plus 6 more hours (for 1011 and 1021)</td>
</tr>
<tr>
<td>2021 Intermediate 2</td>
<td>3</td>
<td>Receive credit for this course, plus 9 more hours (for 1011, 1021, and 2011)</td>
</tr>
<tr>
<td>3011 or 3021 Advanced</td>
<td>3</td>
<td>Receive credit for this course, plus 12 more hours (for 1011, 1021, 2011, and 2021)</td>
</tr>
</tbody>
</table>

### Major Course Requirements

Students are encouraged to take a placement test and enroll at the level at which they feel comfortable. Placement credit will be awarded for 1000- or 2000-level courses upon successful completion of coursework at a higher level. All required courses in major subject area must be completed with a grade of ‘C’ or higher. Courses taken through study abroad may be substituted with departmental approval.

**French Major** (37 credit hours)
- FREN 1011 Elementary French 1 (3)
- FREN 1021 Elementary French 2 (3)
- FREN 2011 Intermediate French 1 (3)
- FREN 2021 Intermediate French 2 (3)
- FREN 3011 Introduction to French Literature (3)
- FREN 3021 Advanced: French Speaking (3)
- FREN 3031 Advanced: French Writing (3)
- FREN 4501 Capstone (1)

Select five courses (15 credit hours):
- FREN 3041 Cultural History of France 1 (3)
- FREN 3051 Cultural History of France 2 (3)
- FREN 3081 Francophone Cultures (3)
- FREN 4001 Special Topics (3)
- FREN 4011 French Novel 1 (3)
- FREN 4021 French Novel 2 (3)
- FREN 4031 French Theatre (3)
- FREN 4101 French Poetry and Song (3)
- FREN 4201 French Film (3)
- FREN 4301 Francophone Literature (3)
- FREN 4401 Modern French Musical (3)

**French Major with Teacher Licensure** (90 credit hours) The 90 credit hours includes the 37 credit hours required for the major plus the 53 additional credit hours required for the licensure. Study abroad is required. See the ONU Department of Education for details about this licensure.
- FREN 3xx1-4xx1 French elective (3)
- FREN 3xx1-4xx1 French elective (3)
- FREN 3xx1-4xx1 French elective (3)

**Required education courses**
- EDUC 1151 Culture and Schooling (3)
- EDUC 1501 Five-Day Field Experience I (1)
- EDUC 1521 Five-Day Field Experience II (1)
- EDUC 2101 Exceptional Learners (3)
- EDUC 2681 Curriculum and Assessment (3)
- EDUC 3201 Instructional Media and Educational Technologies (3)
- EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
- EDUC 4401 Educational Psychology and Instructional Practices (3)
- EDUC 4451 Leadership Seminar in Education (3)
- EDUC 4561 Integrated Modern Languages Methods (3)
- EDUC 4701 Student Teaching – EC/MC (6)
- EDUC 4721 Student Teaching – AYA (6)

**Required general education courses**
- CACS 2151 Communication in the Classroom (3)
- PSYC 2171 Adolescent Psychology (3)

**German Major** (34 credit hours)
- GERM 1011 Elementary German 1 (3)
- GERM 1021 Elementary German 2 (3)
- GERM 2011 Intermediate German 1 (3)
- GERM 2021 Intermediate German 2 (3)
- GERM 3011 German Language Studies (3)
- GERM 3021 Using German (3)
- GERM 3111 Culture of German-Speaking Europe (3)
- GERM 3121 Studies in German Literature (3)
- GERM 4501 Capstone (1)
- OVRC xxxx Study Abroad (9)

**German Major with Teacher Licensure** (87 credit hours) The 87 credit hours includes the 34 credit hours required for the major plus the 53 additional credit hours required for the licensure. See the Department of Education for details about this licensure.
- GERM 3xx1-4xx1 German elective (3)
- GERM 3xx1-4xx1 German elective (3)
- GERM 3xx1-4xx1 German elective (3)

**Required education courses**
- EDUC 1151 Culture and Schooling (3)
- EDUC 1501 Five-Day Field Experience I (1)
- EDUC 1521 Five-Day Field Experience II (1)
- EDUC 2101 Exceptional Learners (3)
- EDUC 2681 Curriculum and Assessment (3)
- EDUC 3201 Instructional Media and Educational Technologies (3)
- EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
- EDUC 4451 Leadership Seminar in Education (3)
- EDUC 4561 Integrated Modern Languages Methods (3)
- EDUC 4701 Student Teaching – EC/MC (6)
- EDUC 4721 Student Teaching – AYA (6)

**Required general education courses**
- CACS 2151 Communication in the Classroom (3)
- PSYC 2171 Adolescent Psychology (3)

**Spanish Major** (37 credit hours)
- SPAN 1011 Elementary Spanish 1 (3)
- SPAN 1021 Elementary Spanish 2 (3)
- SPAN 2011 Intermediate Spanish 1 (3)
- SPAN 2021 Intermediate Spanish 2 (3)
- SPAN 3011 Spanish Conversation (3)
- SPAN 3021 Spanish Composition (3)
- SPAN 3041 Introduction to Spanish Literature (3)
- SPAN 4501 Capstone (1)

Select five courses (15 credit hours):
- SPAN 3xx1-4xx1 Spanish elective (3)
- SPAN 3xx1-4xx1 Spanish elective (3)
- SPAN 3xx1-4xx1 Spanish elective (3)

**Required education courses**
- EDUC 1151 Culture and Schooling (3)
- EDUC 1501 Five-Day Field Experience I (1)
- EDUC 1521 Five-Day Field Experience II (1)
- EDUC 2101 Exceptional Learners (3)
- EDUC 2681 Curriculum and Assessment (3)
- EDUC 3201 Instructional Media and Educational Technologies (3)
- EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
- EDUC 4451 Leadership Seminar in Education (3)
- EDUC 4561 Integrated Modern Languages Methods (3)
- EDUC 4701 Student Teaching – EC/MC (6)
- EDUC 4721 Student Teaching – AYA (6)

**Required general education courses**
- CACS 2151 Communication in the Classroom (3)
- PSYC 2171 Adolescent Psychology (3)
Spanish Major with Teacher Licensure (90 credit hours) The 90 credit hours includes the 37 credit hours required for the major plus the 53 additional credit hours required for the licensure. Study abroad is required. See the ONU Department of Education for details about this licensure.

SPAN 3xx1-4xx1 Spanish elective (3)
SPAN 3xx1-4xx1 Spanish elective (3)
SPAN 3xx1-4xx1 Spanish elective (3)

Required education courses
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience I (1)
EDUC 1521 Five-Day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4561 Integrated Modern Languages Methods (3)
EDUC 4701 Student Teaching – EC/MC (6)
EDUC 4721 Student Teaching – AYA (6)

Required general education courses
CACS 2151 Communication in the Classroom (3)
PSYC 2171 Adolescent Psychology (3)

Minor Course Requirements
Students are encouraged to take a placement test and enroll at the level at which they feel comfortable. Placement credit will be awarded for 1001- or 2001-level courses upon successful completion of coursework at a higher level. All required courses in major subject area must be completed with a grade of ‘C’ or higher. Courses taken through study abroad may be substituted with departmental approval.

French Minor (24 credit hours)
FREN 1011 Elementary French 1 (3)
FREN 1021 Elementary French 2 (3)
FREN 2011 Intermediate French 1 (3)
FREN 2021 Intermediate French 2 (3)
FREN 3011 Introduction to French Literature (3)
FREN 3021 Advanced: French Speaking (3)
FREN 3031 Advanced: French Writing (3)
FREN 3xx1 French elective (3)

German Minor (21 credit hours)
GERM 1011 Elementary German 1 (3)
GERM 1021 Elementary German 2 (3)
GERM 2011 Intermediate German 1 (3)
GERM 2021 Intermediate German 2 (3)
GERM 3011 German Language Studies (3)
GERM 3021 Using German (3)
GERM 3111 Culture of German-Speaking Europe (3)
GERM 3121 Studies in German Literature (3)

Spanish Minor (24 credit hours)
SPAN 1011 Elementary Spanish 1 (3)
SPAN 1021 Elementary Spanish 2 (3)
SPAN 2011 Intermediate Spanish 1 (3)
SPAN 2021 Intermediate Spanish 2 (3)
SPAN 3011 Spanish Conversation (3)
SPAN 3021 Spanish Composition (3)
SPAN 3xx1 Spanish elective (3)
SPAN 3xx1 Spanish elective (3)

Subject - Arabic (ARAB)

1011 - Elementary Arabic 1
3 Credits
This course assumes no previous study of Arabic. The course will introduce the alphabet and sound system of Arabic and will assist in developing some basic reading, writing, speaking and listening skills. The course will deal mainly with Modern Standard Arabic which is the formal language spoken in the Arab world. Some dialectal variations of Arabic will also be introduced when necessary.

1021 - Elementary Arabic 2
3 Credits
This course will reinforce material learned and practiced in Elementary Arabic 1 and help promote development of Arabic language abilities. This course will devote special attention to Arabic grammar and vocabulary to assist with developing an intermediate level of language accuracy. The course will deal mainly with Modern Standard Arabic, which is the formal language spoken in the Arab world. Some direct attention will be given to the different Arab dialects. Prerequisite(s): ARAB 1011.

2011 – Intermediate Arabic 1
3 Credits
Continued development of Arabic language abilities. Prerequisite(s): ARAB 1021.

2021 – Intermediate Arabic 2
3 Credits
Continuation of ARAB 2021. Prerequisite(s): ARAB 2011.

Subject - Chinese (CHNS)

1011 - Elementary Chinese 1
3 Credits
Introduction to basic conversational Mandarin, familiarity with the foundations of the Chinese writing system.

1021 - Elementary Chinese 2
3 Credits
Continuation of CHIN 1011. Prerequisite(s): CHIN 1011.

2011 - Intermediate Chinese 1
3 Credits
Further building of listening and speaking skills. Continued addition of traditional and simplified characters, reading and composition practice. Prerequisite(s): CHIN 2011.

2021 - Intermediate Chinese 2
3 Credits
Continuation of CHIN 2011. Prerequisite(s): CHIN 2011.

Subject - French (FREN)

1011 - Elementary French 1
3 Credits
Basic proficiency in understanding, speaking, reading and writing French in everyday situations. Emphasis on comprehension and oral expression. Digitized and Internet realia illustrate contemporary French and francophone cultural values.

1021 - Elementary French 2
3 Credits
Continuation of FREN 1021. Prerequisite(s): FREN 1011.
2011 - Intermediate French 1
3 Credits
Continued development of proficiency in understanding, speaking, reading and writing French. Emphasis on high-frequency vocabulary and grammatical structures. Increased exposure to and discussion of contemporary French and francophone cultural values. Prerequisite(s): FREN 1021

2021 - Intermediate French 2
3 Credits
Continuation of FREN 2011. Prerequisite(s): FREN 2011.

3011 - Introduction to French Literature
3 Credits
Basic principles of analyzing and appreciating major works in French, poetry, prose, and theater. Reading, discussion of, and written reflection on representative French and francophone texts. Prerequisite(s): FREN 2021.

3021 - Advanced French: Speaking
3 Credits
Intensive practice of oral communication in conversations, role-playing, and oral interviews within French and francophone cultural contexts. Emphasis on developing fluidity and accurate pronunciation. Prerequisite(s): FREN 2021.

3031 - Advanced French: Writing
3 Credits
Intensive practice of writing in various contexts, such as correspondence, research, and creative narrative. Topics based on French-speaking societies and cultures. Prerequisite(s): FREN 2021.

3041 - Cultural History of France 1
3 Credits
Discussion in French of French history, art, architecture, and cultural institutions from their origins to the Fifth Republic. Prerequisite(s): FREN 3021 and FREN 3031.

3051 - Cultural History of France 2
3 Credits
Discussion in French of French culture with emphasis on the family, education, employment, politics, technology and cultural institutions from the Fifth Republic to the present. Prerequisite(s): FREN 3021 and FREN 3031.

3061 - Francophone Cultures
3 Credits
Discussion in French of francophone cultures, including Quebec, the Caribbean, the Maghreb, and sub-Saharan Africa, in terms of historical perspectives and contemporary concerns. Prerequisite(s): FREN 3021 and FREN 3031.

4001 - Special Topics
3 Credits
May be repeated as topic varies. Prerequisite(s): FREN 3021 and FREN 3031.

4011 - French Novel 1
3 Credits
Reading, discussion of, and written reflection on representative French novels in their historical and cultural contexts from the 16th century to the Revolution. Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4021 - French Novel 2
3 Credits
Reading, discussion of, and written reflection on representative French and francophone novels in their historical and cultural contexts from the Revolution through the 21st century. Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4031 - French Theatre
3 Credits
Reading and discussion in French of representative works from the 17th century to the present. Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4101 - French Poetry and Song
3 Credits
Discussion and analysis in French of representative French and francophone works in their historical and cultural contexts. Rules of French versification. Interpretations of poetry into song. Classic and contemporary 'chansonniers.' Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4201 - French Film
3 Credits
Viewing, discussion, and analysis in French of representative French and francophone films, directors, and actors. Prerequisite(s): FREN 3021 and FREN 3031.

4301 - Francophone Literature
3 Credits
Reading and discussion in French of works by contemporary writers in francophone countries including Quebec, the Caribbean, the Maghreb, and sub-Saharan Africa. Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4401 - Modern French Musical
3 Credits
Oral and written analysis of visual, auditory, and lyrical elements of musical theatre as text. Opportunities to enrich and enhance literary analytical skills in a multimedia environment while improving linguistic competencies and cultural knowledge. Prerequisite(s): FREN 3011 and FREN 3021 and FREN 3031.

4501 - Capstone
1 Credit
Written or other presentational record of study abroad experience. Alternative; extensive research paper in French evaluated by department faculty.

4901 - Independent Study in French
1 to 3 Credits
For advanced students only: departmental permission required.

Subject - German (GRMN)

1011 - Elementary German 1
3 Credits
For beginners, introduction to basic characteristics of German. Builds on a foundation of vocabulary acquisition through listening and reading comprehension. Basic elements of speaking. Use of texts, stories, audio/visual materials.

1021 - Elementary German 2
3 Credits
Continuation of GERM 1011. Prerequisite(s): GERM 1011.

2011 - Intermediate German 1
3 Credits
Vocabulary building through listening and reading. Greater focus on writing and speaking practice with attention paid to high-frequency grammatical elements. Use of texts, stories, video and audio materials. Prerequisite(s): GERM 1021.

2021 - Intermediate German 2
3 Credits
Continuation of GERM 2011. Prerequisite(s): GERM 2011.
3011 - German Language Studies  
3 Credits  
Intensive overview of German grammatical structures. Emphasis on reading of more complex texts; vocabulary acquisition; training in composition. Prerequisite(s): GERM 2021.

3021 - Using German  
3 Credits  
Intensive practice of listening, reading and speaking skills. Some writing. Use of authentic materials. Prerequisite(s): GERM 2021.

3111 - Culture of German-Speaking Europe  
3 Credits  
A look at the roles played by political, social and cultural forces in Germany, Austria and Switzerland from the Middle Ages until the present. Readings and discussion in German, written composition. Prerequisite(s): GERM 2021.

3121 - Studies in German Literature  
3 Credits  
Readings and discussion in German of drama, poetry short stories and the Novelle from the 19th century to the present. Prerequisite(s): GERM 2021.

4501 - Capstone  
1 Credit  
Written or other presentational record of study abroad experience. Alternative: extensive research paper in German, evaluated by department faculty.

4901 - Independent Study in German  
1 to 3 Credits  
For advanced students only; departmental permission required.

Subject - Japanese (JAPN)  
1011 - Elementary Japanese 1  
3 Credits  
For beginners. Basic listening and speaking skills; introduction to the Japanese writing system.

1021 - Elementary Japanese 2  
3 Credits  
Continuation of JAPN 1011. Prerequisite(s): JAPN 1011.

2011 - Intermediate Japanese 1  
3 Credits  
Builds upon basic skills through listening and speaking exercises. Further work with Japanese writing system and development of reading and writing skills. Prerequisite(s): JAPN 1021.

2022 - Intermediate Japanese 2  
3 Credits  
Continuation of JAPN 2011. Prerequisite(s): JAPN 2011.

Subject - Modern Languages (MLNG)  
1901 - Individualized Language Study  
1 to 3 Credits  
Study of a modern spoken language other than those regularly offered. Limited to motivated students with a particular interest or need. Offerings depend on instructor availability. Does not meet any requirements. Departmental permission required.

Subject - Russian (RUSS)  
1011 - Elementary Russian 1  
3 Credits  
For beginners, introduction to basic characteristics of Russian and the Cyrillic alphabet. Builds foundation of listening and reading comprehension. Use of texts, stories, audio/visual materials. Offered alternate fall semesters.

1021 - Elementary Russian 2  
3 Credits  
Continuation of RUSS 1011. Offered alternate spring semesters. Prerequisite(s): RUSS 1011.

2901 - Independent Study in Russian  
1 to 3 Credits  
Departmental permission required.

Subject - Spanish (SPAN)  
1011 - Elementary Spanish 1  
3 Credits  
Basic proficiency in understanding, speaking, reading and writing Spanish with emphasis on listening, speaking, and pronunciation. Designed for students who have no previous exposure to the language. Verbal and written expression is limited to short, culturally appropriate communication. Students will acquire a panoramic knowledge of the regions and societies where Spanish is spoken and learn about Spanish-speaking communities in the United States.

1021 - Elementary Spanish 2  
3 Credits  
Continuation of SPAN 1011. Prerequisite(s): SPAN 1011.

2011 - Intermediate Spanish 1  
3 Credits  
Continued development of proficiency in understanding, speaking, reading and writing Spanish with emphasis on pronunciation and speaking. Designed for students who have completed the Elementary level or have previous exposure to Spanish. Acquisition of language skills and practice identifying ideas in written texts. Written expression with more incorporation of vocabulary as well as grammar structures compared to the Elementary level. Prerequisite(s): SPAN 2011.

2021 - Intermediate Spanish 2  
3 Credits  
Continuation of SPAN 2011. Prerequisite(s): SPAN 2011.

3011 - Spanish Conversation  
3 Credits  
Strengthening Spanish communication skills by regular guided oral practice. Building vocabulary, written exercises, and improving comprehension by listening to live speech, videos, audio recordings, and films. Prerequisite(s): SPAN 2021.

3021 - Spanish Composition  
3 Credits  
Improvement of written communication skills. Emphasis on task-oriented writing in Spanish, including composing and editing several drafts. Topics based on Spanish speaking societies and cultures. Prerequisite(s): SPAN 2021.

3041 - Introduction to Spanish Literature  
3 Credits  
Discussion in Spanish of critical principles in the assessment of prose, fiction, poetry and drama as applied to selected readings in Spanish and Latin American literature. Prerequisite(s) (may be taken concurrently): SPAN 3011 and SPAN 3021.
3101 - Spanish Film  
3 Credits  
Discussion in Spanish of historical development of Spanish cinema through significant directors, such as Buñuel, Saura, Almodóvar. Prerequisite(s): SPAN 3011 and SPAN 3021.

3111 - Spanish Civilization  
3 Credits  
Discussion in Spanish of geographical, political, economic, social and cultural forces in Spain from prehistoric times to the present. Prerequisite(s): SPAN 3011 and SPAN 3021.

3121 - Spanish Art, Music, Dance  
3 Credits  
Discussion in Spanish of Spanish art, architecture, music and dance from prehistoric times to the present. Prerequisite(s): SPAN 3011 and SPAN 3021.

3201 - Latin American Film  
3 Credits  
Viewing and analysis in Spanish of contemporary Latin American film, with emphasis on understanding the film industry and how films relate to social and political contexts. Prerequisite(s): SPAN 3011 and SPAN 3021.

3211 - Latin American Civilization  
3 Credits  
Discussion in Spanish of geography, history and culture of Latin America from Mesoamerica to the present. Prerequisite(s): SPAN 3011 and SPAN 3021.

3221 - Latin American Art, Music, Dance  
3 Credits  
Discussion in Spanish of Latin American art, architecture, music and dance from Mesoamerica to the present. Prerequisite(s): SPAN 3011 and SPAN 3021.

3301 - Business Spanish  
3 Credits  
Development of oral and written proficiency of Spanish within a business context. Business vocabulary, readings, business and cultural concepts, situational practice and case studies. Prerequisite(s): SPAN 3011 and SPAN 3021.

3311 - Contemporary Hispanic Culture  
3 Credits  
Comparative study in Spanish of socio-cultural attitudes, popular/folk traditions and lifestyles within Hispanic communities. Prerequisite(s): SPAN 3011 and SPAN 3021.

4001 - Special Topics  
3 Credits  
May be repeated as topic varies. Prerequisite(s): SPAN 3011 and SPAN 3021.

4111 - Medieval and Golden Age Spanish Literature  
3 Credits  
Discussion in Spanish of poetry, prose and drama from the origins of the Spanish language to 1681. Works may include selections from the epic of Mio Cid, El libro de buen amor, Don Quijote, Lope de Vega, Quevedo. Prerequisite(s): SPAN 3011 and SPAN 3021 and SPAN 3041.

4121 - 18th and 19th Century Spanish Literature  
3 Credits  
Discussion in Spanish of principles and works of Neoclassicism, Romanticism, Realism, the Generation of 1898. Works may include Don Juan Tenorio, narrative by Benito Pérez Galdós and Emilia Pardo Bazán, poetry by Antonio Machado. Prerequisite(s): SPAN 3011 and SPAN 3021 and SPAN 3041.

4131 - 20th and 21st Century Spanish Literature  
3 Credits  
Discussion in Spanish of modern poetry from the Generation of 1927, tremendismo, the post-Franco reaction, contemporary trends. Works may include selections from Federico García Lorca, Nobel Prize winner Camilo José Cela, Antonio Muñoz Molina. Prerequisite(s): SPAN 3011 and SPAN 3021 and SPAN 3041.

4211 - Colonial and 19th Century Latin American Literature  
3 Credits  
Reading, discussion, and analysis in Spanish of Romanticism, Realism, and Modernism in representative works by Latin American authors. Prerequisite(s): SPAN 3011 and SPAN 3021 and SPAN 3041.

4221 - 20th and 21st Century Latin American Literature  
3 Credits  
Reading and discussion in Spanish of works by contemporary writers in Latin American countries. Prerequisite(s): SPAN 3011 and SPAN 3021 and SPAN 3041.

4501 - Capstone  
1 Credit  
Written or other presentational record of study abroad experience; alternative: extensive research paper in Spanish, evaluated by department faculty.

4901 - Independent Study in Spanish  
1 to 3 Credits  
For advanced students only. Departmental permission required.

DEPARTMENT OF MUSIC

Professors C. Bates, D’Arca, T. Hunt (Chair); Associate Professor Casey; Assistant Professor Kosmyina, S. Waters; Visiting Assistant Professor Aylig; Resident Artists Butler, Osbun-Manley; Lecturers Aebker, Altstaetter, L. Ashmore, P. Ashmore, Carpinteyro-Lara, Damschroder, Eichelberger, Goare, Graber, Klaas, Laukhuf, McCord, Olt, Parker, Simioanca, Sommer, Szabo, Weiler

Mission Statement

In keeping with the university and college mission statements, the Music Department strives to develop the higher values of beauty and goodness through the art of music. The Department of Music seeks to fully develop highly capable music majors to be leaders in tomorrow’s cultural landscape—as music educators, performers, scholars and advocates—while actively serving the greater whole of the university’s mission by providing its general student body with significant applied and academic opportunities in music.

Accreditation

The Music Department is accredited by the National Association of Schools of Music.

Majors, Minors and Degrees Offered

Music Performance Major (BM)  
Music Education Major (BM)  
Music Major/Applied Studies Concentration (BA)  
Music Major/Music History and Literature Concentration (BA)  
Music Major/Music Theory and Composition Concentration (BA)  
Music Minor

Licensure Offered

Multi-age (PK-12) Music Licensure

Admission Requirements

Auditions are required of all new students (freshman or transfer) who wish to declare a major in music. The audition process also serves to determine scholarship consideration. All audition information is available on the music admissions webpage.

Music Education majors must meet the requirements of the Center for Teacher Education’s professional education program for Music (PK-12) licensure.
Special Programs

Study Abroad

Music majors frequently take advantage of study-abroad opportunities offered through the university, including student teaching. A special relationship exists between ONU and the Estonian Academy of Music.

Major Course Requirements

All required courses in major subject area must be completed with a grade of ‘C’ or higher. All required courses outside of the major subject area must be completed with a grade of ‘D’ or higher.

Bachelor of Music with a Major in Performance (86 credit hours)

MUSC 4291
MUSC 3281
MUSC 2341
MUSE 1251
MUSC 2351
MUSE 1251
MUSC 3331
MUSC 2331
MUSC 1331

Complete 3 credit hours from one of the following groups:

MUSL 4221
MUSL 3221
MUSL 3211
MUSL 2221
MUSL 2211
MUSL 1211

Complete 20 credit hours:

MUSE 1051
MUSE 1041
MUSE 1031
MUSE 1021
MUSE 1011
MUSE 0011

Complete 8 credit hours:

MUSL 1391 First Year Applied Proficiency Exam (0)
MUSL 2041 Piano Proficiency Exam (0)
MUSC 3221 Music History and Literature I (3)
MUSC 3211 Music History and Literature II (3)
MUSL 4311 Senior Recital (1)
MUSC 4111 Analytical Techniques (2)
MUSC 4171 Instrumentation and Arranging (2)
MUSC 3221 Music History and Literature II (3)
MUSC 3211 Second Year Applied Proficiency Exam (0)

Complete 14 credit hours:

MUSL 2391 Second Year Applied Proficiency Exam (0)
MUSL 2401 Foundations of Music Education (1)
MUSC 2411 Woodwind Methods (1)
MUSC 2421 Brass Methods (1)
MUSC 2431 String Methods (1)
MUSC 2441 Percussion Methods (1)
MUSC 3221 Music History and Literature II (3)
MUSC 3211 Music History and Literature I (3)
MUSC 3301 Half Recital (0)
MUSC 3471 Technology for Music Educators (2)
MUSC 4417 Instrumentation and Arranging (2)
MUSC 4481 Instrumental Music Methods (3)
MUSC 4491 Choral Music Methods (3)

Complete 7 credit hours:

MUSC 3311 Choral Conducting (2)
MUSC 3321 Instrumental Conducting (2)

MUSC 3311
MUSC 3321

Complete one:

MLNG xxx1 Modern Language I (3)
MLNG xxx1 Modern Language II (3)

Other required courses:

Bachelor of Music with a Major in Music Education (106 credit hours)

Successful completion of the Praxis I examination is required for study beyond the fourth semester. The Praxis II area examination and the Piano Proficiency Exam (MUSL 2041) must be passed prior to student teaching.

MUSC 4011 Concert and Recital Attendance (0)
MUSC 1011 Introduction to the Study of Music (2)
MUSC 1021 Technology for Musicians (1)
MUSC 1111 Music Theory I (3)
MUSC 1121 Music Theory II (3)
MUSC 1131 Aural Skills I (1)
MUSC 1141 Aural Skills II (1)
MUSL 1211 Basic Conducting (2)

Complete 20 credit hours:

MUSC 1211 Applied Lessons (2)
MUSC 1221 Applied Lessons (2)
MUSC 2211 Applied Lessons (2)
MUSC 2221 Applied Lessons (2)
MUSC 3211 Applied Lessons (3)
MUSC 3221 Applied Lessons (3)
MUSC 4211 Applied Lessons (3)
MUSC 4221 Applied Lessons (3)

Complete 8 credit hours:

MUSC 1331 Singers Diction I (1)
MUSC 2331 Singers Diction II (1)
MUSC 3331 Singers Diction III (1)
or
MUSC 1251 Chamber Music (3)
or
MUSC 2351 Piano Pedagogy (2)
MUSC 1251 Chamber Music (1)

Complete 2 credit hours from one of the following groups:

MUSC 2341 Survey of Piano Literature (2)
or
MUSC 3271 Survey of Vocal Literature I (1)
MUSC 3281 Survey of Vocal Literature II (1)
or
MUSC 4291 Applied Field Literature and Pedagogy for Instrumentalists (2)

Complete one:

MUSC 1331 Singer’s Diction I (1)
MUSL 0401 Voice Class (1)

Complete one:

MUSC 3311 Choral Conducting (2)
MUSC 3321 Instrumental Conducting (2)

Complete 2 credit hours:

MUSC 3461 Methods of Marching and Jazz Bands (2)
MUSC 2331 Singer’s Diction II (1)
MUSC 3331 Singer’s Diction III (1)
Required education courses
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience 1 (1)
EDUC 1521 Five-Day Field Experience 2 (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4591 Integrated Music Methods (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4701 Student Teaching/EC/MC (6)
EDUC 4721 Student Teaching/AYA (6)

Other required courses
ENGL 1221 or ENGL 1231 Writing Seminar (3)
CACS 2151 Classroom Communication (3)
PSYC 2151

Bachelor of Arts with a Major in Music (53 credit hours)
Students pursuing the Bachelor of Arts degree with a major in music must either complete the minor in arts administration offered through the Communication and Theatre Arts Department or one of the three concentrations: applied studies, music history and literature, or music theory and composition. The 53 credit hours listed below include the 33 credit hours in common to all music majors, plus the 18-20 credit hours required for the concentration.

MUSC 0011 Concert and Recital Observation (0)
MUSC 1011 Introduction to the Study of Music (2)
MUSC 1021 Technology for Musicians (1)
MUSC 1111 Music Theory I (3)
MUSC 1121 Music Theory II (3)
MUSC 1131 Aural Skills I (1)
MUSC 1141 Aural Skills II (1)
MUSL 1211 Applied Lessons (2)
MUSL 1221 Applied Lessons (2)
MUSL 1391 1st Year Applied Proficiency Exam (0)
MUSL 2041 Piano Proficiency Exam (0)
MUSC 2201 Non-Western Music (3)
MUSL 2211 Applied Lessons (2)
MUSL 2221 Applied Lessons (2)
MUSL 2391 2nd Year Applied Proficiency Exam (0)
MUSC 3211 Music History and Literature I (3)
MUSC 3221 Music History and Literature II (3)
MUSC 2311 Basic Conducting (2)
MUSC 4601 Senior Research Project (3)

Applied Studies Concentration (18 credit hours)
MUSC 2111 Music Theory III (3)
MUSC 2121 Music Theory IV (3)
MUSC 2131 Aural Skills III (1)
MUSC 2141 Aural Skills IV (1)
MUSL 3211 Applied Lessons (2)
MUSL 3221 Applied Lessons (2)
MUSL 4211 Applied Lessons (2)
MUSL 4221 Applied Lessons (2)
MUSE 1251 Chamber Music (2)

Music History and Literature Concentration (20 credit hours)
MUSC 2111 Music Theory III (3)
MUSC 2121 Music Theory IV (3)
MUSC 2131 Aural Skills III (1)
MUSC 2141 Aural Skills IV (1)
MUSC 3231 Jazz History and Literature (3)
MUSC 3241 American Music (3)
MUSC 3251 African Music (3)
MUSC 4911 Independent Study (3)

Music Theory and Composition Concentration (20 credit hours)
MUSC 2111 Music Theory III (3)
MUSC 2121 Music Theory IV (3)
MUSC 2131 Aural Skills III (1)

MUSC 2141 Aural Skills IV (1)
MUSC 3151 Composition (6)
MUSC 4111 Analytical Techniques (2)
MUSC 4161 Electronic Music (2)
MUSC 4171 Instrumentation and Arranging (2)

Minor Course Requirements
All courses required for a minor must be completed with a grade of 'C' or higher.

Music Minor (20-21 credit hours)
MUSL 0011 Applied Lessons (2)
MUSC 1111 Music Theory I (3)
MUSC 1121 Music Theory II (3)
MUSC 1131 Aural Skills I (1)
MUSC 1141 Aural Skills II (1)
MUSL xxx1 Electives (3)

Complete one:
MUSC 1001 Music Appreciation (3)
MUSC 1011 Introduction to the Study of Music (2)

Complete 2 credit hours:
MUSE 1011 University Singers (1)
MUSE 1021 Symphony Orchestra (1)
MUSE 1031 Wind Orchestra (1)
MUSE 1041 Symphonic Band (1)
MUSE 1051 Marching Band (1)

Subject - Music (MUSC)

0011 - Concert and Recital Observation
0 Credits
Required number of concerts and recitals to be attended each semester, including some events with mandatory attendance. Student must receive credit in six semesters to graduate. Limited to music majors. Graded S/U. Zero Credit. Offered fall and spring semesters.

1001 - Music Appreciation
3 Credits
Music and its basic elements, including culture, forms, styles and media associated with a variety of music. Emphasis on listening and understanding historical periods and respective stylistic characteristics. Includes concert attendance, knowledge of music fundamentals, instruments, composers and representative literature. Not available to music majors. Offered fall and spring semesters.

1011 - Introduction to Study of Music
2 Credits
All aspects of the music major, including the development of a four-year plan for graduation that fulfills NASM competencies and ONU catalog requirements for each degree program. Includes survey of western art music with emphasis on musical terms, styles, composers and representative literature. Limited to music majors and/or minors. Offered fall semester.

1021 - Technology for Musicians
1 Credit
The use of technology in the music professions. Emphasis on MIDI sequencing, music notation, and digital audio recording. Limited to music majors and minors. Offered fall and spring semesters.

1031 - Fundamentals of Music
3 Credits
Note names, clefs, scales, triads, inversions, intervals, key signatures. Offered summers.
1041 - Fundamentals of Music for Musical Theatre Majors
3 Credits
Reading and writing musical notation including rhythms, note names, scales, chords, intervals, and interpretation. Offered fall semester.

1051 - Musicianship for the Musical Theatre
3 Credits
Functional harmony and form analysis applied to musical theatre repertoire. Includes advanced sight-singing and techniques for notating melody and harmony. Offered spring semester. Prerequisite(s): MUSC 1041 Minimum Grade of C.

1111 - Music Theory I
3 Credits
Foundational music theory and harmony including analysis, part-writing, and creative projects in composition and arranging. Limited to music majors and/or minors. Formerly part of the first-year music theory sequence MUSC 121, 122 and 123. Offered fall semester. Corequisite(s): MUSC 1131.

1121 - Music Theory II
3 Credits
Continuation of MUSC 1111. Formerly part of the first-year music theory sequence MUSC 121, 122 and 123. Offered spring semester. Prerequisite(s): MUSC 1111 Minimum Grade of C. Corequisite(s): MUSC 1141.

1131 - Aural Skills I
1 Credit
Introduction to singing; melodic, rhythmic, and harmonic dictation; and keyboard skills. Includes basic counting exercises, conducting patterns, and coordination exercises to train basic musicianship skills in a skills/performance-based environment. Formerly part of the first-year sight-singing sequence MUSC 131, 132 and 133. Offered fall semester. Corequisite(s): MUSC 1111.

1141 - Aural Skills II
1 Credit
Continuation of MUSC 1211. Formerly part of the first-year sight-singing sequence MUSC 131, 132 and 133. Offered spring semester. Prerequisite(s): MUSC 1131 Minimum Grade of C. Corequisite(s): MUSC 1141.

1331 - Singers Diction I
1 Credit
The proper pronunciation of vocal and choral texts in Italian and Latin. Introduction of the International Phonetic Alphabet as it applies to all languages. Offered fall semester.

1901 - Special Topics
1 to 3 Credits
Topics include, but are not limited to special areas in music theory, music history, and/or music education. Permission of department and instructor. May be repeated as topics vary. Variable credit. Offered on demand.

2111 - Music Theory III
3 Credits
Continuation of MUSC 1121. The study of 18th, 19th and 20th century compositional techniques, orchestration and counterpoint. Includes development of analytical skills. Formerly part of the second-year music theory sequence MUSC 221, 222 and 223. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C. Corequisite(s): MUSC 2131.

2121 - Music Theory IV
3 Credits
Continuation of MUSC 2111. Three credits. Formerly part of the second-year music theory sequence MUSC 221, 222 and 223. Offered spring semester. Prerequisite(s): MUSC 2111 Minimum Grade of C. Corequisite(s): MUSC 2141.

2131 - Aural Skills III
1 Credit
Continuation of MUSC 1141. Advanced sight-singing; melodic, rhythmic, and harmonic dictation; and keyboard basic skills. Includes advanced counting exercises, conducting patterns, and coordination exercises to train advanced musicianship skills in a skills/performance based environment. Formerly part of the second-year sight-singing sequence MUSC 131, 132 and 133. Offered fall semester. Prerequisite(s): MUSC 1141 Minimum Grade of C. Corequisite(s): MUSC 2111.

2141 - Aural Skills IV
1 Credit
Continuation for MUSC 2131. Formerly part of the second-year sight-singing sequence MUSC 131, 132 and 133. Offered spring semester. Prerequisite(s): MUSC 2131 Minimum Grade of C. Corequisite(s): MUSC 2121.

2201 - Non-Western Music
3 Credits
The fundamental concepts of music in any culture with an in-depth exploration of the music of a limited number of non-Western groups. Emphasis on listening and understanding. Offered spring semester. Prerequisite(s): MUSC 1121 Minimum Grade of C.

2311 - Basic Conducting
2 Credits
Basic baton technique applied to choral and instrumental conducting practices. Includes score reading and rehearsal techniques for various ensembles. Two credits. Offered spring semester. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

2331 - Singers Diction II
1 Credit
Continuation of MUSC 1331, with specialized work in German. Offered alternate spring semesters. Prerequisite(s): MUSC 1331 Minimum Grade of C.

2341 - Survey of Piano Literature
2 Credits
Major keyboard composers, including overviews of styles, keyboard music as it relates to music history, and how various styles influenced future composers and keyboard music. Performance practices and recording artists emphasized. Formerly MUSC 371 and 372. Permission of instructor required. Offered alternate fall semesters.

2351 - Piano Pedagogy
2 Credits
The role of the teacher in the learning process including observation and laboratory teaching; literature relevant to piano pedagogy and its practical application; presentation of a professional teaching demeanor; basic techniques of teaching both individual and group piano; technology applicable to the above. Formerly MUSC 373. Permission of instructor. Offered alternate spring semesters.

2401 - Foundations of Music Education
1 Credit
Orientation to the profession of music education, including current issues: psychological, sociological, aesthetic, and historical foundations; current philosophies and learning theories; assessment; and an overview of instructional skills, knowledge, and dispositions, including national and state standards for music education. Limited to music education majors. Offered spring semester. Prerequisite(s): MUSC 1011 Minimum Grade of C.

2411 - Woodwind Methods
1 Credit
Elementary performance skills and pedagogy of woodwind instruments including literature and materials for school-aged performers. Limited to music education majors. Offered alternate spring semesters. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.
2421 - Brass Methods
1 Credit
Elementary performance skills and pedagogy of brass instruments including literature and materials for school-aged performers. Limited to music education majors. Offered alternate fall semesters. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

2431 - String Methods
1 Credit
Elementary performance skills and pedagogy of string instruments including literature and materials for school-aged performers. Limited to music education majors. Offered alternate spring semesters. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

2441 - Percussion Methods
1 Credit
Elementary performance skills and pedagogy of percussion instruments including literature and materials for school-aged performers. Limited to music education majors. Offered alternate fall semesters. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

2901 - Special Topics
1 to 3 Credits
Topics include, but are not limited to special areas in music theory, music history, and/or music education. Permission of department and instructor. May be repeated as topics vary. Offered on demand. This course is repeatable.

3151 - Composition
2 Credits
Principles and practices general to all compositional styles applied to weekly composition projects. Includes score study of great works. Limited to music majors. May be repeated for credit. Offered fall and spring semesters. Prerequisite(s): MUSC 2121 Minimum Grade of C and MUSC 2141 Minimum Grade of C.

3211 - Music History and Literature I
3 Credits
Survey of the history of Western music from the medieval, renaissance, and baroque eras. Study of the development of musical styles, genres and compositional devices. Includes score reading and musical analysis. Students will become familiar with the masterworks of Western music history. Limited to music majors and minors. Formerly part of the music history sequence-MUSC 321, 322 and 323. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C.

3221 - Music History and Literature II
3 Credits
A survey of the history of Western music from the Classical, Romantic, and Modern eras of music. Study of the development of musical styles, genres and compositional devices. Course includes score reading and musical analysis. Students will become familiar with the masterworks of Western music history. Limited to music majors and minors. Formerly part of the music history sequence-MUSC 321, 322 and 323. Offered spring semester. Prerequisite(s): MUSC 1121 Minimum Grade of C.

3231 - Jazz History and Literature
3 Credits
Jazz from African influences through present developments; personalities involved in stylistic change. Listening-based; experiential component.

3241 - American Music
3 Credits
Music from colonial America to present day. Listening and recognition of styles and instruments, major composers and performers. Includes sacred music, pop, rock, band, jazz and music from the stage.

3251 - African Music
3 Credits
Traditional and modern music from Africa. Includes music from western African and southern African countries as well as the African Diaspora. Listening, recognition of styles and musical instruments, dance, religious ceremonies.

3271 - Survey of Vocal Literature I
1 Credit
Study of recital vocal literature, focusing on the Lied, French melodie, and British and American art song. Some Russian and Czech literature included. Formerly part of Vocal Literature sequence MUSC 371, 372 and 373. Offered alternate fall semesters. Prerequisite(s): MUSL 2391 Minimum Grade of S.

3281 - Survey of Vocal Literature II
1 Credit
Continuation of MUSC 3271. Formerly part of Vocal Literature sequence-MUSC 371, 372 and 373. Offered alternate spring semesters.

3311 - Choral Conducting
2 Credits
Adaptation of basic conducting techniques to the choral ensemble including leadership, error detection, tonal development, historical and stylistic accuracy and analysis. Includes survey choral literature and programming for ensembles of every level. Offered fall semester. Prerequisite(s): MUSC 2311 Minimum Grade of S.

3321 - Instrumental Conducting
2 Credits
Adaptation of basic conducting techniques to the instrumental ensemble including formal analysis, score-marking, transpositions, rehearsal technique, error detection, program creation, historical and stylistic accuracy and analysis. Includes survey of literature for concert bands, wind ensembles, string orchestras and symphony orchestras in the schools at every level. Offered spring semester. Prerequisite(s): MUSC 2311 Minimum Grade of C.

3331 - Singers Diction III
1 Credit
Continued development of the skills acquired in Diction I, with specialized work in French. Offered alternate spring semesters. Prerequisite(s): MUSC 1331 Minimum Grade of C.

3461 - Methods of Marching and Jazz Bands
2 Credits
Methods, materials, and techniques in the development and direction of marching and jazz bands. Marching band topics include show planning, drill writing, precision drill, rehearsal techniques, and selection and rehearsal of music. Membership in Marching Band required in conjunction with the course. Jazz ensemble methods include seating, standard and alternative instrumentation, literature selection and preparation, style, and the development of a personal philosophy of jazz education. This course is not for developing Jazz musicians. Offered fall semester. Prerequisite(s): MUSC 2311 Minimum Grade of C and MUSC 1141 Minimum Grade of C Corequisite(s): MUSE 1051.

3471 - Technology for Music Educators
2 Credits
Integration of technology into the music curriculum, effective use of technology in teaching and learning music, preparation of teaching and administrative materials, leading class activities, and student projects. Includes experiences with music notation software, audio amplification, recording and editing, video recording and editing, and website creation and management. Offered spring semester. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

3901 - Special Topics
1 to 3 Credits
Topics include, but are not limited to special areas in music theory, music history, and/or music education. Permission of department and instructor. Variable credit. May be repeated as topics vary. Offered fall and spring semesters. This course is repeatable.
4111 - Analytical Techniques
2 Credits
Elements of form and analysis, and counterpoint. Musical forms and styles from the Baroque to the present. Theoretical and stylistic analysis of representative music with creative projects in contrapuntal writing. Offered fall semester. Prerequisite(s): MUSC 2121 Minimum Grade of C and MUSC 2141 Minimum Grade of C.

4161 - Electronic Music
2 Credits
History, development, materials, and techniques of electronic music. Emphasis on composition in the medium. May be repeated for credit. Offered alternate fall semesters. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

4171 - Instrumentation and Arranging
2 Credits
Basic characteristics of each orchestral instrument and instrument family, including range, transposition, timbre and technique. Students produce scores of arrangements for choir, band, and orchestra. Offered fall semester. Prerequisite(s): MUSC 2121 Minimum Grade of C and MUSC 2141 Minimum Grade of C.

4291 - Applied Field Literature and Pedagogy for Instrumentalists
2 Credits
Study of the professional and pedagogical literature for each instrument. Two credits. Offered on demand. Formerly MUSC 371, 372 and 373. Prerequisite(s): MUSL 2391 Minimum Grade of S.

4481 - Instrumental Music Methods
3 Credits
Procedures and materials in the successful administration, development and direction of instrumental music programs at the elementary, middle and high school level. Includes the beginning instrumentalist, curriculum planning, repertoire, adjudicated events, behavior management, recruiting, and public relations. Requires laboratory experience in teaching beginning instrumental students individually, in small groups and larger classes during 20 hours of field experience. Admission to the Teacher Education Program or approval of the Director of Teacher Education required. Limited to music education majors. Offered spring semester.

4491 - Choral Music Methods
3 Credits
Development of the middle school and high school choral ensemble, including philosophies, technologies, classroom management, vocal production and placement, rehearsal and organizational techniques, audition procedures, production of musicals, adjudicated events and festivals, booster/parent groups, selection of repertoire, concept-based and standards-based choral music education, and curriculum. Admission to the Teacher Education Program required. Limited to music education majors. Three credits. Offered fall semester.

4601 - Senior Research Project
3 Credits
Study of a specialized area of music directed by a member of the music faculty. Serves as capstone experience for the concentrations in the Bachelor of Arts degree program: music history and literature, music theory/composition, or applied studies. Three credits. Offered on demand. Prerequisite(s): MUSL 2391 Minimum Grade of C.

4901 - Special Topics
1 to 3 Credits
Topics include, but are not limited to, special areas in music theory, music history, and/or music education. Permission of department chair and instructor. Variable credit. Offered on demand. May be repeated as topics vary. This course is repeatable.

4911 - Independent Study
1 to 3 Credits
Independent Study in areas of student interest not offered in the catalog. Offered on demand. Variable credit. May be repeated. Permission of department chair and instructor required. Formerly MUSC 497. This course is repeatable.

Subject - Applied Music & Performance (MUSE)

Membership in music ensembles is open to all university students. All ensembles may be repeated for credit.

1011 - University Singers
1 Credit
A select group of men and women singers chosen to perform a wide variety of choral literature from various periods of music with the highest musical standards. Performances include concerts on and off campus and on tour as well as frequent appearances with various area symphony orchestras. Tours internationally every third year. Membership by audition. Offered fall and spring semesters. This course is repeatable.

1021 - Symphony Orchestra
1 Credit
The Symphony Orchestra studies and performs the great symphonic repertoire from Baroque to the 21st century. Membership is by audition only. Offered fall and spring semesters. This course is repeatable.

1031 - Wind Orchestra
1 Credit
Select ensemble performs standard professional and collegiate repertoire for winds and percussion. Tours internationally every third year. Membership is by audition. Offered fall and spring semesters. This course is repeatable.

1041 - Symphonic Band
1 Credit
A fully-instrumented performance based concert ensemble studying and performing the finest wind band literature with the highest musical standards. Open to all students with prior high school instrumental experience. Placement audition required. Offered spring semester. This course is repeatable.

1051 - Marching Band
1 Credit
The preparation and performance of music and field shows for home and selected away football games and tours internationally every third year. Open to all university students who play band instruments or are accepted for auxiliary groups. Requires successful completion of band camp prior to the start of fall semester. Placement audition required. Offered fall semester. This course is repeatable.

1111 - Opera Workshop
1 Credit
Instruction and experience in preparation for opera performances on and off campus. Singers will study operatic literature and be coached for specific roles in public performance of opera scenes and/or fully staged operas. Membership by audition. Offered fall and spring semesters. This course is repeatable.

1121 - Northernaires
1 Credit
Highly select vocal jazz ensemble with backup instrumental ensemble performing a wide variety of a cappella and accompanied vocal jazz literature. Performances include concerts on and off campus. Members are selected from the University Singers. Offered fall and spring semesters. This course is repeatable.

1131 - A Cappella Chamber Singers
1 Credit
A highly select choral ensemble of 12-16 members performing appropriate literature both a cappella and accompanied from Renaissance to Contemporary. Performances include concerts on and off campus. Membership by audition. Offered fall and spring semesters. This course is repeatable.

1141 - Barbershop Quartet
1 Credit
A highly select men's quartet performing varied a cappella Barbershop literature. Performances include concerts on and off campus. Members are selected from the Men's Chorus. Offered on demand. This course is repeatable.
1151 - Women’s Chorus
1 Credit
Choral ensemble performing outstanding sacred and secular literature written and arranged for female voices. Open to all qualified women: students, faculty, staff and community members. Offered fall and spring semesters. This course is repeatable.

1161 - Men’s Chorus
1 Credit
A choral ensemble performing outstanding sacred and secular choral literature written and arranged for men’s voices. On occasion the chorus may combine with other university choruses to perform major choral works. Performances include concerts on and off campus and on tour. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1171 - Jazz Ensemble
1 Credit
The study and performance of characteristic jazz literature. Membership is by audition. Offered fall and spring semesters. This course is repeatable.

1181 - Steel Drum Band
1 Credit
Studies and performs music specific to the steel drum idiom. Includes music of the Caribbean, especially the island nations Guyana and Trinidad and Tobago. Performances are scheduled throughout the year, both on and off campus. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1191 - Brass Ensemble
1 Credit
Studies and performs characteristic brass literature. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1201 - Percussion Ensemble
1 Credit
Studies and performs music specific to the varied world of percussion. Includes percussion music performance opportunities for percussion majors. Performances are scheduled throughout the year, on and off campus. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1211 - String Ensemble
1 Credit
Ensembles of string instrumentalists for the study and performance of characteristic strings literature. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1221 - Woodwind Ensemble
1 Credit
A non-auditioned ensemble for all woodwinds. Open to all students and staff. Performs concerts on-campus. Open to all qualified students. Offered fall and spring semesters. This course is repeatable.

1231 - Pep Band
1 Credit
Athletic band provides spirited music for sports contests (men’s and women’s basketball games). Open to all students with prior high school instrumental experience. No formal audition required. Offered spring semester. This course is repeatable.

1241 - Composer’s Workshop Ensemble
1 Credit
Rehearses and performs literature for smaller ensembles from the 20th and 21st centuries. Also, significant experimental music from previous centuries. Emphasis on landmark works by major composers of these eras. Open to all qualified students. Offered spring semester. This course is repeatable.

1251 - Chamber Music
1 Credit
Ensembles which perform without conductor. Includes standard trios, quartets and quintets for woodwinds, brass and strings as well as mixed ensembles with piano. Offered fall and spring semesters. This course is repeatable.

Subject - Applied Music (MUSL)

Individual instruction in applied music is available to music majors and minors, and to some non-majors. Non-majors register for MUSL 0011 classes and take half hour lessons for one credit.

Musical Theatre majors register for MUSL 1111, 1121, 2111, 2121, 3111, 3121 courses, taking half hour lessons for one credit.

First and second-year music majors register for 1211, 1221, 2211, 2221 courses, taking hour lessons for two credits.

Third and fourth year music majors who have passed the Second-Year Applied Music Proficiency Exam (MUSL 2391) register for MUSL 3211, 3221, 4211, 4221 courses, taking hour lessons for two credits (BA and Music Education majors) or three credits (Performance majors). Students are allowed a maximum of five semesters to pass the Second Year Proficiency Exam.

Students must be eligible for upper-level status before admission to the teacher education program or the performance degree program.

Select MUSL catalog numbers are followed by a catalog suffix indicating the discipline to be studied. These catalog numbers are for the following courses:

Applied Lessons for Non-Majors (MUSL 0011)

Applied Lessons for Musical Theatre Majors (MUSL 1111, 1121, 2111, 2121, 3111, 3121)

Applied Lessons for Music Majors (MUSL 1211, 1221, 2211, 2221, 3211, 3221, 4211, 4221)

The chart below indicates the discipline and the corresponding letter suffix.

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0011 - Applied Lessons for Non-Majors
1 Credit
Development of applied musical skills at all ability levels. Preference for placement in lessons is given to students participating in ONU ensembles. Skills include but are not limited to: repertoire; improvisation; sight-reading; technique; and other skills pertinent to a student’s interest. Formerly APMU 001. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above. Repeatable for credit.

0401 - Voice Class for Non-Voice Majors
1 Credit
Introduction to a variety of technical exercises, improvisation and the basic concepts of vocal technique and song interpretation. Offered fall and spring semesters. This course may be repeated.

0421 - Piano Class for Non-Music Majors
1 Credit
Applied piano study for non-music majors with various levels of experience. Basic concepts for beginners and advanced concepts for experienced performers, according to individual skill level. One semester required for Musical Theatre majors. Formerly APMU 004. Offered fall and spring semesters. This course may be repeated.

1011 - Piano Skills for Music Majors I
1 Credit
Continuing course to develop functional keyboard skills and a working knowledge of piano in the music profession. Skills include: repertoire; pedalizing; harmonizing; sight-reading; vocal/ instrumental open score reading; construction and maintenance of the piano; scales; arpeggios; choral warm ups; transpositions including alto and tenor clef; hymns; and improvising using appropriate accompaniment patterns. Limited to Music Majors. Offered fall and spring semesters.
1021 - Piano Skills for Music Majors II  
1 Credit  
Continuation of MUSL 1011. Offered fall and spring semesters.  
Prerequisite(s): MUSL 1011 Minimum Grade of C

1111A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
First-year study in applied voice for Musical Theatre majors. Offered fall and spring semesters.

1121A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
Continuation of MUSL 1111A. Offered fall and spring semesters.

1211 - Applied Lessons for Music Majors  
2 Credits  
Applied lessons to prepare for the respective proficiency exams and recitals required in the Bachelor of Arts and Bachelor of Music degree programs. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

1221 - Applied Lessons for Music Majors  
2 Credits  
Continuation of MUSL 1211. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

1391 - First Year Applied Proficiency Exam  
0 Credits  
Comprehensive juried performance exam on the major applied instrument assessing competency in technique, musicality, sight reading at the appropriate level of literature. Required to register for 2000 level study. May be repeated only once. Offered fall and spring semesters.

2011 - Piano Skills/Music Majors III  
1 Credit  
Continuation of MUSL 1021. Offered fall and spring semesters.  
Prerequisite(s): MUSL 1021 Minimum Grade of C

2021 - Piano Skills/Music Majors IV  
1 Credit  
Continuation of MUSL 2011. Offered fall and spring semesters.  
Prerequisite(s): MUSL 2011 Minimum Grade of C

2041 - Piano Proficiency Exam  
0 Credits  
Comprehensive piano exam preparing music majors for keyboard use in music careers. Skills include but are not limited to sight reading, harmonization, improvisation, transposition, repertoire, choral warm ups. Registration occurs after passage of exam. Offered fall and spring semesters.

2111A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
Continuation of MUSL 1121A. Offered fall and spring semesters.

2121A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
Continuation of MUSL 2111A. Offered fall and spring semesters.

2211 - Applied Lessons for Music Majors  
2 Credits  
Continuation of MUSL 1221. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

2221 - Applied Lessons for Music Majors  
2 Credits  
Continuation of MUSL 2221. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

2391 - Second Year Applied Proficiency Exam  
0 Credits  
Comprehensive juried performance exam on the major applied instrument assessing competency in technique, musicality, sight reading at the appropriate level of literature. Required to register for 3000 level study. Offered fall and spring semesters. This course may be repeated 1 time.

3111A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
Continuation of MUSL 2121A. Formerly APMU 225. Offered fall and spring semesters.

3121A - Applied Lessons for Musical Theatre Majors/Voice  
1 Credit  
Continuation of MUSL 3111A. Formerly APMU 225. Offered fall and spring semesters.

3211 - Applied Lessons for Music Majors  
2 to 3 Credits  
Continuation of MUSL 2221. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

3221 - Applied Lessons for Music Majors  
2 to 3 Credits  
Continuation of MUSL 3221. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

3301 - Half Recital  
0 Credits  
Recital 30 minutes in length given typically in the fourth year of study. Required for music education majors. Offered fall and spring semesters. Discipline to be performed is indicated by the catalog suffixes listed above.

3311 - Junior Recital  
1 Credit  
Full length (60 minutes) recital in the third year of study. Required for performance majors. Offered fall and spring semesters. Discipline to be performed is indicated by the catalog suffixes listed above.

4211 - Applied Lessons for Music Majors  
2 to 3 Credits  
Continuation of MUSL 4211. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

4221 - Applied Lessons for Music Majors/Voice  
2 to 3 Credits  
Continuation of MUSL 4221. Offered fall and spring semesters. Discipline to be studied is indicated by the catalog suffixes listed above.

4311 - Senior Recital  
1 Credit  
Full length (60 minutes) recital in the fourth year of study. Required for performance majors. Offered fall and spring semesters. Discipline to be performed is indicated by the catalog suffixes listed above.

DEPARTMENT OF NURSING

Associate Professor Walker (Chair); Assistant Professors Fox, Liebrecht, Montenery, Schroeder, White; Part-time Faculty Carse, Fickel, Hauserman, Keller, Kroeger, Niemeyer, Patton, Seggerson

Mission Statement
To address the health care needs and issues within a diverse and changing world, the Nursing Program at Ohio Northern University provides educational opportunities to a diverse population of qualified students who seek to acquire the knowledge and skills required for the practice of nursing as a Registered Nurse. The program actualizes this mission through integration of critical thinking in theory and practice principles to achieve evidence-based nursing practice inspired by a desire to contribute to the good of humankind. The development of the whole person reflects the emphasis of the university and prepares the student as a life-long learner in pursuit of knowledge and excellence in practice.
Vision Statement
The department is committed to being an exemplary private baccalaureate nursing program grounded in the sciences and liberal arts. Faculty and graduates are poised to become leaders whose actions and voices will transform the health needs of individuals, families and communities worldwide.

Accreditation
The program has Full Approval by the Ohio Board of Nursing (17 South High St., Suite 400, Columbus, OH 43215-7410, 614-466-3847) and is accredited by Commission on Collegiate Nursing Education (One Dupont Circle, NW, Suite 530, Washington, DC 20036-1120, 202-887-6791).

Major and Degree Offered
Nursing Major (BSN)

Licensure Offered
Graduates of the program are eligible to take the national licensing examination (NCLEX-RN) to become a Registered Nurse.

Admission Requirements
1. Meet the general admission requirements of Ohio Northern University.
2. Graduate with a cumulative grade point average (GPA) of 3.0 or higher on a scale of 4.00 from an accredited high school program (or GED).
3. Earn a minimum ACT score of 23 or a composite SAT score of 1070.
4. Complete two units of high school mathematics.
5. Complete six units of high school natural sciences, including biology and chemistry.
6. Before beginning clinical nursing courses pass a criminal background check and drug screening.

Special Programs
RN-BSN Nursing Completion Program
In addition to the traditional BSN degree, Ohio Northern University offers a non-traditional RN-BSN nursing completion program degree for practicing nurses. Further information about this program is available beginning on page 119.

Program Requirements
“A student shall not have impairment of the ability to practice according to acceptable and prevailing standards of safe nursing care because of physical or mental disability” (ORC Rule 4723-5-12 (16))

In accord with this rule and to ensure the safe practice of nursing, all nursing majors must possess the following:

• The ability to see, hear, touch, smell, and distinguish colors;
• The ability to speak and write with accuracy, clarity, and efficiency;
• Manual dexterity (gross and fine movement);
• The ability to learn, think critically, analyze, assess, solve problems, and reach judgments, and;
• Emotional stability and the ability to accept responsibility and accountability.

Students will need to demonstrate satisfactory application of these functions and competencies during their course of study in nursing. Students should consider their ability to demonstrate these functions and competencies when applying for admission to the nursing program of Ohio Northern University.

Students must earn a grade of ‘C’ or higher in all nursing core courses and all other identified required courses outside of the major.

Nursing Major (120 credit hours)
The 120 credit hours listed above include 55 credit hours in nursing and 65 credit hours of other required courses outside the major.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>NURS 1101</td>
<td>Professional Concepts (1)</td>
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<td>NURS 2101</td>
<td>Physical Assessment (3)</td>
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<td>NURS 2201</td>
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<td>NURS 2301</td>
<td>Fundamentals of Nursing (6)</td>
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<td>NURS 2501</td>
<td>Pharmacology (3)</td>
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<td>NURS 3001</td>
<td>Mental Health Nursing (3)</td>
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<tr>
<td>NURS 3101</td>
<td>Medical Surgical Nursing I (6)</td>
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NURS 3301 Transcultural Healthcare (2)
NURS 3351 Nursing Research and Informatics (2)
NURS 3501 Nursing Care of the Developing Child and Family (6)
NURS 3601 Older Adult Nursing (2)
NURS 4101 Community Health Nursing (4)
NURS 4201 Leadership and Management in Nursing (2)
NURS 4401 Medical Surgical Nursing II (6)
NURS 4981 Transition to Professional Practice: Nursing Capstone (6)

Other required courses (65 hours)
AHPE xxxx1 Sport services course (1)
BIOL 1101* Principles and Concepts of Human Biology (3)
BIOL 2151* Microbiology for Nurses (3)
BIOL 2311* Anatomy and Physiology 1 (3)
BIOL 2321* Anatomy and Physiology 2 (3)
BIOL 2531* Nutrition for Nurses (3)
BIOL 3151* Medical Terminology (1)
CHEM 1201* Chemistry for the Health Sciences (5)
MATH 1251* College Algebra (3) (Prereq for Stats)
PSYC 1001* Psychology (3)
PSYC 2151* Development across the Lifespan (3)
TREX 1xx1* First Year Transition (3)
XXXX xxx1* Extradisciplinary Seminar (3)
XXXX xxx1 Fine art elective (3)
XXXX xxx1 Humanities electives (9)
XXXX xxx1 Other electives (7)

Complete one:
ENGL 1221* Writing Seminar (3)
ENGL 1231* Writing Seminar (3)

Complete one:
CACS 1111* Presentational Speaking (3)
CACS 2251* Interpersonal Communication (3)

Complete one:
STAT 1311* Introduction to Statistical Reasoning (3)
STAT 1561* Statistics for Professionals 1 (3)

*Indicates other required courses outside of the major requiring a grade of ‘C’ or higher.

RN-BSN Nursing Completion Program
The RN-BSN completion program has been developed to meet the needs of the practicing nurse. RNs will transfer into ONU with 72 credit hours based on their diploma and/or associate degree. The program of study is 48 credit hours with a clinical experience in NURS 4251 and NURS 4991. This program is designed to be completed in one calendar year with 4 twelve-week terms. The program is held on-site at local area hospitals.

Admission Requirements
1. Hold an associate or equivalent degree from a regionally accredited institution.
2. Possess a minimum GPA of 2.50 on a 4.00 scale.
3. Possess a current and unrestricted Ohio RN license.
4. Meet the health requirements of the clinical agencies.

Each applicant must submit an RN-BSN application, ONU Financial Aid Form, Informational Form, Computer Account Agreement, and $30.00 application fee. All academic transcripts must be submitted to ONU directly from the institution before admission.

Completion Program Requirements
Students must attain a grade of ‘C’ or higher in all nursing core courses and all other identified required courses outside of the major.

RN-BSN Nursing Completion Program (Non-traditional) Degree
(48 credit hours)
The 48 credit hours listed above include 24 hours of nursing courses and 24 credit hours of courses outside the major.
NURS 3011 Foundations of the Discipline and Science for the Registered Nurse (2)
NURS 3021 Physical Assessment for the Registered Nurse (3)
NURS 3051 Leadership & Mgmt in Nursing Care for the Registered Nurse (2)
NURS 3061 Transcultural Healthcare for the Registered Nurse (2)
NURS 3221 Pathophysiology for the Registered Nurse (3)
NURS 4251 Community Health Nursing for the Registered Nurse (4)
NURS 4751 Nursing Research Process and Informatics for the Registered Nurse (3)
NURS 4991 Transition to Professional Nursing Practice for Registered Nurses: Clinical Capstone (5)

Other required courses (24 hours)
ENGL xxx1 Literature elective (3) or
MLNG xxx1 Literature elective (3)
HIST xxx1 History elective (3)
RELG xxx1 Religion elective (3)
XXXX xxx1* Extracurricular Seminar (3)
XXXX xxx1 Fine art elective (3)

Complete one:
ENGL 1221* Writing Seminar (3)
ENGL 1231* Writing Seminar (3)

Complete one:
CACS 1111* Presentational Speaking (3)
CACS 2251* Interpersonal Communication (3)

Complete one:
STAT 1311* Introduction to Statistical Reasoning (3)
STAT 1561* Statistics for Professionals 1 (3)

* Indicates other required courses outside of the major requiring a grade of ‘C’ grade or higher.

**Subject - Nursing (NURS)**

(Class Hours+Campus Lab Hours+Clinical Hours)

1101 - Professional Concepts
1 Credit
An entry level course that introduces students to concepts, theories and issues relevant to the nursing profession. The dynamics of the evolving role of nursing professional ethics and selected historical events and figures are discussed. Introduces conceptual framework of the nursing curriculum. Enrollment is restricted to nursing majors. Offered spring semester. Must be enrolled in one of the following Fields of Study: Nursing.

2101 - Physical Assessment (2+3+0)
3 Credits
Aspects of routine well-adult health assessment and physical examination are presented and demonstrated. Nursing techniques of inspection, palpation, percussion and auscultation are demonstrated and practiced. Emphasis is placed on differentiating normal from abnormal findings. Therapeutic communication techniques and caring behaviors are integrated with assessment skills. Enrollment is restricted to nursing majors. A lab fee is charged. Offered fall semester. Prerequisite(s): (NURS 1101 Minimum Grade of C and BIOL 2311 Minimum Grade of C and CHEM 1201 Minimum Grade of C) Corequisite(s): BIOL 2321. Must be enrolled in one of the following Fields of Study: Nursing.

2201 - Pathophysiology
3 Credits
The basis of human diseases and disorders and the interaction of environmental, biological, behavioral, and pharmacologic consequences to the disease process. Microbiological concepts applied to the understanding of normal and pathological body processes. Emphasis on the effects of degenerative, metabolic and neoplastic diseases and disorders occurring in the following body systems: immunologic, nervous, hematologic, cardiovascular, respiratory, endocrine, gastrointestinal, reproductive, skeletal, integumentary and special senses. Offered spring semester. Prerequisite(s): (NURS 2101 Minimum Grade of C and BIOL 2321 Minimum Grade of C). Corequisite(s): NURS 2301 and NURS 2501. Must be enrolled in one of the following Fields of Study: Nursing.

2301 - Fundamentals of Nursing (3+3+8)
6 Credits
Foundation of fundamental nursing skills and related concepts basic to safe clinical practice. Concepts will be applied to nursing care in selected settings. Application of the nursing process for beginning clinical practice will be emphasized. Documentation, use of concept maps, health adaptation, teaching, learning and therapeutic communication are emphasized to promote development of nursing judgment. Basic concepts of drug therapy are introduced. Evidence based practice is explored in the clinical experience. Enrollment is restricted to nursing majors. Offered spring semester. Prerequisite(s): (NURS 2101 Minimum Grade of C and BIOL 2321 Minimum Grade of C). Corequisite(s): BIOL 2151, NURS 2201, NURS 2501. Must be enrolled in one of the following Fields of Study: Nursing.

2501 - Pharmacology
3 Credits
Principles of pharmacology including pharmacokinetics, pharmacodynamics, drug interactions, common side effects and the misuse of medications. Selected drug classifications related to the neurological, circulatory, respiratory, endocrine, immune, gastrointestinal and urinary systems and processes. Offered spring semester. Prerequisite(s): (NURS 2101 Minimum Grade of C and BIOL 2321 Minimum Grade of C). Corequisite(s): BIOL 2311, NURS 2301. Must be enrolled in one of the following Fields of Study: Nursing.

3001 - Mental Health Nursing (2+0+4)
3 Credits
The acquisition and application of new knowledge of mental health nursing. The use of the nursing process with clients experiencing mental health alterations in selected care environments. Gain skill and refine therapeutic communication techniques and work with clients and family members in promoting therapeutic interpersonal relationships. Evidence based practice is applied in this clinical experience. Offered spring semester. Prerequisite(s): (NURS 3101 Minimum Grade of C and NURS 3301 Minimum Grade of C and NURS 3601 Minimum Grade of C). Corequisite(s): NURS 3351 NURS 3501. Must be enrolled in one of the following Fields of Study: Nursing.

3011 - Foundations of the Discipline for the Registered Nurse
2 Credits
Aspects of historical, philosophical, theoretical and social influences on the science and professional practice of nursing is presented and examined. The conceptual framework of the nursing curriculum is introduced. Enrollment restricted to RN-BSN Completion students. Offered in Term 1. Corequisite(s): NURS 3021, NURS 3061. Must be enrolled in one of the following Fields of Study: Nursing.

3021 - Physical Assessment for the Registered Nurse
3 Credits
Aspects of routine well-adult health assessment and physical examination are presented and demonstrated for the registered nurse student. Nursing techniques of inspection, palpation, percussion and auscultation are demonstrated and practiced. Emphasis is placed on differentiating normal from abnormal findings. Therapeutic communication techniques and caring behaviors are integrated with assessment skills. Enrollment restricted to RN-BSN Completion students. Offered in Term 1. Corequisite(s): NURS 3011, NURS 3061. Must be enrolled in one of the following Fields of Study: Nursing.
3051 - Leadership and Management in Nursing Care for the Registered Nurse
2 Credits
For the professional practice nurse and focuses on leadership and management theory/principles related to contemporary nursing trends and emphasizes practice applications. Emphasis will be placed on the coordination of nursing services and care management in relation to client/patient care, peers, superiors, or subordinates. Enrollment is restricted to RN-BSN Completion students. Offered in Term 2. Prerequisite(s): (NURS 3011 Minimum Grade of C and NURS 3021 Minimum Grade of C and NURS 3061 Minimum Grade of C). Corequisite(s): NURS 3221. Must be enrolled in one of the following Fields of Study: Nursing.

3061 - Transcultural Healthcare for the Registered Nurse
2 Credits
Course is designed to build upon the Registered Nurses understanding of health beliefs, attitudes, values and practices in relation to health, illness, and health-seeking behaviors of culturally diverse individuals/groups. Cultural assessment will focus on tools, methods, nursing care adaptations. Enrollment is restricted to RN-BSN Completion students. Offered in Term 1. Corequisite(s): NURS 3011 NURS 3021. Must be enrolled in one of the following Fields of Study: Nursing.

3101 - Medical Surgical Nursing I (3+3+8)
6 Credits
Builds on the concepts of Fundamentals of Nursing. Acquisition and application of nursing knowledge and nursing skills with adult clients and their families who are experiencing acute and chronic health alterations in selected clinical settings. Clinical judgment, nursing process, health adaptation, teaching-learning and therapeutic communication are emphasized. Evidence based practice is integrated into this clinical experience. Offered fall semester. Prerequisite(s): (NURS 2301 Minimum Grade of C and NURS 2501 Minimum Grade of C and NURS 2201 Minimum Grade of C). Corequisite(s): NURS 3301, NURS 3601. Must be enrolled in one of the following Fields of Study: Nursing.

3221 - Pathophysiology for the Registered Nurse
3 Credits
Review and further exploration of the basis of human diseases and disorders and the interaction of environmental, biological, behavioral and pharmacological consequences to the disease process. The application of previous nursing knowledge, medical and nursing diagnoses, and interventions will be applied to current and emerging knowledge. Emphasis is placed on the effects of degenerative, metabolic and neoplastic diseases and disorder occurring in the following body systems: immunologic, nervous, hematologic, cardiovascular, respiratory, endocrine, gastrointestinal, reproductive, skeletal, integumentary and special senses. Enrollment restricted to RN-BSN Completion students. Offered in Term 2. Prerequisite(s): (NURS 3011 Minimum Grade of C and NURS 3021 Minimum Grade of C and NURS 3061 Minimum Grade of C). Corequisite(s): NURS 3051. Must be enrolled in one of the following Fields of Study: Nursing.

3301 - Transcultural Healthcare
2 Credits
To broaden an understanding and perspective of health and illness of differing sociocultural populations. Transcultural health care will introduce cultural influences which affect an individuals attitude toward institutional health care and the use thereof, and will identify culturally competent nursing interventions for the professional nursing student. Examines culturally based beliefs and values, preventive and therapeutic health practices and caring behaviors in diverse cultural and ethnic groups. Classroom and experimental activities address cultural assessment, awareness and competence. Offered fall semester. Prerequisite(s): NURS 1101 Minimum Grade of C. Corequisite(s): NURS 3101, NURS 3601. Must be enrolled in one of the following Fields of Study: Nursing.

3351 - Nursing Research and Informatics
2 Credits
Historical developments and methodologies of nursing research as it relates to nursing practice. Development of an understanding of the research process and research proposals. Interpretation of research reports and critiquing research literature. Exploration and examination of computer technology, basic information systems, and the use of cyber technology as it relates to a variety of health care environments and nursing practice. The impact of these technologies on nursing clinical practice, nursing administration, education and research are discussed. Enrollment is restricted to nursing majors. Offered spring semester. Prerequisite(s): (NURS 3601 Minimum Grade of C and NURS 3101 Minimum Grade of C and NURS 3301 Minimum Grade of C and STAT 1561 Minimum Grade of C or STAT 1311 Minimum Grade of C). Corequisite(s): NURS 3001, NURS 3501. Must be enrolled in one of the following Fields of Study: Nursing.

3501 - Nursing Care of the Developing Child and Family (4+0+8)
6 Credits
Application and acquisition of knowledge development in the specialty area of maternity and pediatric nursing. Emphasis will be placed on nursing process, teaching/learning and health promotion and health maintenance in these populations. Students will care for clients in a variety of settings. Evidence based practice is applied in this clinical experience. Enrollment is restricted to nursing majors. Offered spring semester. Prerequisite(s): (NURS 3601 Minimum Grade of C and NURS 3101 Minimum Grade of C and NURS 3301 Minimum Grade of C). Corequisite(s): NURS 3001, NURS 3351. Must be enrolled in one of the following Fields of Study: Nursing.

3601 - Older Adult Nursing
2 Credits
This course applies knowledge and the nursing process in caring for the gerontological population in selected settings and focuses on issues related to the phenomenon of aging. Gerontological nursing models are explored. Exploration of ethical issues related to aging and concepts of research in aging. Evidence based practice is applied. Offered fall semester. Prerequisite(s): (NURS 2301 Minimum Grade of C and NURS 2501 Minimum Grade of C and NURS 2201 Minimum Grade of C). Corequisite(s): NURS 3101, NURS 3301. Must be enrolled in one of the following Fields of Study: Nursing.

3801 - Topics in Nursing
1 to 4 Credits
The practice and principles of specialized topics in non-acute nursing care. Topics include but are not limited to: oncology, nursing care, end of life nursing care and neurological nursing care. May be repeated as the topic varies. Enrollment is restricted to nursing majors. Prerequisite(s): NURS 3101 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Nursing. This course is repeatable.

4101 - Community Health Nursing (2.5+0+6)
4 Credits
Nursing care and public health principles for families and communities. Introduction of health care policy. Epidemiology, health promotion and prevention strategies and interventions are presented. Health promotion (primary, secondary, tertiary prevention) is emphasized along with emerging community health issues and nursing interventions. Clinical leadership and management roles are explored. Evidence based practice is integrated into this clinical experience. Offered fall semester. Prerequisite(s): (NURS 3351 Minimum Grade of C and NURS 3501 Minimum Grade of C and NURS 3001 Minimum Grade of C). Corequisite(s): NURS 4201, NURS 4401. Must be enrolled in one of the following Fields of Study: Nursing.
4201 - Leadership and Management in Nursing

2 Credits
Leadership and management theory/principles for professional nursing practice in key leadership and management areas. Health care policy, finance and regulatory environments are discussed. Current issues and trends (national, state, and local) in nursing and health care illustrate the practical application of leadership/management theory to practice and create a framework to identify, explore and analyze issues. Offered fall semester. Prerequisite(s): (NURS 3351 Minimum Grade of C and NURS 3501 Minimum Grade of C and NURS 3001 Minimum Grade of C). Corequisite(s): NURS 4101, NURS 4401. Must be enrolled in one of the following Fields of Study: Nursing.

4251 - Community Health Nursing for the Registered Nurse (2.6+0+3.5)

4 Credits
Apply previous nursing knowledge and practice to individuals, families, groups and the practice setting of the community to promote optimal health behaviors. Review nursing care and current public health theories and principles as they relate to families, groups, and communities. Nursing process in public health nursing practice and common health problems encountered in community health nursing are studied. Enrollment restricted to RN-BSN Completion students. Offered in Term 3. Prerequisite(s): (NURS 3221 Minimum Grade of C and NURS 3051 Minimum Grade of C). Corequisite(s): NURS 4751. Must be enrolled in one of the following Fields of Study: Nursing.

4401 - Medical Surgical Nursing II (3+3+8)

6 Credits
Builds on concepts on previous clinical courses. Emphasizes the role of the Baccalaureate nurse in the care of the adult with acute and chronic illness across the lifespan. This course will combine complex medical surgical topics specific to the adult client. Uses the nursing process, clinical judgment principles and leadership experiences to coordinate and plan care for patients in acute care settings. Evidence based practice is integrated into this clinical experience. Offered fall semester. Prerequisite(s): (NURS 3221 Minimum Grade of C and NURS 3051 Minimum Grade of C and NURS 3351 Minimum Grade of C). Corequisite(s): NURS 4201, NURS 4420. Must be enrolled in one of the following Fields of Study: Nursing.

4751 - Nursing Research and Informatics for the Registered Nurse

3 Credits
Major components of the research process are addressed with a focus on the professional nurse as a consumer of research. Critical thinking skills are emphasized in the analysis of current nursing research. Historical developments and the methodologies of nursing research; and study findings as it relates to patient evaluation and care. Emphasis on developing an understanding of the research process and research proposals. The interpretation of research reports and critiquing research literature to support evidence-based nursing practice is examined. Explore and examine computer technology, basic information systems, and the use of cyber technology as it relates to a variety of health care environments and nursing practice. Further discussion regarding the impact of these technologies on nursing clinical practice, nursing administration, education and research will be examined. Enrollment restricted to RN-BSN Completion students. Offered in Term 3. Prerequisite(s): (NURS 3221 Minimum Grade of C and NURS 3051 Minimum Grade of C and STAT 1561 Minimum Grade of C or STAT 1311 Minimum Grade of C). Corequisite(s): NURS 4251. Must be enrolled in one of the following Fields of Study: Nursing.

4801 - Topics in Nursing

1 to 4 Credits
The practice and principles of specialized topics in nursing care in acute settings. Topics to be covered include but are not limited to: emergency/urgent nursing care and ICU nursing care. May be repeated as the topic varies. Enrollment is restricted to nursing majors. Prerequisite(s): NURS 4401 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Nursing. This course is repeatable.

4981 - Transition to Professional Practice: Nursing Capstone (2.5+0+14)

6 Credits
Students evaluate achievement of graduate outcomes. Integration of theory and practice. Provides direct nursing care and makes clinical judgments based on thorough assessment and evidence based practice. Synthesis of content from previous courses. A scholarly project is required. Offered spring semester. Prerequisite(s): (NURS 4101 Minimum Grade of C and NURS 4201 Minimum Grade of C and NURS 4401 Minimum Grade of C). Must be enrolled in one of the following Fields of Study: Nursing.

4991 - Transition to Professional Nursing Practice for Registered Nurses: Clinical Capstone (2.6+0+7)

5 Credits
Integration of theory and practice as in the approach to completion of the nursing major. A clinical area will be selected to carry out nursing activities that promote health potential. Assist in the decision-making process about delivery of nursing care based on a thorough assessment, analysis and exploration of potential consequences while utilizing therapeutic communication. Enhance skills needed to continue with professional role development. Clinical experiences are based on objectives developed with RN preceptor and faculty and may be chosen from a variety of settings. Enrollment is restricted to RN-BSN Completion students. Offered in Term 4. Prerequisite(s): (NURS 4251 Minimum Grade of C and NURS 4751 Minimum Grade of C). Must be enrolled in one of the following Fields of Study: Nursing.

DEPARTMENT OF PHILOSOPHY AND RELIGION

Professors Katayama, Person (Chair); Associate Professors Clingerman, Croskery, Dixon, S. Morrison; Assistant Professors Neely.

Mission Statement
The Department of Philosophy and Religion’s purpose is to help all Ohio Northern students develop into “mature men and women capable of clear and logical thinking and sensitive to the higher values of truth, beauty and goodness.” This development is to occur within a curriculum that introduces and critiques both the Judeo-Christian tradition and various other religious and philosophical traditions. The minors in philosophy and religion provide all students with opportunities to explore philosophical and religious traditions in more depth and the majors in philosophy, religion, and youth ministry also offer rigorous preparation for students who wish to pursue graduate and professional studies.

Majors, Minors and Degrees Offered
Philosophy Major (BA)
Religion Major (BA)
Youth Ministry Major (BA)
Philosophy Minor
Religion Minor

Special Programs
Prelaw Program
The department cooperates with the Pettit College of Law in the “guaranteed admission” prelaw program (see page 20). Information about the curricular requirements of the program can be obtained from the department chair.

Seminary Preview Program Partnership
Ohio Northern University participates in the Methodist Theological Seminary in Ohio’s Seminary Preview Program. Eligible students are able to enroll tuition-free in no more than two courses offered by MTSO. Students in their junior or senior years with a GPA of 3.00 or higher who have taken at least two courses in religion at ONU are eligible. More information is available from the chair of the Department of Philosophy and Religion.
Preseminary Program

A faculty member in the department of philosophy and religion serves as advisor to preseminary students in planning a preprofessional program. The recommendations of the American Association of Theological Schools are followed in advising students. A major in the department of philosophy and religion or in another appropriate department may be selected.

Major Course Requirements

All required courses in the major must be completed with a grade of ‘C’ or higher.

Philosophy Major (30 credit hours)

Philosophy is a quest for a comprehensive understanding of human existence. The objective of philosophy is to consider the rational justification of logical inferences, human values, criteria for establishing the claims of knowledge and certainty, and interpretations of the nature of reality. The diverse insights of significant philosophers from ancient times to the present contribute resources to stimulate contemporary philosophical thinking in each of these areas.

A major in philosophy prepares students generally for careers in areas which require the ability to analyze problems and to think and write clearly. It is an appropriate major for students planning to continue their education for professional careers such as law, medicine, or theology.

PHIL 2021 Ancient Philosophy (3)
PHIL 2341 Logic (3)
PHIL xxx1 Elective (15)
PHIL 4801 Philosophy Senior Essay (3)

Complete one:
PHIL 3201 Political Philosophy (3)
PHIL 3441 Ethical Theory (3)

Complete one:
PHIL 3401 Metaphysics (3)
PHIL 3551 Epistemology (3)

Note:
1No more than two PHIL courses (6 credit hours) at the 1000-level may count towards the major.

Religion Major (30 credit hours)

Religion is an integral part of human life and culture. It includes the ultimate commitments, attitudes, beliefs and forms of worship by which people live and find meaning for their personal and social existence. The courses in religion are intended to acquaint the student with the living religious traditions through an examination of their origins and development, their interaction with the changing cultural context, and their insights for dealing with the perennial questions of human existence and destiny. The approach to the study is ecumenical and makes use of current scholarly methods of research and findings.

Students majoring in religion must select one of the following concentrations: Eastern or Western. The 30 credit hours listed above include the 12 credit hours required in common plus the additional 20 credit hours required for the concentration.

RELG 2031 Eastern Religious Traditions (3)
RELG 2041 Western Religious Traditions (3)
RELG xxx1 Elective (3)
RELG 4811 Religion Senior Essay (3)

Eastern Concentration

PHIL 2431 Asian Philosophies (3)
RELG xxx1 Elective in Western traditions (3)
RELG xxx1 Electives in Eastern traditions (12)

Western Concentration

PHIL 2251 Philosophy of Religion (3)
RELG xxx1 Elective in Western traditions (3)
RELG xxx1 Electives in Western traditions (12)

1No more than three RELG courses (9 credit hours) at the 1000-level may count towards the major. Only the second semester of the biblical languages may count towards the major.
2This course may be at the 1000-level.
3No more than one RELG course (3 credit hours) at the 1000-level may count towards these 12 credits.

Youth Ministry Major (55 credit hours)

RELG 2001 Old Testament (3)
RELG 2011 New Testament (3)
RELG 2031 Eastern Religious Traditions (3)
RELG xxx1 Elective in Bible (3)
RELG xxx1 Elective in contemporary Christian thought (3)
RELG xxx1 Elective in a religious tradition other than Christianity (3)
RELG 4811 Religion Senior Essay (3)
YMIN 0011 Youth Ministry Observation 1 (0)
YMIN 0021 Youth Ministry Observation 2 (0)
YMIN 0031 Youth Ministry Observation 3 (0)
YMIN 0041 Internship - Group Reflection (0)
YMIN 2531 Youth Ministry Settings and Issues (3)
YMIN 4101 Youth Ministry Internship (4)
YMIN 4531 Principles of Christian Education (3)

Minor Course Requirements

All courses required for a minor must be completed with a grade of ‘C’ or higher.

Philosophy Minor (18 credit hours)

PHIL 2021 Ancient Philosophy (3)
PHIL 2341 Logic (3)
PHIL 3401 Metaphysics (3)
PHIL xxx1 Electives (9)

Religion Minor (18 credit hours)

RELG 2031 Eastern Religious Traditions (3)
RELG 2041 Western Religious Traditions (3)
RELG xxx1 Electives (12)

Subject - Philosophy (PHIL)

1001 - Theories of Human Nature
3 Credits
Philosophical inquiry into rival theories of human nature with reference to religion, psychology, and science. Consideration of the various philosophical problems, such as the role of reason, free-will and determinism, the relationship between the individual and the universe/God (as well as society), moral psychology, and gender differences.

1011 - Plato
3 Credits
Plato’s early to middle dialogues, including the Republic.

1021 - Philosophy of Science
3 Credits
Explores the logical and philosophical foundations that underlie science. Specific issues include: what is the difference between science and pseudo-science, what are scientific explanations, laws and theories, and what are science’s limits?
1031 - Philosophy of Identity
3 Credits
Explores the question of who we are by examining questions related to our social identity, specifically how our identity is affected by attributes such as race, gender, and class and by the societal reaction to those attributes.

1041 - Philosophy and Film
3 Credits
An exploration of perennial philosophical questions What is real? What can I know? What is life’s meaning? Through classic and modern films and traditional philosophical treatises. Question concerning whether film is an appropriate medium in which to pursue philosophical issues.

1051 - Ethics, Justice and Law
3 Credits
An exploration of challenging and controversial issues such as euthanasia, the meaning of equality, and the role of religious beliefs in a society with multiple religious traditions, starting with issues at the level of personal ethical beliefs, then moving to broader issues of social justice, and concluding with the role of law in a pluralistic society.

1901 - Special Topics in Philosophy
1 to 3 Credits
May be repeated for credit, depending on content.

2021 - Ancient Philosophy
3 Credits
Greek philosophical traditions against the background of the Pre-Socratic and Socrates, with a special emphasis on Plato and Aristotle.

2251 - Philosophy of Religion
3 Credits
Critical inquiry into issues such as the nature and existence of God, the problem of evil, the significance of religious experience, the justification of religious belief, and the relation of faith and reason.

2281 - Philosophy of Law
3 Credits
Major philosophical theories of law, from legal positivism to originalism. Application to topics such as criminal law, contract law, and constitutional interpretation. Specific applications include but are not limited to: free speech, the insanity defense, and surrogate mother contracts.

2341 - Logic
3 Credits
Logical fallacies and the principles of correct reasoning. The application of formal logical analysis to arguments encountered in ordinary language.

2401 - Professional Ethics
3 Credits
Major ethical theories and their application to the professions and topics that arise in the professional setting. The nature of professions and responsibilities to clients and the public. Offered fall and spring semesters.

2431 - Asian Philosophies
3 Credits
Asian philosophical traditions on the metaphysical, epistemological, logical, and ethical questions about the universe’s and human beings’ origins, natures and purposes, including the historical origins of these traditions, their development, and interactions.

2901 - Special Topics in Philosophy
1 to 3 Credits
May be repeated for credit, depending on content.

3101 - Environmental Ethics
3 Credits
Theories of value, with special emphasis on the possible justification of extending the moral community to include non-human nature. Foci will include future generations, pollution, the commons, ‘jobs vs. wilderness,’ and legal and moral rights.

3201 - Political Philosophy
3 Credits
Theories of political philosophy, such as social contract, libertarianism, utilitarianism, feminist, and political liberalism. Prerequisite(s): One course in PHIL excluding PHIL 2341.

3401 - Metaphysics
3 Credits
Classical metaphysical questions about human nature and the world, such as the nature of reality, essence, existence, and causation. Prerequisite(s): One course in PHIL excluding PHIL 2341.

3441 - Ethical Theory
3 Credits
Major ethical theories, such as utilitarianism, deontology, and virtue theory. Additional topics, such as ethical egoism, moral realism, and ethical relativism. Prerequisite(s): One course in PHIL excluding PHIL 2341.

3551 - Epistemology
3 Credits
Knowledge, its origins, structure, scope, justification and limitations, with reference to such problems as skepticism, realism, sense perception, mental representation, opinion and truth. Prerequisite(s): One course in PHIL excluding PHIL 2341.

3901 - Special Topics in Philosophy
1 to 3 Credits
May be repeated for credit, depending on content.

4801 - Philosophy Senior Essay
3 Credits
A critical essay on a topic selected in consultation with a faculty advisor. Enrollment in the semester during which the paper is to be completed. However, preliminary work on this project commences no later than the beginning of the senior year.

4971 - Independent Study in Philosophy
1 to 3 Credits
Departmental permission required. May be repeated for credit, depending on content.

Subject - Religion (RELG)

1001 - Death and Beyond in World Religions
3 Credits
An examination of distinct religious perspectives on individuals’ dying, afterlife, and additional goals beyond the experience of physical death.

1011 - Encountering the Other
3 Credits
The diversity of religious and cultural worldviews and practices, with primary focus on the phenomenon of ‘otherness,’ or ‘difference,’ and its personal and social ramifications.

1021 - Christianity and Natural World
3 Credits
Christian theological and ethical responses to nature. Discussion of how Christianity has historically understood the doctrine of creation. The diverse ways that contemporary Christianity interprets the material world

1031 - Religion and Culture
3 Credits
The relationship between religious worldviews and culture, including fine arts, technology, and popular media. Different theological models that can be used to understand how culture challenges and influences religion.

1041 - Women in the Bible
3 Credits
The portrayal of women in the Old and New Testaments with secondary readings of feminist theory.
1071 - Religions East and West
3 Credits
Representative major religions of the world, their origins, sacred writings, basic beliefs, and life practices, with special attention to non-Western religious traditions.

1911 - Special Topics in Religion
1 to 3 Credits
May be repeated for credit, depending on content.

2001 - Introduction to Old Testament
3 Credits
Critical reading of the Old Testament (Hebrew Bible): its historical background, literary features, and theological claims.

2011 - Introduction to New Testament
3 Credits

2021 - Islam
3 Credits
The ideas and practices of the Muslim tradition, with emphasis on Islam’s scriptural base, historical development, societal impact, and encounter with the West and with other religious traditions.

2031 - Eastern Religious Traditions
3 Credits
Major religions of Asia: their origins, sacred writings, basic beliefs, life practices, and, where applicable, presence in the West.

2041 - Western Religious Traditions
3 Credits
Major Semitic/Western religions: their origins, sacred writings, basic beliefs, life practices, and variations around the world.

2051 - Hinduism
3 Credits
The ideas and practices of the Hindu tradition, with emphasis on historical development, varied literatures, societal influence, and encounters with the contemporary West.

2061 - Issues in Science & Religion
1 Credit
Investigation of the work of a major figure in the contemporary science and religion dialogue. Students are required to attend annual weekend Goshen Conference on Religion and Science, where students will have the opportunity to interact with the author being studied. Fee required.

2711 - Biblical Hebrew 1
3 Credits
Biblical Hebrew with heavy emphasis on grammar and vocabulary.

2731 - Biblical Hebrew 2
3 Credits
Biblical Hebrew with an emphasis on grammar and vocabulary as well as readings from the Hebrew Bible. Prerequisite(s): RELG 2711 Minimum Grade of C.

2811 - Biblical Greek 1
3 Credits
Biblical Greek with heavy emphasis on grammar and vocabulary and readings from the Greek New Testament. Prerequisite(s): RELG 2711 Minimum Grade of C.

2831 - Biblical Greek 2
3 Credits
Biblical Greek with heavy emphasis on grammar and vocabulary and readings from the Greek New Testament. Prerequisite(s): RELG 2811 Minimum Grade of C.

2911 - Special Topics in Religion
1 to 3 Credits
May be repeated for credit, depending on content.

3001 - Christian Thought to 1500
3 Credits
Christian history, theology, and ethics from the formative period of the Church to the late Middle Ages. Emphasis on the Christian response to cultural settings, efforts to define orthodoxy, philosophers, theologians and mystics.

3011 - Christian Thought 1500 to the Present
3 Credits
Christian history, theology, and ethics from the Reformation to the present. The rise of confessions, Enlightenment challenges to religion, and representative theologians and issues from the past two centuries.

3021 - Buddhism
3 Credits
The ideas and practices of the Buddhist tradition in Asia as well as in the West, with emphasis on the life and teachings of the Buddha and the evolution of extremely diverse forms of Buddhism.

3911 - Special Topics in Religion
1 to 3 Credits
May be repeated for credit, depending on content.

4811 - Religion Senior Essay
3 Credits
A critical essay on a topic selected in consultation with a faculty advisor. Enrollment in the semester during which the paper is to be completed. However, preliminary work on this project commences no later than the beginning of the senior year.

4981 - Independent Study in Religion
1 to 3 Credits
Departmental permission required. May be repeated for credit, depending on content.

Subject - Youth Ministry (YMIN)

0011 - Youth Ministry Observation 1
0 Credits
Observation of and reflection on youth ministry in a congregational setting related to one's own denominational tradition. Must be enrolled in one of the following Fields of Study: Youth Ministry.

0021 - Youth Ministry Observation 2
0 Credits
Observation of and reflection on youth ministry in a congregational setting different from one's own denominational tradition. Must be enrolled in one of the following Fields of Study: Youth Ministry.

0031 - Youth Ministry Observation 3
0 Credits
Observation and reflection on ministry to youth in a culturally, racially, and/or socioeconomically diverse setting. Must be enrolled in one of the following Fields of Study: Youth Ministry.

0041 - Internship: Group Reflection
0 Credits
Group reflection on issues pertaining to students' internships. Must be enrolled in one of the following Fields of Study: Youth Ministry.

2531 - Youth Ministry Issues and Settings
3 Credits
Exploration of various settings for youth ministry, including weekly youth meetings, camps, mission trips, Sunday School, and community service. Offered alternate years.
2901 - Special Topics in Youth Ministries
1 to 3 Credits
May be repeated for credit depending on course content.

3901 - Special Topics in Youth Ministries
1 to 3 Credits
May be repeated for credit, depending on content.

4101 - Youth Ministry Internship
1 to 3 Credits
Internship in youth ministry in various possible settings: congregation, camp, mission trip, etc. Each credit hour requires 25 hours in internship. Corequisite(s): YMIN 0041. This course is repeatable for a total of 6 hours.

4531 - Principles of Christian Education
3 Credits
The philosophy, theory, and current methods of Christian education. The relationship of Christian education to other areas of ministry (e.g., worship). Offered alternate years. Prerequisite(s): (YMIN 2531 Minimum Grade of C and YMIN 4101 Minimum Grade of C).

4991 - Independent Study in Youth Ministries
1 to 3 Credits
Departmental permission required. May be repeated for credit depending on course content.

DEPARTMENT OF PHYSICS AND ASTRONOMY

Professors Me. Caragiu, Sheridan, Theisen (Chair); Associate Professor Pinkney

Mission Statement
The primary aim of the department is to offer courses that will stimulate scientific thought, train the student to reason from fundamental experimental fact, further the student's desire to continue scientific investigation, and meet the needs of those students who are interested in physics for its cultural or vocational value. The department aims to give training with a sufficiently broad perspective to enable the student to appreciate the physics of scientific articles; to teach physics in the public schools; to apply physics in engineering, medicine, and other sciences; and to pursue graduate work.

Accreditation
The secondary education program for licensure to teach physics is approved by the Ohio Department of Education and nationally accredited by the National Council for Accreditation of Teacher Education.

Majors, Minors and Degrees Offered
Physics Major/Physics Concentration (BS)
Physics Major/Astronomy Concentration (BS)
Physics Major/Applied Physics Concentration (BS)
Astronomy Minor
Physics Minor

Licensure Offered
Adolescent Young Adult (7-12) Integrated Life Sciences Licensure
Adolescent Young Adult (7-12) Physical Sciences: Chemistry & Physics Licensure
Adolescent Young Adult (7-12) Physical Sciences: Physics Licensure

Admission Requirements
Students pursuing teacher licensure must request acceptance into the Center for Teacher Education.

Special Programs
The department offers a variety of research opportunities for interested students including research in astronomy, laser optics, plasma physics, astrophysics, solid state, and atomic physics.

Major Course Requirements
All required courses in major subject area must be completed with a grade of 'C' or higher. All required courses outside of the major subject area must be completed with a grade of 'D' or higher.

Physics Major (37-63 credit hours)
Students majoring in physics are required to complete one of three concentrations: physics, astronomy, or applied physics. The 37-63 credit hours above include 10 required major courses and 2 other required courses plus 27 credit hours for the physics concentration, or 35 credit hours for the astronomy concentration, or 9 credit hours for the applied physics concentration.

Required major courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 2311</td>
<td>Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2321</td>
<td>Physics 2</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2341</td>
<td>Physics Laboratory 1</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2351</td>
<td>Physics Laboratory 2</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 3051</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3451</td>
<td>Math Methods</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3731</td>
<td>Analytical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4111</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
</tbody>
</table>

Other required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1631</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1641</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
</tbody>
</table>

Physics Concentration (27 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 3011</td>
<td>Advanced Physics Lab</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3751</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3951</td>
<td>Independent Research</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 3331</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3331</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4121</td>
<td>Electricity and Magnetism</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 4951</td>
<td>Senior Thesis Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Astronomy Concentration (35 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1051</td>
<td>Planetary Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1061</td>
<td>Stars and Galaxies</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1081</td>
<td>Planetary Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1091</td>
<td>Stars and Galaxies Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 3331</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>Advanced Physics Lab</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3471</td>
<td>Introductory Astrophysics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3751</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3951</td>
<td>Independent Research</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 4121</td>
<td>Electricity and Magnetism</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 4951</td>
<td>Senior Thesis Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Other required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECCS 1611</td>
<td>Programming 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2631</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2651</td>
<td>Differential Equations</td>
<td>4</td>
</tr>
</tbody>
</table>

Applied Physics Concentration (9 credit hours)

The applied physics concentration is intended for students who are completing the requirements for a second program in addition to the physics major. Examples of this second program include a second major or minor or a program of courses leading to licensure for public school teaching. The student can choose to obtain licensure in physics, physics and chemistry, or integrated sciences. For further details about the teacher licensure requirements, please see the Department of Education.
PHYS 1051 Planetary Astronomy (3)
PHYS 1061 Stars and Galaxies (3)
PHYS 1081 Planetary Astronomy Laboratory (1)
PHYS 1091 Stars and Galaxies Laboratory (1)
PHYS 2111 Classic Newtonian mechanics and thermodynamics. The corresponding laboratory is PHYS 2341. Offered spring semester.
PHYS 2311 Electrical and magnetic phenomena. Oscillations and sound. Optics. The corresponding laboratory is PHYS 2351. Offered fall semester.
PHYS 2321 Electrical and magnetic phenomena. Oscillations and sound. Optics. Differential and integral calculus are used. The corresponding laboratory is PHYS 2351. Offered fall and spring semesters.
PHYS 3xx1 Physics elective (3)

Minor Course Requirements
All courses required for a minor must be completed with a grade of 'C' or higher.

Astronomy Minor (22 credit hours)
PHYS 1051 Planetary Astronomy (3)
PHYS 1061 Stars and Galaxies (3)
PHYS 1081 Planetary Astronomy Laboratory (1)
PHYS 1091 Stars and Galaxies Laboratory (1)
PHYS 2311 Classic Newtonian mechanics and thermodynamics. The corresponding laboratory is PHYS 2351. Offered spring semester.
PHYS 2321 Electrical and magnetic phenomena. Oscillations and sound. Optics. The corresponding laboratory is PHYS 2351. Offered spring semester.
PHYS 3xx1 Physics elective (3)

Teacher Licensure in Physics
This option is available to students majoring in physics (54 credit hours)
CHEM 1711 General Chemistry 1 (5)
CHEM 1721 General Chemistry 2 (5)
BIOL 1311 Biology 1: Cells and Molecules (4)
EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-Day Field Experience (1)
EDUC 1521 Five-Day Field Experience (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment
EDUC 3201 Instructional Media and Educational Technologies (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4401 Educational Psychology and Instructional Practices (3)
EDUC 4511 Integrated Science Methods (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4651 Science Education Portfolio (0)
EDUC 4721 Student Teaching/AYA (12)

Specified general education courses
CACS 2151 Communication in the Classroom (3)
PSYC 1001 Psychology (3)
PSYC 2171 Adolescent Psychology (3)

Notes:
1 Substitution of courses may be made with the approval of the chair of the Department of Physics. Substituted courses may be either internal to the Department of Physics or external. A maximum of 3 external credit hours may be substituted provided a grade of 'C' or higher is earned in the corresponding course. Internal substitutions which may be allowed are PHYS 2111 for PHYS 2311 or PHYS 2121 for PHYS 2321. External substitutions which may be allowed are GE 2141 for PHYS 3731, ECCS 3111 for PHYS 4111, or CHEM 3421 for PHYS 3531.
2 Some of the courses listed contain material which is similar but treated at different levels. Consequently, credit for both PHYS 2111 and 2311, or PHYS 2121 and 2321, cannot be given toward satisfying minimum program requirements.
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisite(s)</th>
<th>Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>2341</td>
<td>Physics Laboratory 1</td>
<td>1</td>
<td>Experiments in Newtonian mechanics and thermodynamics. PHYS 2111 or 2311 should be taken concurrently, or instructor’s permission must be obtained. Offered fall and spring semesters.</td>
<td>PHYS 2111 or PHYS 2311.</td>
<td>alternate fall semesters.</td>
</tr>
<tr>
<td>2351</td>
<td>Physics Laboratory 2</td>
<td>1</td>
<td>Experiments in electricity and magnetism, sound and optics. PHYS 2121 or 2321 should be taken concurrently, or instructor’s permission must be obtained. Offered fall and spring semesters.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td>alternate fall semesters.</td>
</tr>
<tr>
<td>2901</td>
<td>Special Topics in Physics</td>
<td>1 to 3</td>
<td>This course may be repeated 4 times. This course is repeatable for a total of 6 hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3051</td>
<td>Modern Physics</td>
<td>3</td>
<td>General and special relativity, quantum and wave mechanics, atomic and nuclear physics. Offered spring semester.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3111</td>
<td>Nuclear Physics</td>
<td>3</td>
<td>Nuclear structure, nuclear reactions, nuclear constituents, fundamentals of nuclear reactor theory and design, shielding and safety principles in nuclear physics. Offered alternate spring semesters.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3411</td>
<td>Optics</td>
<td>3</td>
<td>The laws of geometrical and physical optics. Image formation by mirrors and lenses and optical aberrations. Interference and diffraction.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3451</td>
<td>Math Methods</td>
<td>3</td>
<td>Vector algebra, vector calculus in arbitrary coordinate systems, Fourier analysis, contour integration in complex plane, special functions. Offered alternate fall semesters.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3471</td>
<td>Introductory Astrophysics</td>
<td>3</td>
<td>Motions and physical nature of objects in the solar system, electromagnetic radiation, telescopes and astronomical detectors.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3511</td>
<td>Solid State</td>
<td>3</td>
<td>Structure of solids. Quantum and statistical mechanics are used to develop theories of internal stress and strain in crystals, conductivity of electricity in metals, semiconductors and superconductors, magnetism, the thermal properties of solids and imperfections in solids.</td>
<td>PHYS 3051.</td>
<td></td>
</tr>
<tr>
<td>3551</td>
<td>Electronics</td>
<td>3</td>
<td>Theory of solid state devices, rectifier circuits, transistor amplifiers, oscillators and modulators, instrumentation applications.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3571</td>
<td>Computational Physics</td>
<td>3</td>
<td>Methods and problems in computational physics.</td>
<td>PHYS 3451 and ECCS 4611.</td>
<td></td>
</tr>
<tr>
<td>3731</td>
<td>Analytical Mechanics</td>
<td>3</td>
<td>Vector analysis, kinematics, conservative forces, planetary motion, pendulum, free and forced oscillations, coupled systems and normal coordinates, angular momentum, rigid bodies. Offered alternate fall semesters.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>3901</td>
<td>Special Topics in Physics</td>
<td>1 to 3</td>
<td>This course may be repeated 4 times. This course is repeatable for a total of 6 hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3951</td>
<td>Independent Research</td>
<td>1 to 2</td>
<td>This course may be repeated 4 times. This course is repeatable for a total of 8 hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4111</td>
<td>Electricity and Magnetism 1</td>
<td>3</td>
<td>Electrostatic field theory, capacitance, multipole expansion, dielectric properties of matter; magnetic field theory; electromagnetic induction; magnetic properties of matter; Maxwell's equations and electromagnetic waves. Offered alternate fall semesters.</td>
<td>PHYS 2121 or PHYS 2321.</td>
<td></td>
</tr>
<tr>
<td>4121</td>
<td>Electricity and Magnetism 2</td>
<td>3</td>
<td>Advanced electric and magnetic fields; electric and magnetic properties of solids, electromagnetic radiation. Offered alternate spring semesters.</td>
<td>PHYS 4111.</td>
<td></td>
</tr>
<tr>
<td>4901</td>
<td>Special Topics in Physics</td>
<td>1 to 3</td>
<td>Part of the Physics major program and offered when needed. This course may be repeated 4 times. This course is repeatable for a total of 6 hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4951</td>
<td>Senior Thesis Seminar</td>
<td>1</td>
<td>Written and oral presentation of the complete Capstone Research Project. The Research Project is written in the format of a scientific manuscript and presented during a formal seminar. This course will be the culmination of the Capstone experience. Offered spring semester.</td>
<td>PHYS 3951.</td>
<td></td>
</tr>
<tr>
<td>4971</td>
<td>Independent Research</td>
<td>1 to 3</td>
<td>1 to 3 Credits. Part of the Physics major program and offered when needed. This course may be repeated 4 times. This course is repeatable for a total of 8 hours.</td>
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<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF PSYCHOLOGY AND SOCIOLOGY

Professors  Cohoe, Durkin; Associate Professors  Carrothers  (Chair),
Payment; Assistant Professors  Kraynok, Zoladz; Visiting Instructor  Brooks

Mission Statement
The mission of the Department of Psychology and Sociology is to provide students with an intellectual foundation in the theories that explain human behavior under both normal and abnormal conditions and clarify how pre-existing patterns of behavior shape human interaction. Students are taught to critically evaluate, theoretically analyze, and scientifically produce research findings about everyday life and to translate the knowledge they have gained from courses through the application of these skills.

Majors, Minors and Degrees Offered
Psychology Major /Behavioral Neuroscience Concentration (BS)
Psychology Major /Clinical and Counseling Psychology Concentration (BA, BS)
Psychology Major /General Psychology Concentration (BA, BS)
Sociology Major (BA)
Psychology Minor
Sociology Minor

Special Programs
Honoraries and Organizations
Alpha Kappa Delta is the international honor society in sociology, founded in 1920. Membership in Alpha Kappa Delta is limited to those students with superior scholarship and serious interest in sociology who meet the criteria for membership. Alpha Kappa Delta derives its name from the first letters of three Greek words, which, when translated freely, express both the goal and the method of Alpha Kappa Delta: "To study humankind for the purpose of service."
Psi Chi, the national honor society in psychology, was founded in 1929 for the purpose of encouraging, stimulating and maintaining excellence in scholarship and advancing the science of psychology. Membership in the society is selective and based on high academic performance.
Psi Sigma is a student organization open to all students with an interest in either psychology or sociology. The club sponsors speakers and fundraisers for community organizations.

Internships and Research
Students majoring in psychology and sociology have the opportunity to pursue internships and research. Psychology internships may include anything from experience with childhood development to experience with clinical and/or counseling psychologists. Sociology majors may pursue internship opportunities at various social service agencies. Students might also gain research experience by working closely with a specific faculty member to conduct empirical investigations in various areas of psychological or sociological inquiry.

Major Course Requirements
All required courses, both in and outside of the major subject area must be completed with a grade of ‘C’ or higher.

Psychology (39-42 credit hours)
Psychology majors must complete one of three concentrations: behavioral neuroscience, clinical and counseling psychology, or general psychology. Each concentration has been designed to prepare students for graduate study in general psychology or specific subfields within the discipline. The 39-42 credit hours listed above includes 16 credit hours of common courses plus 25 credit hours for the behavioral neuroscience concentration, 26 credit hours for the clinical and counseling psychology concentration, and 23 credit hours for the general psychology concentration.

PSYC 1001  Psychology (3)
PSYC 2401  Statistics for the Behavioral Sciences (3)
PSYC 3401  Experimental Psychology with Lab (4)
PSYC 4951  Senior Capstone in Psychology I (1)
PSYC 4961  Senior Capstone in Psychology II (1)

Other required courses
BIOL 1201  Introductory Biology (4)

Behavioral Neuroscience Concentration (25 credit hours)
The behavioral neuroscience concentration is designed to prepare students for graduate study in physiological psychology, behavioral neuroscience or neuropsychology.
PSYC 3151  Learning and Behavior with Lab (4)
PSYC 3251  Cognitive Psychology with Lab (4)
PSYC 3301  Sensation and Perception with Lab (4)
PSYC 3351  Physiological Psychology with Lab (4)
PSYC 4351  Psychopharmacology (3)

Complete at least one elective from each of the following two categories:
Developmental Aspects of Psychology:
PSYC 2161  Child Psychology (3)
PSYC 2171  Adolescent Psychology (3)

Clinical and Social Aspects of Psychology:
PSYC 3011  Social Psychology (3)
PSYC 3111  Psychology of Personality (3)
PSYC 4201  Abnormal Psychology (3)

Clinical and Counseling Psychology Concentration (26 credit hours)
The clinical and counseling psychology concentration is designed to prepare students for immediate entry into the workforce or graduate study in clinical or counseling psychology.
PSYC 2301  Introduction to Counseling (3)
PSYC 3111  Psychology of Personality (3)
PSYC 3121  Psychological Assessment (3)
PSYC 4201  Abnormal Psychology (3)
PSYC 4351  Psychopharmacology (3)

Complete at least one elective from each of the following three categories:
Physiological Aspects of Psychology:
PSYC 3301  Sensation and Perception with Lab (4)
PSYC 3351  Physiological Psychology with Lab (4)

Cognitive Aspects of Psychology:
PSYC 3151  Learning and Behavior with Lab (4)
PSYC 3251  Cognitive Psychology with Lab (4)

Developmental Aspects of Psychology:
PSYC 2161  Child Psychology (3)
PSYC 2171  Adolescent Psychology (3)

General Psychology Concentration (23 credit hours)
The general psychology concentration is designed to prepare students for immediate entry into the workforce or graduate study in most subdisciplines of experimental psychology.
PSYCH 2xx1-4xx1  Psychology elective (3)

Complete at least one elective from each of the following four categories: (14)
Physiological Aspects of Psychology:
PSYC 3301  Sensation and Perception with Lab (4)
PSYC 3351  Physiological Psychology with Lab (4)

Cognitive Aspects of Psychology:
PSYC 3151  Learning and Behavior with Lab (4)
PSYC 3251  Cognitive Psychology with Lab (4)

Developmental Aspects of Psychology:
PSYC 2161  Child Psychology (3)
PSYC 2171  Adolescent Psychology (3)
Clinical and Social Aspects of Psychology:
PSYC 3011 Social Psychology (3)
PSYC 3111 Psychology of Personality (3)
PSYC 4201 Abnormal Psychology (3)

Sociology Major (37 credit hours)
Sociology majors must complete a core set of courses covering research methodology, data analysis, and sociological theory as well as a series of elective courses covering areas such as criminology, social psychology, social stratification, and medical sociology. These degree requirements prepare students for graduate work in sociology and related fields, as well as entry into the job market.

SOC 1001 Introduction to Sociology (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 4461 Classic Sociological Theory (3)
SOC 4471 Contemporary Sociological Theory (3)

Other required courses
ISR 2531 Research Methods (3)
ISR 2541 Data Analysis (4)
STAT 1311 Introduction to Statistical Reasoning (3)

Minor Course Requirements
All courses required for a minor must be completed with a grade of ‘C’ or higher.

Psychology Minor (19 credit hours)
PSYC 1001 Psychology (3)
PSYC 2xx1-4xx1 Psychology electives (3)
PSYC 2xx1-4xx1 Psychology electives (3)

Complete at least one elective from each of the following three categories:
Cognitive and Physiological Aspects of Psychology:
PSYC 3151 Learning and Behavior with Lab (4)
PSYC 3251 Cognitive Psychology with Lab (4)
PSYC 3301 Sensation and Perception with Lab (4)
PSYC 3351 Physiological Psychology with Lab (4)

Developmental Aspects of Psychology:
PSYC 2161 Child Psychology (3)
PSYC 2171 Adolescent Psychology (3)

Clinical and Social Aspects of Psychology:
PSYC 3011 Social Psychology (3)
PSYC 3111 Psychology of Personality (3)
PSYC 4201 Abnormal Psychology (3)

Sociology Minor (28 credit hours)
SOC 1001 Introduction to Sociology (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 2xx1-4xx1 Sociology electives (3)
SOC 4461 Classical Sociological Theory (3)

Other required courses
ISR 2531 Research Methods (3)
ISR 2541 Data Analysis (4)
STAT 1311 Introduction to Statistical Reasoning (3)

Notes:
Developments across the Lifespan (PSYC 2151) is designed for non-psychology majors. Psychology majors who are interested in developmental psychology should take courses within the developmental sequence (PSYC 2161, PSYC 2171). Students taking PSYC 2151 should not take PSYC 2161 or PSYC 2171 and vice-versa.

2 Students may take an unlimited number of PSYC 4261 and 4271 credits. However, a maximum of 3 of these credits may be used as the equivalent of a psychology elective, and only 9 credits from these courses can be applied toward graduation.

3 Students may take an unlimited number of SOC 4811, 4881, 4891 and 4981 credits. However, a maximum of 3 of these credits may be used as the equivalent of a sociology elective, and only 9 credits from these courses can be applied toward graduation.

4 The capstone requirement will be filled by work done in the SOC 4461 and 4471 courses.

Subject - Psychology (PSYC)

1001 - Psychology
3 Credits
Introduction to the scientific approach to understanding human behavior and mental processes. Topics may include human development, learning and memory, personality, social and environmental factors, biological aspects of behavior, the experience of emotion and psychological disorders. Offered fall and spring semesters.

2101 - Motivation and Emotion
3 Credits
Examination of how motivational factors, including emotion, affect the behavior of human and non-human organisms. Theoretical and empirical evidence addressing the biological, behavioral and mental events that trigger and direct behavior will be covered. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2151 - Development across the Lifespan
3 Credits
Basic theories in human development from conception through old age using a biopsychosocial model; contemporary research at each age level. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2161 - Child Psychology
3 Credits
Survey of the basic theories and research relative to human growth and development from conception through late childhood with an emphasis on the physiological, cognitive, socioemotional and cultural changes associated with human life. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2171 - Adolescent Psychology
3 Credits
Survey of the basic theories and research relative to human growth and development from preadolescence through young adulthood with an emphasis on the physiological, cognitive, socioemotional and cultural changes associated with human life. Offered fall semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2201 - Health Psychology
3 Credits
Examination health using a bio-psycho-social model and investigation of the relation between psychology, health-promoting behaviors, wellness, sickness, and the health care system. Offered alternate spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2261 - Human Sexual Behavior
3 Credits
Use of research literature in an attempt to provide an understanding of what is known (as well as what is not known) about the major facets of human sexual behavior. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).
2301 - Introduction to Counseling  
3 Credits  
Discusses the basic skills involved in the counseling relationship, including attending, client observation, paraphrasing, summarization, confrontation, and reflection of feeling; explores basic skills and emphasizes skill development as well as counseling theory. Offered fall semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

2401 - Statistics for the Behavioral Sciences  
3 Credits  
Provides an introduction to statistical methods in the behavioral sciences and stresses understanding when and why certain statistical procedures are used. Topics include descriptive and inferential statistics, including measures of central tendency and dispersion, correlation, hypothesis testing, t-tests, analysis of variance, and chi square. This course may be used to fulfill a math/stat distributional requirement. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C) or PSYC 100 Minimum Grade of C). Must be enrolled in one of the following Major fields of study: Psychology.

2901 - Special Topics in Psychology  
3 Credits  
Coverage of special topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

2921 - Topics in Psychology  
3 Credits  
Coverage of topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

3011 - Social Psychology  
3 Credits  
The effects of social and cultural forces upon the individual. The nature and development of attitudes, languages, cognitive processes. Individual and group projects illustrative of the methodology of social psychology. Offered fall semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3111 - Psychology of Personality  
3 Credits  
The major theories of personality from Freud to contemporary theoretical approaches. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3121 - Psychological Assessment  
3 Credits  
Psychological measurement and evaluation in the areas of intelligence tests, tests of separate abilities, and personality inventories. Experience will be gained in test administration, scoring and interpretation. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3151 - Learning and Behavior with Lab  
4 Credits  
The major theories and empirical issues related to common forms of learning, such as classical and instrumental conditioning. Current research in learning is covered on both the human and non-human animal level. Laboratory component involves application of learning principles to modify the behavior of organisms. Offered fall semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3201 - Psychology and the Law  
3 Credits  
A review of the role of the psychologist in civil commitment procedures, the insanity defense, patient’s rights, the determination of competency and testifying as an expert witness. An examination of significant case studies involving psychology and the law, research in the areas of jury selection, eye witness testimony and psychologists’ licensing procedures. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3211 - Psychology of the Criminal Mind  
3 Credits  
Focus on forensic psychology utilizing criminal justice and psychological theoretical approaches. Specific attention is paid to the processes of identifying personality traits, behavioral tendencies, geographical location and demographic variables of an offender based on characteristics of a crime. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3251 - Cognitive Psychology with Lab  
4 Credits  
An introduction to the complex system of mental abilities. Theoretical and empirical approaches to the role of pattern recognition, attention, memory, problem-solving and decision making in human thinking will be explored. Laboratory component involves participation in experiments designed to facilitate student understanding of cognition phenomena. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3301 - Sensation and Perception with Lab  
4 Credits  
Biological and psychological mechanisms responsible for internalizing the external world. In-depth discussion of the relationship between physical and psychological events based on theoretical and empirical evidence. Laboratory component will use laboratory techniques to illustrate the biological and psychological mechanisms underlying sensation and perception. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

3351 - Physiological Psychology with Lab  
4 Credits  
Psychology as a biological science. Physiological events underlying behavior, including sensory, neural, and glandular involvement in such topics as motivation, emotion, and learning. Laboratory component involves dissections and experiments used to illustrate the role of biological processes in behavior. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C and BIOL 1311 Minimum Grade of C).

3401 - Experimental Psychology with Lab  
4 Credits  
The logic of experimental research and the application of the methods of science to the study of behavior. Particular emphasis on framing empirically testable hypotheses, experimental design, and analysis of data. Extensive instruction in scientific communication and the APA Publications Manual. Laboratory component involves use of computer simulation and research experience to facilitate student understanding of the processes involved in empirical psychological investigations. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C and PSYC 2401 Minimum Grade of C).

3901 - Special Topics in Psychology  
3 Credits  
Coverage of special topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

3921 - Topics in Psychology  
3 Credits  
Coverage of topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

4201 - Abnormal Psychology  
3 Credits  
4261 - Internship Practicum in Psychology
1 to 12 Credits
A field experience in the area of psychology. Only 3 practicum credits may be applied to the major. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

4271 - Research Practicum in Psychology
1 to 12 Credits
A research experience in the field of psychology supervised by a faculty member. Only 3 research practicum credits may be applied to the major. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

4281 - Teaching Practicum in Psychology
3 Credits
A mentoring experience in conducting undergraduate psychology laboratories. Practicum students work with a supervising professor in preparation and presentation of instruction and laboratory exercises and providing feedback to students. Ethical, organizational and practical issues will be discussed. Only 3 practicum credits may be applied to the major. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C).

4351 - Psychopharmacology
3 Credits
An advanced examination of pharmacological agents and their effects on neuronal function, with a particular emphasis on the alteration of behavioral states. Major drug classes, their pharmacological properties and their use to treat various psychological disorders will be covered. Offered alternate fall semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C and BIOL 1311 Minimum Grade of C).

4901 - Special Topics in Psychology
3 Credits
Coverage of special topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

4921 - Topics in Psychology
3 Credits
Coverage of topics in psychology. Offered fall and spring semesters. Prerequisite(s): (PSYC 1001 Minimum Grade of C). This course is repeatable as topic changes.

4951 - Senior Capstone in Psychology I
1 Credit
Use of developed skills in the field of psychology to prepare students for graduate studies in psychology or careers in psychology. Students will be exposed to the Psychology GRE subject test, graduate school interview process, preparation of a curriculum vitae, preparation of a personal statement, reviewing psychological journal articles, and preparation of literature review or experimental study proposal. Offered fall semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C and PSYC 3401 Minimum Grade of C).

4961 - Senior Capstone in Psychology II
1 Credit
Continuation of PSYC 4951. Offered spring semester. Prerequisite(s): (PSYC 1001 Minimum Grade of C and PSYC 3401 Minimum Grade of C and PSYC 4951 Minimum Grade of C).

4971 - Independent Study in Psychology
1 to 4 Credits
Offered fall and spring semesters. This course may be repeated one time.

Subject - Sociology (SOC)

1001 - Introduction to Sociology
3 Credits
The basic phenomena and processes of social life: culture, socialization, deviance, social institutions (family, economy, education, religion, military), bureaucratization, collective behavior, social inequality, race, ethnicity, class, gender, and sexuality. Analysis of the interplay between the person and social groups. Offered fall and spring semesters.

2301 - Sociology of Religion
3 Credits
Survey of the sociological study of religion as a social institution within a social system. Trends and patterns of individual, group, and organizational religious behavior are assessed using critical and empirical analysis, sociological theories, ideas and concepts. Offered alternate spring semesters.

2401 - Sociology of the Family
3 Credits
Historical, cross cultural, and analytical study of family with emphasis on ideology and the effects of social structures and agencies on family composition and roles. Offered fall semester.

2431 - Deviant Behavior
3 Credits
Sociological perspectives on the processes of individual and group deviance. An examination of how deviant behavior is defined, how the definitions are maintained, and how the violators are processed. Theory and research regarding specific classes of deviants are explored, and current public policy issues concerning deviants are discussed. Offered alternate fall semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

2501 - Cultural Anthropology
3 Credits
The major concepts and principles of cultural anthropology, emphasizing the understanding of the total configuration and interrelationships of cultural traits, complexes, and social relationships in a particular geographic environment and historical context. Offered fall and spring semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

2601 - Social Problems
3 Credits
Sociological perspectives on contemporary problems and the process by which these issues come to be socially constructed as problems. Offered alternate spring semesters.

2611 - Criminology
3 Credits
The nature and extent of crime, development of criminological theory, major forms of criminal behavior, and society's attempts at prevention and control of crime. The major perspectives, issues and diverse concerns that characterize contemporary criminology are presented. Offered spring semester. Prerequisite(s): (SOC 1001 Minimum Grade of C).

2631 - Victimology
3 Credits
The history of victimology, patterns of victimization, the role of the victim in crime, the victim in the criminal justice system (including jury perceptions of victims), victim assistance programs, and victim/offender reconciliation programs. Offered alternate fall semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

2901 - Special Topics
1 Credit
Coverage of topics in sociology. Offered fall and spring semesters.
3461 - Social Stratification
3 Credits
The origins, institutionalization and change of class, status, prestige, power, and other forms of social inequality with attention to the effects of stratification on the individual. Offered alternate fall semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

3471 - Race, Class, and Gender
3 Credits
Analysis of the structural interplay and social ramifications of race, social class, and gender. The course focuses on power relationships, intra and intergroup conflict, and minority relations. Offered spring semester. Prerequisite(s): (SOC 1001 Minimum Grade of C).

3481 - Sociology of Health and Health Care
3 Credits
This course introduces students to the social dimensions of health, illness, and health care. The sociology of health and health care, often referred to as medical sociology, examines a broad range of topics relevant to those in many fields of study. These topics include the social distribution of disease, social stress, health and illness behaviors, medical professions, the doctor-patient relationship, and health care systems. Offered alternate fall semesters.

3491 - Sociology of Mental Health and Illness
3 Credits
Sociological perspectives on the definition, causes, patterning, and responses to mental health and illness. Topics include sociological (versus psychological or biological) theories of mental health and illness, the stress process, and the differential distribution of mental health and illness by race/ethnicity, gender, socioeconomic status, age, and marital status. Also covers the labeling or social construction of mental illness, as well as how society and various social institutions respond to those in need of treatment. Offered alternate spring semesters.

3501 - Self and Identity
3 Credits
The theories of and research done on the self, self-concept, and identities in humans from both sociological and psychological perspectives. Offered alternate fall semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

3551 - Advanced Data Analysis
3 Credits
Multivariate statistical procedures, including measures of association for nominal and ordinal variables as well as correlation. Simple, multiple and logistic regression. Cleaning data, and construction of and evaluation of measurement scales. Involves the use of statistical software.

3611 - Delinquency & Juvenile Justice
3 Credits
An analysis of competing theoretical approaches to the causes of delinquent behavior, and the study of the prevention, treatment, and control of delinquency. Procedures and major contemporary issues in Juvenile Justice are addressed. Offered alternate spring semesters. Prerequisite(s): (SOC 1001 Minimum Grade of C).

3621 - Occupational Crime & Deviance
3 Credits
The various forms of criminal and deviant behavior that occur in the occupational context. A discussion of the nature of deviance, the extent, consequences, and strategies to control this behavior. Major theoretical perspectives on occupational crime and deviance are considered. Topics covered include: white-collar crime, organized crime, employee theft, career criminality, and workplace violence. Offered alternate spring semesters.

3631 - Sociology of Substance Abuse
3 Credits

3901 - Special Topics in Sociology
1 Credit
Coverage of topics in sociology. Offered fall and spring semesters.

4461 - Classical Sociological Theory
3 Credits
Traces sociological theorizing from sociology’s historical origins. Major theorists covered include Marx, Durkheim, Weber, Simmel, and Chicago School sociologists. Emphasis on building an understanding of the roots of contemporary social theory. Senior status. Offered fall semester. Prerequisite(s): (SOC 1001 Minimum Grade of C). Corequisite(s): SOC 4881.

4471 - Contemporary Sociological Theory
3 Credits
The major sociological theories developed since 1950. An examination of the critical debates in contemporary social theory. Senior status. Offered spring semester. Prerequisite(s): (SOC 1001 Minimum Grade of C) Corequisite(s): SOC 4881.

4811 - Sociology Internship
4 to 16 Credits
Supervised placement in an agency which involves work experience related to sociology or criminology or work experience on a research project. Senior status, 2.75 GPA, consent of instructor, and approval of Department Chair. Offered fall and spring semesters.

4881 - Senior Capstone Research 1
2 Credits
Development of research topic and/or question, literature review, and outline of research project directed by faculty advisor. Capstone Research does not count toward Sociology elective hours. Senior status, sociology primary major, and permission of advisor. Offered fall and spring semesters. Corequisite(s): SOC 4481.

4891 - Senior Capstone Research 2
3 Credits
Research design, data collection, data analysis, and writing of the research paper directed by faculty advisor. Capstone Research does not count toward Sociology elective hours. Offered fall and spring semesters. Prerequisite(s): (SOC 4881 Minimum Grade of C) Corequisite(s): SOC 4471.

4981 - Independent Study in Sociology
1 to 4 Credits
Approval of Chairperson. Offered fall and spring semesters.

DEPARTMENT OF TECHNOLOGICAL STUDIES

Professor Rouch (Chair); Associate Professors Jao, Nutter; Assistant Professor Stienecker; Visiting Instructor Miller

Mission Statement
The mission of the Department of Technological Studies is to graduate leaders that pursue life-long learning, possess a high degree of technological literacy and the ability to implement and manage emerging technologies to benefit the world.

Overview Statement
The course work comprising the curriculum in the Department of Technological Studies is designed to prepare students for careers in professional and technical fields throughout industry and education.
Majors, Minors and Degrees Offered

Construction Management Major (BS)
Manufacturing Technology Major / Applied Robotics Concentration (BS)
Technology Education Major (BS)
Technology Systems Minor

Certification and Licensure Offered

The department provides opportunities for students to gain certifications in the following: ATMAE Manufacturing Specialist, Construction, MS Office software related, and other software related certifications, as appropriate.

Admission Requirements

Students desiring teacher licensure must meet the requirements for admission into the Center for Teacher Education. See page 65 for details.

Special Programs

Tours of Industries

The department has developed an extensive program of field work involving tours to relevant industries both regionally and internationally. Students are required to participate in at least one tour of industry class. The department will periodically take the Tour of Industries to study abroad locations.

Internships and Cooperative Experiences

The department offers two different work experience programs. The first is a one-semester internship (TECH 4841) designed to give the student a 15 week real-world experience, which is completed during the normal four-year program. The other is a five-year co-op program in which the student enrolls in TECH 3801 (Professional Practice) and completes at least two semesters of work experience, usually with the same company. No other courses can be taken while on a co-op experience. Participation in intercollegiate athletic teams is prohibited while on a co-op experience. Once the experience is begun, it can be terminated by the participant, the department, the university, or the employer for any reason. Co-op employers must meet the requirements of the department and the university. Requirements of the co-op program are provided in the TECH 3801 course description and details are available in the department office.

Organized Professional Activities

Also, students are given opportunities and are expected to participate in a variety of organized professional activities with professional student organizations such as the Society of Manufacturing Engineers (SME), Association of Technology Management, and Applied Engineering (ATMAE), and Construction Management.

Certification and Licensure Offered

The Technology Education major and teacher licensure program is in alignment with ITEEA/CTTE/NCATE program standards and is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Accreditation

The construction and manufacturing programs are accredited by the Association for Technology, Management, and Applied Engineering (ATMAE).

Admission Requirements

Students majoring in Technology Education pursue the following teaching licensure: Career-Technical Technology Education Licensure (grades 4-12).

Major Course Requirements

All required courses in major subject area (TECH) must be completed with a grade of ‘C’ or higher. All required courses outside of the major subject area must be completed with a grade of ‘D’ or higher.

Construction Management Major (78-88 credit hours)

TECH 1001 Technology and Society (3)
TECH 1201 Introduction to CAD (3)
TECH 1301 Materials Science (3)
TECH 1601 Fundamentals of Electronics (3)
TECH 2211 Construction Design (4)
TECH 2301 Materials and Processes (3)
TECH 2401 Computer Networking (3)
TECH 2501 Construction Materials and Methods (4)
TECH 2701 Fluid and Mechanical Systems (3)
TECH 3421 Database Management and Applications (3)
TECH 3511 Applied Soils and Foundations (4)
TECH 3611 Applied Controls 1 (4)
TECH 4521 Construction Estimating and Scheduling (3)
TECH 4961 Tour of Industries (1)
TECH 4991 Senior Capstone (1)
TECH xxx1 Technical elective (3)
TECH xxx1 Technical elective (3)

Complete one (capstone experience)

TECH 3801 Professional Practice in Technological Studies (2)
TECH 4841 Internship (12)

Other required courses

BIZ 2131 Legal Environment for Business Planning (3)
BIZ 2331 Behavioral Management for Business Planning (3)
CE 2011 Surveying (3)
CE 4141 Project Management (3)
CHEM 1001 Chemistry (3)
MATH 1611 Calculus with Precalculus 1 (4)
MGMT 3631 Human Resource Management (3)
PHYS 1001 Physics (3)

Manufacturing Technology Major (76-79 credit hours)

TECH 1001 Technology and Society (3)
TECH 1201 Introduction to CAD (3)
TECH 1301 Materials Science (3)
TECH 1601 Fundamentals of Electronics (3)
TECH 2231 Product Design and Analysis (4)
TECH 2301 Materials and Processes (3)
TECH 2401 Computer Networking (3)
TECH 2701 Fluid and Mechanical Systems (3)
TECH 3421 Database Management and Applications (3)
TECH 3611 Applied Controls 1 (4)
TECH 3631 Applied Controls 2 (3)
TECH 4621 Programming in Embedded Sys. (4)
TECH xxx1 Technical elective (3)
TECH xxx1 Technical elective (3)

Applied Robotics Concentration (38 credit hours)

TECH 3641 Industrial Instrumentation (3)
TECH 3651 Applied Controls 3 (4)
TECH 4341 Advanced Robotics 1 (capstone) (2)
TECH 4351 Advanced Robotics 2 (capstone) (2)
TECH 4661 Applied Controls 4 (4)
TECH 4671 Robotic Systems (3)

Other required courses

MATH 1631 Calculus 1 (4)
MATH 1641 Calculus 2 (4)
MATH 2651 Differential Equations (4)
PHYS 2311 Physics 1 (4)
PHYS 2321 Physics 2 (4)
MANUFACTURING MANAGEMENT CONCENTRATION (35 credit hours)

TECH 3211 Digital Manufacturing (4)
TECH 3221 Manufacturing Simulation (4)
TECH 4111 Product Manufacturing (4)
TECH 4121 Manufacturing Management (3)
TECH 4341 Advanced Robotics 1 (capstone) (2)
TECH 4351 Advanced Robotics 2 (capstone) (2)

OTHER REQUIRED COURSES

CHEM 1001 Chemistry (3)
MATH 1401 Functions for Science and Technology (3)
MATH 1421 Calculus for Science and Technology (3)
PHYS 1001 Physics (3)
STAT 1421 Statistics (4)

TECHNOLOGY EDUCATION MAJOR (92 credit hours)

TECH 1001 Technology and Society (3)
TECH 1201 Introduction to CAD (3)
TECH 1301 Materials Science (3)
TECH 1421 Web Design (3)
TECH 1601 Fundamentals of Electronics (3)
TECH 2211 Construction Design (4)
TECH 2301 Materials and Processes (3)
TECH 2401 Computer Networking (3)
TECH 2501 Construction Materials and Methods (4)
TECH 2701 Fluid and Mechanical Systems (3)
TECH 3611 Applied Controls I (4)
TECH 4111 Product Manufacturing (4)
TECH 4961 Tour of Industries (1)
TECH 4991 Senior Capstone (1)
TECH XXX1 Technical elective (3)
TECH XXX1 Technical elective (3)

REQUERIED EDUCATION COURSES

EDUC 1151 Culture and Schooling (3)
EDUC 1501 Five-day Field Experience I (1)
EDUC 1521 Five-day Field Experience II (1)
EDUC 2101 Exceptional Learners (3)
EDUC 2681 Curriculum and Assessment (3)
EDUC 3041 Strategies for Technology Education (3)
EDUC 3451 Literacy Across the Content Areas AYA/MA (3)
EDUC 4581 Organizations and Methods for Technology Education (3)
EDUC 4451 Leadership Seminar in Education (3)
EDUC 4701 Student Teaching – EC/MC (6)
EDUC 4721 Student Teaching – AYA (6)

OTHER REQUIRED COURSES

PSYC 1001 Psychology (3)
PSYC 2171 Adolescent Psychology (3)
CACS 2151 Communication in the Classroom (3)

NOTES:

Students must be admitted to teacher education to take 3001-level and above education (EDUC) courses.
Students must attend 160 hours of course related field experience.
Graduates of the program must attain a passing score on Praxis II for Teacher Licensure.
Admission to Teacher education requires at least a 2.50 accumulative GPA.

MINOR COURSE REQUIREMENTS

All courses required for a minor must be completed with a grade of 'C' or higher.

TECHNOLOGY SYSTEMS MINOR (18 credit hours)

Students from all disciplines are encouraged to use courses from the Department of Technological Studies as a corollary to their major. This will permit students to use technology custom-made to meet individual needs and interests. Any student interested in the technology systems minor should contact the department to obtain a proposal form that the student completes to indicate personal objectives to be met with the minor plus a list of intended courses for the minor.

TECH 1001 Technology and Society (3)
TECH ###1 Technical elective (3)
TECH ###1 Technical elective (3)
TECH ###1 Technical elective (3)
TECH ###1 Technical elective (3)
TECH ###1 Technical elective (3)

NOTES:

Technical electives taken for the minor may not be a part of a student’s major program of study and require department approval. Specific courses used to fulfill the requirements of the minor must be proposed to the Department of Technological Studies prior to declaring the minor.

SUBJECT - TECHNOLOGY (TECH)

1001 - Technology and Society
3 Credits
An overview of the development and design of technical systems in society, their impact throughout history, and procedures for making choices of appropriate technology to apply in the future. Lab activities and visitations utilized to reinforce concepts. Offered fall semester.

1201 - Intro to Computer Aided Design
3 Credits
Graphic representation using the personal computer. Attention will be placed on the standards of the technical graphics field and the graphic illustration and visualization techniques as applied to CAD software. Develop proficient use of CAD software for solid modeling and orthographic projection, sections, auxiliary views, file conversion, and size description. Offered spring semester.

1301 - Materials Science
3 Credits
An investigation into major industrial materials and their properties using industry standard testing formulas and equipment. The conversion of raw materials via extraction, refining, and processing into consumer products. An emphasis on safety, metallurgy, nondestructive testing, destructive testing and material processing will be applied. Offered fall semester.

1401 - Intro to Information Systems
3 Credits
Fundamental computer literacy skills in Windows environment. Basic computer terminologies. Productivity software applications such as word processing, spreadsheets, database and presentation tools with an emphasis on organizing, accessing, managing and presenting data for personal and professional communication. Offered fall semester.

1421 - Web Design
3 Credits
The development of computing skills focusing on web site design. Site structure, site planning, multimedia authoring, and the use of computer peripherals. Developing web sites using XHTML, DHTML, CSS, and web authoring software applications. Designing web based computer graphics and publishing web sites to the WWW. Offered fall and spring semesters.

1601 - Fundamentals of Electronics
3 Credits
The fundamentals of alternating and direct current will be explored in the context of changing technological advances. Basic electrical circuits and electronic components will be studied and utilized in the laboratory. MATH 1401 or above required. Offered fall and spring semesters.

1901 - Special Topics in Technology
1 to 3 Credits
May be repeated as the topic varies. This course is repeatable.
2211 - Construction Design
4 Credits
Pre-construction planning, scheduling, design, engineering and layout. Residential and commercial construction principles, print reading, architectural details, plot surveying and layout, scheduling, creation of architectural working drawings and introductory cost estimating using the latest software and technology available. Offered spring semester. Prerequisite(s): TECH 1201 Minimum Grade of C.

2231 - Product Design and Analysis
4 Credits
Technical sketching, product design processes and the components/variables of good design. Use of CAD solids modeling software to create part models and assemblies. Product designs will be designed and analyzed for manufacturability, performance, and potential for profitability for a company. Oral presentations, patent searches, and prototype development. Offered fall semester. Prerequisite(s): TECH 1201 Minimum Grade of C.

2301 - Materials and Processes
3 Credits
Materials and processes involved in machining and fabricating of consumer products. Machining technologies include traditional and nontraditional material removal equipment, tooling and processes. Fabrication operations include welding, fastening and adhesives. Offered spring semester.

2311 - Custom Woodworking
3 Credits
Basic processes, tools, and materials employed in the production of custom, individually designed, and crafted wood projects. May be repeated twice. Offered summers.

2401 - Computer Networking
3 Credits
Introduction to network terminologies, infrastructure (wired topologies), network functions and models of internet. Description of the OSI and TCP/IP layered models. Overview of applications and services of Application, Network, Data Link and Physical Layers. Simulation of LAN topology, configuration of routers and switches, implementation of cable selection and IP addressing schemes. Offered fall and spring semesters.

2501 - Construction Materials & Methods
4 Credits
Basic concepts of construction techniques used today; including the methods and materials involved in framing, enclosing, and finishing residential and light commercial buildings. Financing, contracting, procuring, supervising, site-operation, foundation, structural elements, utilities, landscaping and personnel associated with construction activities. Offered fall semester.

2701 - Fluid and Mechanical Systems
3 Credits
Concepts of fluid power transmission, mechanical applications, and its control. Methods of maintaining, troubleshooting, and repairing energy conversion and transmission devices. Hydraulic and pneumatic power concepts, components, and their symbols. Control techniques experienced with hardware, and simulated with software based PLC ladder logic that is used in fluid and mechanical systems. Offered spring semester.

2901 - Special Topics
1 to 3 Credits
May be repeated as the topic varies. This course is repeatable.

3211 - Digital Manufacturing
4 Credits
Design of mechanical parts and products for manufacturing using 3D CAD solid modeling. Overview of digital manufacturing technologies, and product data and product lifecycle management systems, including Internet applications. Introduction to computer simulation for analysis of assembly processes and ergonomic improvements. Offered fall semester. Prerequisite(s): (TECH 1201 Minimum Grade of C and TECH 2231 Minimum Grade of C).

3221 - Manufacturing Simulation
4 Credits
Application of discrete event computer simulation software for analysis of manufacturing operations and processes. Specific applications include robotics, factory layouts, and product flows. Manufacturing Simulation team project with a local industrial company. Offered fall semester. Prerequisite(s): TECH 3411 Minimum Grade of C.

3411 - Wide Area Networking
3 Credits
The equipment and procedures for selecting hardware and configuring networking equipment and control software for network communication. Overview of WAN protocols, routing protocols, network management, and physical connections. Offered spring semester. Prerequisite(s): TECH 2401 Minimum Grade of C.

3421 - Database Management and Applications
3 Credits
Comprehensive introduction to database concepts, design and applications. Database terminologies, relational database, database models, data normalization, and Structured Query Language (SQL). Constructing and maintaining of databases and objects in databases. Implementation of data sharing in applications. Offered fall and spring semesters.

3461 - Digital Photography
3 Credits
Techniques of digital photographic composition, camera types, uses and accessories, photographic optics, Photoshop software applications, special effects, image formats, media types, equipment and accessory use, laboratory methods, materials for the collection and manipulation of digital images, and methods of processing. Reference to, and experiences of chemical photography and the shift to digital photographic methods. Offered fall and spring semesters.

3511 - Applications of Soils and Foundations
3 Credits
Principles of soil mechanics as it relates to general construction and foundation systems including footings, piles, caissons, cofferdams, and other substances. Includes applications with properties of soils, soil exploration, compaction, water in soil, consolidation and settlement, soil strength, foundation design, and slope stability. Offered spring semester. Prerequisite(s): TECH 2501 Minimum Grade of C.

3611 - Applied Controls 1
4 Credits
Combinational digital logic and logic design will lay down a framework from which programmable logic controllers are presented. The concepts of inputs, outputs, relay logic and ladder logic will be addressed. Industrial robots will also be introduced and on-line programming will include tasks such as pick and place, finish application, and robot integration. Offered fall semester. Prerequisite(s): TECH 1601 Minimum Grade of C.

3631 - Applied Controls 2
3 Credits
A further investigation into automation systems dealing with automated manufacturing practices in CNC machines, PLCs, vision systems, RFID, and industrial robotics. Activities include such things as automated handling and processing of materials using conveyors, positioners/workholders, industrial robots, and CNC machines. Computer Integrated Manufacturing techniques including technologies such as sensing, vision, automated product identification, and storage and retrieval. Offered spring semester. Prerequisite(s): TECH 3611 Minimum Grade of C.

3641 - Industrial Instrumentation
3 Credits
Presents the fundamental scientific principles of process control including calibration, measurement, and actuation. Topics will include pressure, temperature, level, flow, motors, heaters, other actuators, power supplies for control, and common malfunctions of instrumentation. Offered spring semester. Prerequisite(s): TECH 3611 Minimum Grade of C.
3651 - Applied Controls 3
3 Credits
An introduction to the concepts and techniques of feedback and control systems as well as a brief introduction to the concepts of digital control. There is heavy emphasis on the application of feedback and control while providing a firm foundation of understanding of those principles. Offered fall semester. Prerequisite(s): TECH 3641 Minimum Grade of C.

3801 - Professional Practice in Technological Studies
1 Credit
Study and professional experience in a technological studies related occupation in an industrial enterprise, consulting firm, or governmental agency. A midterm and final report on the assignment and employer’s evaluation are required. Sophomore standing and minimum 2.50 cumulative GPA. Graded S/U. This course may be repeated 3 times.

3901 - Special Topics
1 to 3 Credits
May be repeated as the topic varies. This course is repeatable.

4111 - Product Manufacturing
4 Credits
Application of operations management principles and practices in the manufacture of various types of products into consumer products. Creation, management, and dissolution of a simulated company to produce and sell a tangible product. Emphasis on process design, material handling, organization of work, division of labor, distribution and sales practices relating to mass production industries. Offered fall semester. Prerequisite(s): TECH 2301 Minimum Grade of C and TECH 2231 Minimum Grade of C.

4121 - Manufacturing Management
3 Credits
Methods applied in mass production industries. Quality topics include Statistical Process Control, TQM, Lean Mfg. and Six Sigma, ISO/QS/TS quality systems, and automatic identification and data capture. Work measurement topics include methods engineering, traditional time studies, predetermined time measurement and work sampling. Offered spring semester. Prerequisite(s): TECH 4111 Minimum Grade of C.

4341 - Advanced Robotics 1
2 Credits
The first half of a two course capstone sequence. An advanced investigation of robotics and automated equipment. Topics of investigation will include robot and automated system design, construction, programming and troubleshooting in a team based environment. Offered spring semester. Prerequisite(s): TECH 3611 Minimum Grade of C.

4351 - Advanced Robotics 2
2 Credits
The second half of a two course capstone sequence. An advanced investigation of robotics and automated equipment. Topics of investigation will include robot and automated system design, construction, programming and troubleshooting in a team based environment. Offered spring semester. Prerequisite(s): TECH 4341 Minimum Grade of C.

4521 - Construction Estimating and Scheduling
3 Credits
Methods and techniques in construction estimating, scheduling, and bidding to include quantity take-off, labor costs, material costs, overhead, profits, and bidding using industry standard software packages. Includes extended practice in scheduling and submittal activities from pre-construction to completion. Practical applications emphasized. Offered fall semester. Prerequisite(s): TECH 3511 Minimum Grade of C.

4621 - Programming in Embedded Systems
4 Credits
Exploration of programming applications in an embedded environment using various microcontroller functions including I/O, memory, and interface techniques. Offered fall semester. Prerequisite(s): TECH 3611 Minimum Grade of C.

4661 - Applied Controls 4
3 Credits
A continuation of TECH 3651 with an emphasis on the design and application of computer-controlled systems and the digital approximation of continuous-time controllers. Offered spring semester. Prerequisite(s): TECH 3651 Minimum Grade of C.

4671 - Robotic Systems
3 Credits
An introduction to digitally-controlled robotic manipulators. Topics include coordinate frames, coordinate frame transformations, forward and inverse kinematic solutions, and control of robot manipulators. Offered spring semester. Prerequisite(s): TECH 3651 Minimum Grade of C.

4841 - Internship
6 to 12 Credits
A supervised program of experiences in production practices, management techniques, research applications, and other activities representative in modern industry. Selection is based upon proper application, screening, and acceptance by an appropriate industry. Six hours of credit for one summer term or 12 hours for one full-time semester. Graded (A, B, C, D, F). A maximum of 12 hours to count toward graduation. Junior standing and minimum 2.50 cumulative GPA. This course may be repeated 1 time.

4901 - Special Topics
1 to 3 Credits
May be repeated as the topic varies. This course is repeatable.

4951 - Senior Project
1 Credit
Individual research project expanding upon and applying content learned in a Technological Studies major. Course must be repeated 2 times to fulfill the senior capstone requirement unless the student participates in a specific major capstone requirement in one of the majors in the department. This course is repeatable for a total of 2 hours.

4961 - Tour of Industries
1 Credit
Participation in the annual department sponsored comprehensive tour of industries including the submission of a written technical report pertaining to one or more facets of the experience. May be repeated up to a total of 4 hours. Graded S/U. Offered spring semester.

4971 - Independent Study
1 to 3 Credits
Individual research project of content not normally included in regular coursework of the department. May be repeated as the topic varies. This course is repeatable.

4991 - Senior Capstone
1 Credit
Report, presentation, and culmination of the senior capstone experience. Presentation of the project management planning, researching, developing, fabricating, assembling, testing, and evaluating processes completed in the senior capstone activity. Offered spring semester. Prerequisite(s): TECH 4841 Minimum Grade of C or TECH 3801 Minimum Grade of C or TECH 435 Minimum Grade of C or TECH 484 Minimum Grade of C or TECH 495 Minimum Grade of C or EDUC 4721 Minimum Grade of S or TECH 4351 Minimum Grade of C.
THE JAMES F. DICKE COLLEGE OF BUSINESS ADMINISTRATION

James W. Fenton, Jr., Dean

Professors: Fenton, M. Govekar, Maris, Meininger (Associate Dean), Woods; Visiting Professors: Cooper, Young; Associate Professors: Banfe, Christopher, Ewing, P. Govekar, Kleine, Savino, Zekany; Assistant Professors: McClough, Schakett, Schertz; Visiting Assistant Professors: MacKenzie; Instructor: Prasad; Computer Applications Professional: Elsass.

Patton Chair
The George Willard Patton Chair of Business and Economics, endowed by the Richard King Mellon Charitable Trust of Pittsburgh, Pennsylvania, has been established beginning with the academic year 1973-74. The 2010-11 recipient of this endowed professorship is Michele Govekar, professor of management.

Mission Statement
Develop business and civic leaders for a changing world.

Supporting Values
Ethical
We are honest and transparent in our interactions with others. We believe that integrity is the foundation of business and civic leadership.

Entrepreneurial
We are collaborative, innovative, and embrace opportunity. We believe that vision and persistence produce innovation.

Engaged
We are active contributors to our academic, civic, and global communities. We believe that developing leaders requires mentoring, experiential learning, and scholarship.

Admissions Standards
Candidates seeking admission to the James F. Dicke College of Business Administration are required to meet the general requirements for admission to the University. The College of Business Administration accepts high school graduates who have 16 acceptable units of high school credits. Thirteen of these units are prescribed as follows: Four units of English; three units of mathematics (including algebra and geometry); six units in history, social studies, language, or natural science, or any combination thereof. Candidates are encouraged to pursue a foreign language while in high school. Acceptable scores on the American College Test or the College Entrance Examination Board Test are expected of all candidates.

Transfer Students
The Ohio Northern University Dicke College welcomes students from other accredited colleges and universities. Applications for transfer will be considered only if the student has a prior grade point average of 2.00 on a 4.00 scale, and the student is eligible to return to his/her former institution.

Students transferring from a two-year associate degree program are advised that courses in advanced business subjects (i.e., offered at the college’s 300 or 400 level) taken at a two-year institution are not normally granted credit as equivalents of the business courses taught at Ohio Northern University. Such courses can be accepted as general electives. Under certain circumstances, students could establish equivalent credit through college-administered proficiency tests.

Bachelor of Science in Business Administration Degree Requirements
The Bachelor of Science in Business Administration degree is an undergraduate degree that provides a foundation in the business disciplines of accounting, business law, economics, finance, international business, management, marketing and personal computer applications as well as a comprehensive understanding in the student’s chosen major area. This program prepares students to successfully enter either the business world or a graduate course of study.

This program requires a minimum of 122 semester hours of study including general education requirements, business administration core course requirements and additional requirements for the specific majors.

General Education Requirements
Undergraduate students must, in addition to all other graduation requirements, complete the university general education program to graduate from Ohio Northern University. Those requirements are outlined on page 18 of this catalog. Within the context of the university general education program, several specific courses are required for students pursuing a Bachelor of Science in Business Administration:

1. One additional English elective beyond the required Writing Seminar
2. Statistics for Professionals 1 and 2 (STAT 1561 and 2561)
3. Presentational Speaking (CACS 1111)

Business Administration Core Courses
The James F. Dicke College of Business Administration core curriculum provides an integrated four-year experience themed around business planning. The business core culminates in a year long senior capstone experience that is interdisciplinary in nature.

Bachelor of Science in Business Administration Degree Requirements

- BIZ 0001  BIZ 1001  BIZ 1201  BIZ 2021  BIZ 2031  BIZ 2111  BIZ 2121  BIZ 2131  BIZ 2331  BIZ 2401  BIZ 2511  BIZ 2801  BIZ 3001  BIZ 3621  BIZ 3641  BIZ 3991  BIZ 4851  BIZ 4861
- BIZ 0001  BIZ 1001  BIZ 1201  BIZ 2021  BIZ 2031  BIZ 2111  BIZ 2121  BIZ 2131  BIZ 2331  BIZ 2401  BIZ 2511  BIZ 2801  BIZ 3001  BIZ 3621  BIZ 3641  BIZ 3991  BIZ 4851  BIZ 4861
- Presentational Speaking (CACS 1111)

- BIZ 1001  Free Enterprise and Bus. Planning
- BIZ 1201  Ethics for Business Planning
- BIZ 2021  Microeconomic Found. for Business Plan.
- BIZ 2031  Macroeconomic Found. for Business Plan.
- BIZ 2111  Finan. Accounting Found. for Business Plan.
- BIZ 2121  Managerial Accounting Tools for Business Plan.
- BIZ 2131  Legal Environment for Business Plan.
- BIZ 2331  Behavioral Management for Business Plan.
- BIZ 2401  Information Systems for Business Plan.
- BIZ 2511  Marketing for Business Planning
- BIZ 2801  Career Planning and Preparedness
- BIZ 3001  Global Environment for Business Planning
- BIZ 3621  Financial Analysis for Business Planning
- BIZ 3641  Quantitative Management for Business Planning
- BIZ 3991  BIZ LAB 1
- BIZ 4851  Integrated Business Planning 1
- BIZ 4861  Integrated Business Planning 2
- And an internship experience appropriate to the major:
  - BIZ 4911  Internship in Accounting
  - BIZ 4921  Internship in Finance
  - BIZ 4931  Internship in International Business and Economics
  - BIZ 4941  Internship in Management
  - BIZ 4951  Internship in Marketing
  - BIZ 4961  Internship in Pharmaceutical Business

SPECIFIC MAJORS AND MAJOR COURSE REQUIREMENTS
Beyond the general education requirements and the business core, students must also complete specific requirements in their major areas. The College of Business Administration offers six major areas of study: accounting; finance; international business and economics; management; marketing; and pharmaceutical business.

BUSINESS ADMINISTRATION 139
Accounting

The accounting program offers a four-year (122 semester hour) degree program that prepares students for many entry-level accounting positions. Students completing the accounting major will have the necessary educational requirements for the Certified Management Accounting (CMA) and the Certified Internal Auditing (CIA) examinations.

The curriculum core for the accounting major includes ACCT 3011, 3021, 3141, 3151, ACCT 4351, and six hours of upper division accounting electives.

Bachelor of Science In Business Administration Accounting Major

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<thead>
<tr>
<th>First Year</th>
<th>ACCT</th>
<th>3 hrs.</th>
<th>BIZ 0001</th>
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<td>BIZ 1201</td>
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<td>BIZ 2801</td>
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<td>ENGL 1221 or ENGL 1231</td>
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<td>STAT 2561</td>
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<td>CACS 1111</td>
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<td>Diversity &amp; Human Interaction Elective</td>
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<td>Scientific Method Elective</td>
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<td>Extra-disciplinary seminar</td>
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<td>BIZ 3991</td>
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<td>BIZ 4911</td>
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CPA Program

In the fall of 2012-2013, the DCBA will begin offering a Master of Professional Practice in Accounting (MPPA) degree. Details of that program can be found below. Students planning to sit for the CPA examination should also discuss the MPPA program with their advisor.

Finance

The curriculum core for the finance major includes: ACCT 3011 or 3141, FINC 3691, 4611, 4671 and 6 hours of approved upper division finance electives.

Bachelor of Science in Business Administration Finance Major Curriculum

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<thead>
<tr>
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<td>BIZ 1001</td>
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<tr>
<td></td>
<td>BIZ 4911</td>
<td>3 hrs.</td>
<td>Internship in Accounting</td>
<td></td>
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<tr>
<td></td>
<td>ACCT 3011</td>
<td>3 hrs.</td>
<td>Intermediate Accounting 1</td>
<td></td>
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<tr>
<td></td>
<td>ACCT 3141</td>
<td>3 hrs.</td>
<td>Intermediate Managerial Acct. 1, 2</td>
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<tr>
<td></td>
<td>Approved Elective</td>
<td>3 hrs.</td>
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</tr>
<tr>
<td></td>
<td>Aesthetic Appreciation Elective</td>
<td>3 hrs.</td>
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<tr>
<td></td>
<td>Quantitative Literacy Elective</td>
<td>3 hrs.</td>
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<td>TOTAL</td>
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<tr>
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<th>ACCT</th>
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<th>BIZ 4851</th>
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<tbody>
<tr>
<td></td>
<td>BIZ 4861</td>
<td>3 hrs.</td>
<td>Integrated Business Planning 2</td>
<td></td>
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<tr>
<td></td>
<td>FINC 4611</td>
<td>3 hrs.</td>
<td>Investments</td>
<td></td>
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<td></td>
<td>FINC 4671</td>
<td>3 hrs.</td>
<td>International Finance</td>
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<tr>
<td></td>
<td>FINC</td>
<td>3 hrs.</td>
<td>Finance Elective</td>
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<td></td>
<td>Approved Electives</td>
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</table>

International Business and Economics

The curriculum core for the international business and economics major includes: IBEC 3851, 3871, 4531, 4671 and one upper level economics discipline elective. In addition, students pursuing an international business and economics major must also demonstrate competency in a foreign language through the second year of college level studies.
An internship is required. The internship may be satisfied through an international business and/or economics internship completed domestically or abroad. An international experience is required. This may be satisfied either through a study abroad through an Ohio Northern University sponsored program that carries academic credit (see page 19 of this catalog) or an internship abroad.

**Bachelor of Science in Business Administration International Business and Economics Major Curriculum**

<table>
<thead>
<tr>
<th>First Year</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 0001</td>
<td>BIZ LAB 1</td>
<td>1 hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 1001</td>
<td>Free Enter. and Business Planning</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 1201</td>
<td>Ethics for Business Planning</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 2801</td>
<td>Career Planning and Preparation</td>
<td>3 hrs.</td>
<td></td>
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</tr>
<tr>
<td>ENGL 1221 or ENGL 1231</td>
<td>Writing Seminar</td>
<td>3 hrs.</td>
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<tr>
<td>CACS 1111</td>
<td>Presentational Speaking</td>
<td>3 hrs.</td>
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<tr>
<td>STAT 1561</td>
<td>Statistics for Prof. 1</td>
<td>3 hrs.</td>
<td></td>
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<tr>
<td>STAT 2561</td>
<td>Statistics for Prof. 2</td>
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<td>Modern Language</td>
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<table>
<thead>
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<th>Second Year</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>BIZ 2111, 2121</td>
<td>Accounting Foundations</td>
<td>6 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 2021, 2031</td>
<td>Economic Foundations</td>
<td>6 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 2131</td>
<td>Legal Environment</td>
<td>3 hrs.</td>
<td></td>
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</tr>
<tr>
<td>BIZ 2331</td>
<td>Beh. Mgmt. for Bus. Plan.</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 2511</td>
<td>Marketing for Bus. Plan.</td>
<td>3 hrs.</td>
<td>Extra-disciplinary Elective</td>
<td>3 hrs.</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td>30 or 33 hrs.</td>
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<table>
<thead>
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<th>Third Year</th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 2401</td>
<td>Information Systems</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 3001</td>
<td>Global Environ. for Bus. Plan.</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 3621</td>
<td>Financial Analysis</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 3641</td>
<td>Quantitative Mgmt. for Bus. Plan.</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 4931</td>
<td>Internship in IBEC</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 3991</td>
<td>BIZ LAB 2</td>
<td>1 hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBEC 3851</td>
<td>International Economics</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBEC 3871</td>
<td>Exporting</td>
<td>3 hrs.</td>
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<tr>
<td>IBEC</td>
<td>Economics Elective</td>
<td>3 hrs.</td>
<td>Aesthetic Appreciation Elective</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>IBEC</td>
<td>Quantitative Literacy Elective</td>
<td>3 hrs.</td>
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<tr>
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<td>31 hrs.</td>
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</table>

<table>
<thead>
<tr>
<th>Fourth Year</th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 4851</td>
<td>Integrated Business Planning 1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 4861</td>
<td>Integrated Business Planning 2</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBEC 4531</td>
<td>International Marketing</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBEC 4671</td>
<td>International Finance</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBEC 4861</td>
<td>International Management</td>
<td>3 hrs.</td>
<td>Diversity &amp; Human Interaction Elective</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>IBEC</td>
<td>Scientific Method Elective</td>
<td>3 hrs.</td>
<td>Approved Electives</td>
<td>9 hrs.</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td>30 hrs.</td>
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**Management**

The curriculum core for the management major includes: MGMT 3341, 3631, 3751, 4861, and nine hrs. of upper level management electives.

**Bachelor of Science in Business Administration Management Major Curriculum**

<table>
<thead>
<tr>
<th>First Year</th>
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</thead>
<tbody>
<tr>
<td>BIZ 0001</td>
<td>BIZ LAB 1</td>
<td>1 hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIZ 1001</td>
<td>Free Enter. and Business Planning</td>
<td>3 hrs.</td>
<td></td>
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<tr>
<td>BIZ 1201</td>
<td>Ethics for Business Planning</td>
<td>3 hrs.</td>
<td></td>
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<tr>
<td>BIZ 2801</td>
<td>Career Planning and Preparation</td>
<td>3 hrs.</td>
<td></td>
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</tr>
<tr>
<td>ENGL 1221 or ENGL 1231</td>
<td>Writing Seminar</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 1561</td>
<td>Statistics for Prof. 1</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 2561</td>
<td>Statistics for Prof. 2</td>
<td>3 hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CACS 1111</td>
<td>Presentational Speaking</td>
<td>3 hrs.</td>
<td>Diversity &amp; Human Interaction Elective</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>ENGL</td>
<td>Approved English Elective</td>
<td>3 hrs.</td>
<td>Scientific Method Elective</td>
<td>3 hrs.</td>
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<td><strong>TOTAL</strong></td>
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<td>31 hrs.</td>
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</table>
Second Year

BIZ 2111, 2121 Accounting Foundations 6 hrs.
BIZ 2021, 2031 Economic Foundations 6 hrs.
BIZ 2131 Legal Environment 3 hrs.
BIZ 2401 Information Systems 3 hrs.
BIZ 2331 Beh. Mgmt. for Bus. Plan. 3 hrs.
BIZ 2511 Marketing for Bus. Plan. 3 hrs.
BIZ 3621 Financial Analysis 3 hrs.
BIZ 2011 PC Applications 3 hrs.
BIZ 3641 Quantitative Mgmt. for Bus. Plan. 3 hrs.
TOTAL 30 hr.

Third Year

BIZ 3001 Global Environ. for Bus. Plan. 3 hrs.
BIZ 3641 Quantitative Mgmt. for Bus. Plan. 3 hrs.
BIZ 3991 BIZ LAB 2 1 hr.
BIZ 4951 Internship in Marketing 3 hrs.
MRKT 3441 Marketing Research 3 hrs.
MRKT 3631 Product Development 3 hrs.
MRKT 3521 Consumer Behavior 3 hrs.
Aesthetic Appreciation Elective 3 hrs.
Approved Electives 6 hrs.
TOTAL 31 hrs.

Fourth Year

BIZ 4851 Integrated Business Planning 1 3 hrs.
BIZ 4861 Integrated Business Planning 2 3 hrs.
PHBU 3051 Intro. to Pharmaceutical Science 3 hrs.
PHBU 3751, 4121, 4571 and three hrs. of upper division management electives.

Bachelor of Science in Business Administration Pharmaceutical Business Major

Students pursuing a Pharmaceutical Business Major must select from four concentration areas: marketing, human resource management, manufacturing management or economics. The curriculum core for the major (all concentrations) includes the biological foundation of BIOL 1101 and 2311; and the chemistry foundation of CHEM 1201. Additional core courses for the major include: PHBU 3051, 3171, 3651, 3661, and PHPR 2411.

First Year

BIZ 2001 BIZ LAB 1 1 hr.
BIZ 1001 Free Enterprise and Business Planning 3 hrs.
BIZ 1201 Ethics for Business Planning 3 hrs.
BIZ 2801 Career Planning and Preparation 3 hrs.
BIOL 1101 Prin. Of Human Biology 3 hrs.
BIOL 2311 Anatomy & Physiology I 3 hrs.
ENGL 1221 or ENGL 1231 Writing Seminar 3 hrs.
STAT 1561 Statistics for Prof. 1 3 hrs.
STAT 2561 Statistics for Prof. 2 3 hrs.
ENGL Approved English Elective 3 hrs.
Diversity & Human Interaction Elective 3 hrs.
TOTAL 31 hrs.

Second Year

BIZ 2111, 2121 Accounting Foundations 6 hrs.
BIZ 2021, 2031 Economic Foundations 6 hrs.
BIZ 2131 Legal Environment 3 hrs.
BIZ 2331 Beh. Mgmt. for Bus. Plan. 3 hrs.
BIZ 2511 Marketing for Bus. Plan. 3 hrs.
BIZ 3621 Financial Analysis 3 hrs.
CHEM 1201 Chemistry for Health Sciences 5 hrs.
Extra-Disciplinary Seminar 3 hrs.
Demonstrate Proficiency In Microsoft Office or

Third Year

BIZ 2401 Information Systems 3 hrs.
BIZ 3001 Global Environ. for Bus. Plan. 3 hrs.
BIZ 3641 Quantitative Mgmt. for Bus. Plan. 3 hrs.
TOTAL 30 hr.

Fourth Year

BIZ 4851 Integrated Business Planning 1 3 hrs.
BIZ 4861 Integrated Business Planning 2 3 hrs.
IBEC Economics Elective 3 hrs.
PHBU 3171 Pharm. Legal Environment 3 hrs.
PHBU 3661 Pharm. Economics 3 hrs.
PHBU 3051 Intro. to Pharmaceutical Science 3 hrs.
PHBU 3751, 4121, 4571 and three hrs. of upper division management electives.

Additional core courses for pharmaceutical business majors pursuing the human resource management concentration include: PHBU 3751, 4121, 4151, 4571, MGMT 3631 and three hrs. of upper division management electives.
“FAASTrack” provides a blended online curriculum focused on facets of forensic accounting and audit services track (“FAASTrack”) or a Tax Track (“TaxTrack”). The degree can select one of two program tracks: a forensic accounting professional practice in accounting (MPPA) degree. Students pursuing this program must understand that the program requires completing courses and three hrs. of upper division marketing electives.

### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIZ 2401</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 3001</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 3641</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 3991</td>
<td>1 hr.</td>
</tr>
<tr>
<td>BIZ 4961</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>PHBU 3051</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>PHBU 3651</td>
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<tr>
<td>PHPR 2411</td>
<td>2 hrs.</td>
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<tr>
<td>Quantitative Literacy Elective</td>
<td>3 hrs.</td>
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<tr>
<td>Aesthetic Appreciation Elective</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>Approved Elective</td>
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**TOTAL:** 33 hrs.

### Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIZ 4851</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 4861</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>PHBU 3171</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>PHBU 3751</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>PHBU 4121</td>
<td>3 hrs.</td>
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<tr>
<td>PHBU 4571</td>
<td>3 hrs.</td>
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<tr>
<td>CACS 1111</td>
<td>3 hrs.</td>
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<tr>
<td>TECH 4111</td>
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<tr>
<td>TECH 4121</td>
<td>3 hrs.</td>
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</table>

**TOTAL:** 31 hrs.

Additional core courses for pharmaceutical business majors pursuing the marketing concentration include: PHBU 3341, 3521, 3631, 4711, 4731, and three hrs. of upper division marketing electives.

### Three Year BSBA Express Path

Qualified students can opt to participate in the Dicke College three year accelerated degree program. Students with an ACT composite of 27 or higher (or equivalent SAT score) and a high school GPA of 3.60 or higher are eligible to apply for the program. Majors offered in this accelerated program must understand that the program requires completing courses year round (including summers), and will likely preclude them from fully participating in some extra-curricular activities while at the University. Some of the courses will be available via distance education. Students enrolled in Express Path will receive priority when scheduling their courses to ensure that they can complete the program in a timely manner.

### Dual Majors and Minors

No course used to satisfy a major or minor requirement in the college may be counted as a discipline elective in the completion of a second major or minor in the College.

### Minor in Business Administration

The minor is available only to non-business majors. A “C” grade or higher is required in all courses. A minimum of 15 hours required for the minor must be completed at Ohio Northern University.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIZ 2021</td>
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<tr>
<td>BIZ 2111</td>
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<tr>
<td>BIZ 2131</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 2331</td>
<td>3 hrs.</td>
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<tr>
<td>BIZ 2511</td>
<td>3 hrs.</td>
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<tr>
<td>BIZ 3621</td>
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<tr>
<td>ABUS 2221</td>
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**TOTAL:** 24 hrs.

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**BUSINESS ADMINISTRATION**

143
**Minor in Entrepreneurship**
The Entrepreneurship minor is available to both business and non-business majors with an interest in new venture creation. Courses to be used to satisfy the elective requirements of the minor must be approved. The elective courses will be related to the student’s entrepreneurial interests and will complement his/her academic background. A minimum of 12 hours required for the minor must be completed at Ohio Northern University.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS 2221</td>
<td>Principles of Entrepreneurship</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 2021</td>
<td>Microeconomic Foundations</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 2511</td>
<td>Marketing for Bus. Plan.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>ABUS 4441</td>
<td>New Venture Creation</td>
<td>3 hrs.</td>
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<td>Approved Program Electives</td>
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<td>18 hrs.</td>
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**Minor in Finance**
The Finance minor is available to both business and non-business majors. A grade of “C” or higher is required in all of the finance courses. A minimum of 12 hours required for the minor must be completed at Ohio Northern University. Non-business majors are advised that BIZ 2111, 2121 are prerequisites for ACCT 3011, 3141, and BIZ 3621.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 3011</td>
<td>Intermediate Accounting</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 3621</td>
<td>Financial Analysis</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>FINC 3691</td>
<td>Intermediate Finance</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>FINC 4611</td>
<td>Investments</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>FINC 4671</td>
<td>International Finance</td>
<td>3 hrs.</td>
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<tr>
<td></td>
<td>Upper level Finance elective</td>
<td>3 hrs.</td>
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<tr>
<td>TOTAL</td>
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<td>18 hrs.</td>
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</table>

**Minor in International Business and Economics**
The International business and economics minor is available to both business and non-business majors. A grade of “C” or higher is required in all business courses. A minimum or 12 hours required for the minor must be completed at Ohio Northern University.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIZ 2031</td>
<td>Macroeconomic Foundations</td>
<td>3 hrs.</td>
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<tr>
<td>BIZ 3001</td>
<td>Global Environ. for Bus. Plan.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Economics Elective</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Int’l Bus &amp; Econ Elect.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>One year of a foreign language</td>
<td>6 hrs.</td>
</tr>
<tr>
<td></td>
<td>Approved Int’l Experience</td>
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</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>18 hrs.</td>
</tr>
</tbody>
</table>

**Minor in Management**
The Management minor is available to both business and non-business majors. A grade of “C” or higher is required in all of the courses. A minimum of 12 hours required for the minor must be completed at Ohio Northern University. Non-business majors are advised that STAT 1561 or its equivalent is a prerequisite for BIZ 3641.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIZ 2331</td>
<td>Beh. Mgmt. for Bus. Plan.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>MGMT 3341</td>
<td>Cases &amp; Exercises in Org. Beh.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>MGMT 3631</td>
<td>Human Resource Mgmt.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 3641</td>
<td>Quantitative Mgmt. for Bus. Plan.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Upper level Mgmt. electives</td>
<td>6 hrs.</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>18 hrs.</td>
</tr>
</tbody>
</table>

**Minor in Marketing**
The marketing minor is available to both business and non-business majors. A grade of “C” or higher is required in all of the marketing courses. A minimum of 12 hours required for the minor must be completed at Ohio Northern University.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 1561</td>
<td>Statistics for Prof. 1</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>BIZ 2511</td>
<td>Marketing for Bus. Plan.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>MRKT 3341</td>
<td>Marketing Research</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Upper level Marketing electives</td>
<td>9 hrs.</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>18 hrs.</td>
</tr>
</tbody>
</table>

**Graduation Requirements**

**Bachelor of Science in Business Administration**
It is the student’s responsibility to assure that all of the graduation requirements for the degree and major(s) sought are satisfied:

1. The university general education requirements.
2. The Business Administration core requirements.
3. The specific major requirements and electives.
4. Satisfactory completion and presentation of a minimum of 122 semester hours of appropriate course work for the specific major(s).
5. A minimum of 18 hours of required business courses at the 300 or 400 level to be completed at Ohio Northern University with at least 12 of these hours taken in the student’s major.
6. A minimum 2.00 grade point average.
7. A letter grade of “C” or better in all but one course specified in (2) and (3) above.

**GENERAL REGULATIONS OF THE COLLEGE OF BUSINESS ADMINISTRATION**

1. A student may not register for more than 19 hours of academic course work without the dean’s written approval. A normal program consists of 12 to 19 scheduled hours. See page 10 for overload charges beyond 19 credit hours.
2. All freshmen in the College of Business Administration are required to take BIZ Lab 1, which is scheduled in the fall semester.
3. All students are expected to participate in college program assessment activities.
4. All students are expected to participate in selected college-sponsored service activities that contribute to professional development.
5. A student indicates his/her major choice by completing a declaration of major form available in the Office of the Dean. Faculty advisors assist the student in the planning of his/her major.
6. Each student enrolled in the College of Business Administration is expected to make consistent progress toward completion of the degree requirements of his/her major(s).
7. DCBA majors need to complete BIZ 2111 with a C grade or higher before attempting BIZ 2121.
8. With the written permission of the instructor and the dean, course prerequisites may be waived.
9. Except where noted in the course descriptions, credit hours earned in repeated courses may be counted only once in the total hours required for graduation.
10. A student not enrolled for one academic year (except on approved academic leave) must meet graduation requirements in the catalog effective for the academic year during which the student reentered.
11. Students must have junior standing or higher to enroll in 300 and 400 level College of Business Administration courses.
12. Prior to the attainment of junior standing, students must demonstrate proficiency in the Microsoft Office Suite of programs. Students may demonstrate such proficiency by completing ABUS 2011, Personal Computer Applications for Business with a grade of “C” or higher or by presenting evidence of successful completion of the Microsoft Office Specialist Exams for Word, Excel, and PowerPoint.
13. Non-College of Business Administration majors may not accumulate more than 30 hours of credit in business courses without the written approval of the dean of the College of Business Administration.
14. Credit earned in independent study is not normally counted as credit toward a major.

**S/U Grade Option**
Students in the College of Business are not permitted to register for courses on an S/U (Satisfactory/Unsatisfactory) basis if the course is offered on a graded basis.

**Service and Activities Courses**
A combined maximum of 15 hours of credit in varsity sports, physical education activity service courses, applied music and music performance courses may be counted for graduation.
Classification of Students
For purposes of classification, the minimum requirement for sophomore standing is 30 semester hours of completed academic work.

Junior standing: a minimum of 60 semester hours of credit including the following courses or their articulated equivalents: BIZ 2021 and 2031; BIZ 2111 and 2121; STAT 1561 and 2561; and provide evidence of proficiency in the Microsoft Office Suite of Programs. Proficiency in Microsoft OfficeSuite can be evidenced by passage of Microsoft Office Certification examinations or by successful completion of ABUS 2011, PC Applications.

Senior standing: a minimum of 90 semester hours of credit and completion of the Business Core.

Academic Standing
A grade point average of 2.00 or higher is required for graduation. If a student’s accumulative grade point average falls below 2.00, he/she is placed on academic probation and is not eligible to participate in competitive activities of individuals, teams, or other groups officially designated as representing the University.

Any student on probation whose work for the following semester continues below 2.00 accumulative grade point average will have his/her record reviewed by the Academic Qualifications and Scholarship Committee of the college and may be recommended to the dean for suspension or dismissal from the college. Any student with a semester GPA of less than 1.00 may be placed on probation or suspended.

Prelaw Program
Business students interested in the Prelaw Program will find a complete description on page 20 of this catalog.

Internship Program
The internship program in the College of Business Administration has been designed to help students gain these valuable experiences while still in college. By combining the concepts discussed in the classroom with practical on-the-job experiences, the internship program helps prepare the businessmen and businesswomen of tomorrow.

Academic year internships may be full- or part-time programs lasting at least 15 weeks. Interns may earn as many as 15 semester hours of credit. Summer internships take place in several locations throughout Ohio and beyond. As with academic-year internships, students may earn up to 15 credit hours.

Students must be registered for internship credit during the term in which the experience occurs.

Students pursuing two or more majors in the James F. Dicke College of Business Administration are required to complete a distinct internship/international experience for each.

To participate in the internship program, a student must have junior or senior status, be in good academic standing, and obtain the approval of the Director of Experiential Learning.

Dual Degree Programs
Information concerning dual degree programs involving the College of Business Administration appears on page 19 of this catalog. Students may receive further details in the office of the dean of the college.

Microsoft Authorized Testing Center
The College of Business Administration houses an authorized testing center for Microsoft Office certification. The certification program is designed to validate desktop computer skills using Microsoft Office applications. Certification proves computer literacy, measures proficiency, and identifies opportunity for skills enhancement. Certification testing is available for Microsoft Word, Excel, Power Point, Access, and Outlook applications. CompTIA and Computing Core Certification (IC3) testing is also available in the College of Business Administration.

International Business Program
The international business program is coordinated by the College’s International Experience Committee. Students may participate in study abroad, work abroad, or student exchange.

Study abroad may take place at virtually any foreign college or university if the academic program is determined to meet certain standards for transfer of credit. Students are encouraged to enroll for a full academic year abroad. In some cases, study may occur during the summer or for a lesser period during the academic year.

Work abroad is available to ONU business students in cooperation with the Council on International Educational Exchange. This option may be combined with study abroad or pursued independently during the summer. A special bonus is that such employment may qualify the student to earn up to 15 credits toward graduation through the internship program.

Formal agreements for the exchange of students between Ohio Northern University and several prominent foreign institutions offer many opportunities for business students. These include Glasgow Caledonian University (Scotland), the University of Science and Technology of Lille (France), Robert Schuman University (France), the Plekhanov Economic Academy (Russia), Arnhem Business School (Netherlands), Helsinki School of Economics (Finland), Instituto Tecnologico y de Estudios Superiores de Monterrey, Campus Gueretaro (Mexico), the University of Aarhus (Denmark), Southern Cross University (Australia), Kansai Gaidai University (Japan) and Hanyang University (Korea). Additional study-abroad experiences have taken place at the University of Havana (Cuba), Copenhagen Business School (Denmark), University of Lüneburg (Germany), University of Turin (Italy), the London School of Economics (England), and Queensland University (Australia).

Students with a foreign language background are likely to find that they have more opportunity to take advantage of these programs. All business students therefore are strongly advised to continue their foreign language study at ONU. Those who have no prior course work in foreign language are encouraged to incorporate such courses into their undergraduate studies.

COLLEGE OF BUSINESS ADMINISTRATION

Subject - General Business (ABUS)

1901 - Special Topics in Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2011 - Personal Computer Applications for Business
3 Credits
Business applications for microcomputers. Introductory level use of software for word processing, file management, spreadsheets, and graphics. Offered fall and spring semesters.

2221 - Principles of Entrepreneurship
3 Credits
Entrepreneurship and new venture creation. Offered fall and spring semesters.

2901 - Special Topics in Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3051 - Basics of Expert Testimony
3 Credits
Legal aspects of the forensic engagement, including rules of evidence and procedure. Offered fall semester.

3901 - Special Topics in Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4441 - New Venture Creation
3 Credits
Capstone course for the Entrepreneurship minor. Develop a business plan to support the launch of a new business venture. Offered fall and spring semesters. Prerequisite(s): ABUS 2221.

4901 - Special Topics in Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.
**Subject - Accounting (ACCT)**

1901 - Special Topics in Accounting  
1 to 3 Credits  
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in Accounting  
1 to 3 Credits  
Can be repeated as the topic varies. Offered fall and spring semesters.

3011 - Intermediate Accounting 1  
3 Credits  
Financial accounting functions and basic theory. Preparation of financial statements. Offered fall semester. Prerequisite(s): BIZ 2121.

3021 - Intermediate Accounting 2  
3 Credits  
Preparation of financial statements, working capital, operational assets, long-term liabilities, leases and owners equity. Offered spring semester. Prerequisite(s): ACCT 3011.

3061 - Business Valuation  
3 Credits  
Assessment of organizational health and value via business strategy analysis, accounting analysis, financial analysis, and prospective analysis. Case studies and financial statement analysis applications. Offered fall semester. Prerequisite(s): BIZ 2121 and BIZ 2031.

3071 - Fraud Examination  
3 Credits  
Survey of the types of occupational fraud with the goal of understanding how and why people commit fraud, how fraudulent conduct might be deterred, and how allegations of fraud should be investigated and resolved. Offered spring semester. Prerequisite(s): BIZ 2121.

3141 - Intermediate Managerial Accounting 1  
3 Credits  

3151 - Intermediate Managerial Accounting 2  
3 Credits  

3871 - Taxation 1  
3 Credits  
Tax concepts in the taxation of individuals and entities. The role of taxation in business decisions, how to conduct basic tax research, tax planning, and professional standards and ethics. Interrelationships and differences between financial and tax accounting. Offered spring semester. Prerequisite(s): BIZ 2121.

3901 - Special Topics in Accounting  
1 to 3 Credits  
Can be repeated as the topic varies. Offered fall and spring semesters.

4031 - Auditing 1  
3 Credits  
Auditor’s professional ethics and legal liability. Business processes and internal control structure, including current AIS topics. Auditing procedures and practices relating to the independent verification of financial records, including assessment of the internal control system, audit evidence, issues of materiality and risk, and audit reports. Offered fall semester. Prerequisite(s): ACCT 3021.

4041 - Auditing 2  
3 Credits  
Continuation of ACCT 4031, including statistical sampling in auditing, computer technology in auditing, auditor’s responsibility for detecting fraud, and current issues and problems in auditing. Offered spring semester. Prerequisite(s): ACCT 4031.

4351 - International Financial Accounting  
3 Credits  
Guiding principles behind international financial reporting standards (IFRS): commonalities, substantial divergences between US GAAP and IFRS. Financial Accounting from a multinational viewpoint involving foreign currency transactions and translation of financial statements denominated in a foreign currency. Also listed as IBEC 4351. Offered spring semester. Prerequisite(s): ACCT 3021.

4901 - Special Topics in Accounting  
1 to 3 Credits  
Can be repeated as the topic varies. Offered fall and spring semesters.

4991 - Independent Study in Accounting  
1 to 3 Credits  
An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Permission must be obtained in writing from the faculty-mentor and the Dean of the College prior to registration. Offered fall and spring semesters.

**Subject - Core (BIZ)**

0001 - Biz Lab 1  
1 Credit  
Familiarization with the college, requirements of majors and general education, student portfolio requirements, planning sequences of courses, university catalog and library. Activities include college required program assessment. Offered fall semester. Must be enrolled in one of the following Colleges: Business Administration.

1001 - Free Enterprise and Business Planning  
3 Credits  
Integrative business survey course designed to introduce students to the free enterprise system via a business planning model. An overview of the key functions of business including accounting, finance, management, marketing, operations and human resources and career opportunities pertaining to each. Business majors only. Offered fall semester. Must be enrolled in one of the following Colleges: Business Administration.

1201 - Ethics for Business Planning  
3 Credits  
Systematic examination of alternative ethical decision making approaches necessary to business planning. Provides a critical thinking framework for analysis and discussion of alternative ethical decision making approaches. Case analysis provides experience in the implementation of the ethical decision making framework. Offered spring semester. Must be enrolled in one of the following Colleges: Business Administration.

2021 - Microeconomic Foundations for Business Planning  
3 Credits  
Economics of the individual firm in the free market economy; competitive and monopolistic markets with a business planning focus. How prices ration goods and services to users, and the principles on which the total product is divided among the owners of the factors of production. Offered fall semester.

2031 - Macroeconomic Foundations for Business Planning  
3 Credits  
Forces that determine the behavior of national income and output, unemployment, and the price level with a business planning focus. Rudiments of money and banking, monetary and fiscal policy, growth and development. The dynamics between macroeconomy and business. Offered spring semester. Prerequisite(s): BIZ 2021.
2111 - Financial Accounting Foundations for Business Planning

3 Credits
Analysis and recording of business transactions and accumulating data on the results of economic activity to support business planning. Concepts and issues of financial reporting for business entities, including basic theory of the report writing model. Basic financial statement analysis. Offered fall semester.

2121 - Managerial Accounting Tools for Business Planning

3 Credits
Uses of accounting data to support business planning and management decision-making and control of business operations, determination of costs and cost behavior. Offered spring semester. Prerequisite(s): BIZ 2111.

2131 - Legal Environment for Business Planning

3 Credits
Legal environment for business planning; business ethics, international business transactions, the American legal system, methods of dispute resolution, constitutional law, business torts, business crimes, and the basic laws regulating contracts, agency, the workplace, business organizations, purchase and sale of securities, anticompetitive activities, consumer transactions, and actions affecting the environment. Offered fall and spring semesters.

2331 - Behavioral Management for Business Planning

3 Credits
Modern management concepts with emphasis on the human factors involved in a successful business plan. Historical foundations, individual, group, and organizational processes including current management issues. Offered fall and spring semesters.

2401 - Information Systems for Business Planning

3 Credits
The development, design and implementation of information systems for business planning. Terminology, concepts, and trends in computer hardware and software. Offered fall and spring semesters.

2511 - Marketing for Business Planning

3 Credits
Principles of marketing strategy in the business planning process. Product design and planning, promotional activities, pricing strategy, aspects of physical distribution, retailing, market research, buyer behavior, ethics and global marketing. Offered fall and spring semesters.

2801 - Career Planning and Preparedness

3 Credits
Career development from resume writing to negotiating job offers. Development of written, electronic, and verbal communication skills in employment search. Critiques of resumes, cover letters, and interview styles. Career and industry exercises. Offered fall and spring semesters.

3001 - Global Environmental for Business Planning

3 Credits
Functional and environmental features of global business in the business planning process. Analysis of economic, cultural, legal and political forces affecting global business operations. Examination of organizational responses to the challenges of global business organizations. Offered fall and spring semesters. Prerequisite(s): BIZ 2031.

3621 - Financial Analysis for Business Planning

3 Credits
The role of financial analysis within the business planning process. Time value of money and risk/return concepts serve as the foundation for valuing (analyzing) the firm's sources of capital (debt and equity) and effectively allocating these funds through the capital budgeting process. Formerly FINC 362. Offered fall and spring semesters. Prerequisite(s): BIZ 2111.

3641 - Quantitative Management for Business Planning

3 Credits
Major issues and analytical problem solving techniques in the field of operations management that are used to successfully control the transformation of resources into products and services as established in a business plan. Junior standing. Offered fall and spring semesters. Prerequisite(s): STAT 1561 and BIZ 2331.

3991 - Biz Lab 2

1 Credit
Preparation for senior capstone. Activities cultivate synthesis of BIZ core curriculum courses, initial selection of senior capstone project, and college required program assessment activities. Must be enrolled in one of the following Colleges: Business Administration.

4851 - Integrated Business Planning 1

3 Credits
Capstone course integrates tools and concepts from Business core courses. Develops strategic thinking and analysis for business planning. Case study is emphasized. Offered fall semester. Prerequisite(s): BIZ 1001 and BIZ 1201 and BIZ 2021 and BIZ 2031 and BIZ 2111 and BIZ 2121 and BIZ 2331 and BIZ 2401 and BIZ 2511 and BIZ 2801 and BIZ 3001 and BIZ 2131 and BIZ 3621 and BIZ 3641.

4861 - Integrated Business Planning 2

3 Credits
Completion of BIZ 4851. Completion of a strategic business plan for an applied business case. Offered spring semester. Prerequisite(s): BIZ 4851.

4901 - Internship in Accounting

1 to 15 Credits
Field experience in accounting. Up to 3 hours can be used to satisfy the accounting major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either accounting or business elective requirements. Consult advisor. Offered fall, spring and summer semesters. This course may be repeated for a total of 15 hours.

4911 - Internship in Finance

1 to 15 Credits
Field experience in Finance. Up to 3 hours can be used to satisfy the finance major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either finance or business elective requirements. Consult advisor. Offered fall, spring, and summer semesters. This course may be repeated for a total of 15 hours.

4931 - Internship in International Business and Economics

1 to 15 Credits
Field experience in international business and economics. Up to 3 hours can be used to satisfy the international business and economics major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either international business and economics or business elective requirements. Consult advisor. Offered fall, spring, and summer semesters. This course may be repeated for a total of 15 hours.

4941 - Internship in Management

1 to 15 Credits
Field experience in management. Up to 3 hours can be used to satisfy the management major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either management or business elective requirements. Consult advisor. Offered fall, spring, and summer semesters. This course may be repeated for a total of 15 hours.

4951 - Internship in Marketing

1 to 15 Credits
Field experience in marketing. Up to 3 hours can be used to satisfy the marketing major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either marketing or business elective requirements. Consult advisor. Offered fall, spring, and summer semesters. This course may be repeated for a total of 15 hours.
4961 - Internship in Pharmaceutical Business
1 to 15 Credits
Field experience in pharmaceutical business. Up to 3 hours can be used to satisfy the pharmaceutical business major requirement. Additional hours can be used as general elective hours and cannot be used to satisfy either pharmaceutical business or business elective requirements. Consult advisor. Offered fall, spring, and summer semesters. This course may be repeated for a total of 15 hours.

Subject - Finance (FINC)

1101 - Personal Finance
3 Credits
Personal and family financial planning with an emphasis on financial recordkeeping, budgeting, tax planning, consumer credit, housing, insurance, investments and retirement and estate planning. Offered fall and spring semesters.

1901 - Special Topics in Finance
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in Finance
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3651 - Introduction to Health Care Systems Finance and Economics
3 Credits
Basic concepts, principles, and practices associated with the economic and financial aspects of the U. S. health care delivery system. Also listed as PHBU 3651. Offered fall semester. Prerequisite(s): BIZ 2021 and BIZ 3621 Minimum Grade of C.

3681 - Working Capital Management
3 Credits
Planning for and management of short term funds within the firm. Topics include cash management, short term investments, receivables management, and short term borrowings. Globalization of financial services delivery, and international cash management and foreign exchange risk emphasized. Techniques used to manage short term surplus funds and hedge for short term foreign exchange risk exposures discussed. Offered spring semester. Prerequisite(s): BIZ 3621 Minimum Grade of C.

3691 - Intermediate Financial Management
3 Credits
Advanced concepts and methods employed in financial management. Topics include financial analysis and planning, working capital management, risk analysis and valuation of long-term investments, and capital structure analysis. Offered fall semester. Prerequisite(s): BIZ 3621 Minimum Grade of C.

3901 - Special Topics in Finance
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4601 - Financial Markets and Institutions
3 Credits
Policies and decisions regarding asset, liability, and capital management of a variety of financial institutions such as banks, insurance companies, pension funds, mutual funds and others within the legal, competitive and economic environment. Offered spring semester. Prerequisite(s): BIZ 2031 and BIZ 3621 Minimum Grade of C.

4611 - Investments
3 Credits
The risk-return trade off and distinctive characteristics of different vehicles of financial investment including equities; debt and derivatives; portfolio management; the functioning and regulation of securities markets; the operation of mutual funds and other investment companies. The Efficient Markets Hypothesis receives special attention. Foundations for corporate as well as personal investment decisions. Offered fall and spring semesters. Prerequisite(s): BIZ 3621 Minimum Grade of C.

4621 - Insurance
3 Credits
Principles of personal risk management and insurance. Topics include property and liability insurance, life and health insurance, employee benefits, and social security. Discussion of the functional and financial aspects of insurers. Offered spring semester. Prerequisite(s): BIZ 3621 Minimum Grade of C.

4671 - International Finance
3 Credits
The unique financial challenges and opportunities faced by a multinational enterprise. Hedging as a pivotal tool of exchange rate risk management; the long-term and short-term financing opportunities available to a multinational enterprise; international cash management; and multinational capital budgeting. Also listed as IBEC 4671. Offered spring semester. Prerequisite(s): BIZ 3001 and BIZ 3621 Minimum Grade of C.

4901 - Special Topics in Finance
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

5001 - Independent Study in Finance
1 to 3 Credits
An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Permission must be obtained in writing from the faculty mentor and the Dean of the College prior to registration. Offered fall and spring semesters.

Subject - International Business and Economics (IBEC)

1901 - Special Topics in International Business and Economics
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in International Business and Economics
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3521 - Money and Banking
3 Credits
Theories of money and credit; commercial banking practices; reserve banking; monetary and banking laws; money market; money and credit in the world economy. (Discipline: Economics.) Offered fall semester. Prerequisite(s): BIZ 2021 and BIZ 2031.

3661 - Pharmaceutical Economics
3 Credits
Economic analysis of the pharmaceutical industry. Cost and benefit analysis of industry choices; drug therapy costs and health care outcomes; market structure analysis; patents and trademarks; and government policy impacts. (Discipline: Economics.) Also listed as PHBU 3661. Offered fall semester. Prerequisite(s): BIZ 2021 and BIZ 2031.

3831 - Intermediate Microeconomic Theory
3 Credits
Special problems of pricing, production, and distribution under perfect competition, monopoly, oligopoly, and duopoly in the American economy. (Discipline: Economics.) Offered fall semester. Prerequisite(s): BIZ 2021.

3841 - Intermediate Macroeconomic Theory
3 Credits
The principles, measurement, analysis, and control of aggregate economic activity; the role of consumption, investment, and saving in achieving full employment output, economic growth and price stability. Offered alternate years. (Discipline: Economics.) Prerequisite(s): BIZ 2031.
3851 - International Economics
3 Credits
Theories and current problems of trade between nations; governmental restrictions and controls; the importance of multilateral trade, balance of payments; scarce resources; population, and employment trends. (Discipline: Economics.) Offered spring semester. Prerequisite(s): BIZ 2021 and BIZ 2931.

3871 - Exporting
3 Credits
Tools, mechanics, opportunities, key success factors, unique challenges of exporting successfully: global market, industry and product assessment, export controls, export intermediaries and distribution, export pricing and terms of sale including INCO terms, documentation requirements, shipping terminology, export financing and credit, risk sharing, modes of entry, government export support programs. Regional and specific industry emphases. Presented in applied fashion using industry level export documentation/planning software, field trip, speakers, and an experiential project. Offered spring semester. Prerequisite(s): BIZ 2030.

3901 - Special Topics in International Business and Economics
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4301 - Econometrics
3 Credits
Introductory econometrics. Application of statistical methods to economic, business and social science topics. (Discipline: Economics.) Also listed as PHBU 4301. Offered spring semester. Prerequisite(s): BIZ 2031 and STAT 2561

4311 - Seminar in Pharmaceutical Economics
3 Credits
In-depth analysis of the pharmaceutical industry. Topics will vary. Guest speakers to include industry leaders, researchers, and government officials. (Discipline: Economics.) Also listed as PHBU 4311. Prerequisite(s): IBEC 3661 or PHBU 3661.

4351 - International Financial Accounting
3 Credits
Guiding principles behind international financial reporting standards (IFRS): commonalities, substantial divergences between US GAAP and IFRS. Financial Accounting from a multinational viewpoint involving foreign currency transactions and translation of financial statements denominated in a foreign currency. Also listed as ACCT 4351. Offered spring semester. Prerequisite(s): ACCT 3021.

4421 - Economic History of the United States
3 Credits
Economic life in colonial America and the east-west migration; the development of modern business and industry in the United States; the corporation and its part in the nation's growth; the causes and consequences of the Great Depression. Offered alternate years. (Discipline: Economics.) Prerequisite(s): BIZ 2021 and BIZ 2931.

4531 - International Marketing
3 Credits
World markets, their respective consumers and environments, and the marketing management required to meet the demand of world markets in a dynamic and everchanging setting. Contrasting marketing in the United States with marketing in foreign countries. Case studies illustrate marketing problems faced by international marketers. Also listed as MRKT 4351. Offered fall semester. Prerequisite(s): BIZ 2511 and BIZ 3001.

4671 - International Finance
3 Credits
The unique financial challenges and opportunities faced by a multinational enterprise. Hedging as a pivotal tool of exchange rate risk management; the long-term and short-term financing opportunities available to a multinational enterprise; international cash management; and multinational capital budgeting. Also listed as FINC 4671. Offered spring semester. Prerequisite(s): BIZ 3001 and BIZ 3621 Minimum Grade of C.

4861 - International Management
3 Credits
The application of management concepts and techniques in a multinational environment. The meaning of culture as it applies to international management. Issues in international human resource management. A focus on relevant business simulations and cases. Also listed as MGMT 4861. Offered spring semester. Prerequisite(s): BIZ 2331 and BIZ 2511 and BIZ 3001 and BIZ 3621.

4901 - Special Topics in International Business and Economics
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4971 - Independent Study in International Business and Economics
1 to 3 Credits
An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Permission must be obtained in writing from the faculty mentor and the Dean of the College prior to registration. Offered fall and spring semesters.

Subject - Management (MGMT)

1901 - Special Topics in Management
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in Management
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3251 - Employment Law
3 Credits
The legal relationship between employers and employees. Topics include the basic laws regulating labor relations, employment discrimination, workers' compensation and disability payments, occupational safety and health, employment, and unemployment compensation, termination of employment, and retirement. Offered fall semester. Prerequisite(s): BIZ 2131.

3341 - Cases and Exercises in Organizational Behavior
3 Credits
Experiential and case-based approach to managing organizational behavior. Offered spring semester. Prerequisite(s): BIZ 2331.

3631 - Human Resource Management
3 Credits
Analysis of the role of human resources in contemporary organizations. Functions performed by the human resource practitioner in the areas of recruitment, training and development, compensation, employee relations, health and safety, and employee separation. The impact of government regulations. Offered fall and spring semesters. Prerequisite(s): BIZ 2331.

3751 - Management Decision Making
3 Credits
Qualitative and quantitative management tools and techniques used in problem solving and decision making. Qualitative tools include brainstorming, cause and effect diagrams, the nominal group technique, the Delphi technique, focused groups, force field analysis, competitive analysis, and value chain analysis. Qualitative methods concentrate on linear programming and forecasting. Also listed as PHBU 3751. Offered fall semester. Prerequisite(s): BIZ 3641.

3901 - Special Topics in Management
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.
4001 - Current Labor Relations
3 Credits
Managerial and organizational aspects arising out of employer/union relations. The evolution of labor relations, current labor law, negotiation and administration of labor agreements, and labor relations in the public sector as well as in foreign countries. Prerequisite(s): MGMT 3631.

4101 - Business and Society
3 Credits
The complex and dynamic interrelationships between business and society: the social, cultural, legal, ethical, economic and technological issues, philosophies and points of view which influence business. Issues of corporate responsibility, individual rights and multi-national business. Offered spring semester. Prerequisite(s): BIZ 2331.

4121 - Health Care Management
3 Credits
Special management issues in the health sector: governance, human resources, financial statements and resource seeking, and performance assessments. Also listed as PHBU 4121. Offered spring semester. Prerequisite(s): BIZ 2331.

4151 - Compensation Management
3 Credits
Compensation and benefits fundamentals, strategies, practices, and current issues, including wage level determinants, job requirements, wage and salary structures, incentive systems, methods of job evaluation and wage payments, fringe benefits. Also listed as PHBU 4151. Offered spring semester. Prerequisite(s): MGMT 3631.

4571 - Project Management
3 Credits
Managerial planning and control. Tools and techniques involved in managing projects. Exercises in decision making and critical thinking. Also listed as PHBU 4571. Offered spring semester. Prerequisite(s): BIZ 2331.

4741 - Small Business Management
3 Credits
The importance of small business, its current status, problems encountered and requirements for successful operations. Emphasis on problem solving techniques for small business. Prerequisite(s): BIZ 1001.

4771 - Nonprofit Management
3 Credits
Special management issues in the nonprofit sector: governance, human resources, financial statements and resource seeking, performance assessment, and current issues of concern to nonprofit managers. Offered fall semester. Prerequisite(s): BIZ 2331.

4861 - International Management
3 Credits
The application of management concepts and techniques in a multinational environment. The meaning of culture as it applies to international management. Issues in international human resource management. A focus on relevant business simulations and cases. Offered spring semester. Prerequisite(s): BIZ 2331 and BIZ 2511 and BIZ 3001 and BIZ 3621.

4901 - Special Topics in Management
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4981 - Independent Study in Management
1 to 3 Credits
An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Permission must be obtained in writing from the faculty mentor and the Dean of the College prior to registration. Offered fall and spring semesters.

Subject - Marketing (MRKT)

1901 - Special Topics in Marketing
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in Marketing
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3341 - Marketing Research
3 Credits
Research design, data collection methods, sampling techniques, tabulation, analysis and presentation of information concerning problems in marketing. Provides a working knowledge of the concepts and methods of marketing research. Also listed as PHBU 3341. Offered fall semester. Prerequisite(s): BIZ 2511 and STAT 1561.

3521 - Consumer Behavior
3 Credits
Determinants of behavior which influence the purchase of goods and services. Consumer characteristics, situation analysis and product attributes are key topics covered in this area of behavior. Sociological, cultural, psychological, economic and communication theories used to create unique marketing mixes for specialized target markets. Also listed as PHBU 3521. Offered spring semester. Prerequisite(s): BIZ 2511.

3631 - Product Development
3 Credits
Issues in the development and marketing of new products and services. Also listed as PHBU 3631. Offered fall semester. Prerequisite(s): BIZ 2511.

3901 - Special Topics in Marketing
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4531 - International Marketing
3 Credits
World markets, their respective consumers and environments, and the marketing management required to meet the demand of world markets in a dynamic and everchanging setting. Contrasting marketing in the United States with marketing in foreign countries. Case studies illustrate marketing problems faced by international marketers. Also listed as IBEC 4531. Offered fall semester. Prerequisite(s): BIZ 2511 and BIZ 3001.

4601 - Integrated Marketing Communication
3 Credits
Management of the promotion mix and how its elements can be integrated to solve marketing communication problems. Specific topics include: advertising, personal selling, sales promotion, direct marketing, internet marketing and public relations. Prerequisite(s): BIZ 2511.

4701 - Retailing
3 Credits
Retail store formats, trading area analysis, store location and design, inventory evaluation and management, pricing strategies, sales promotion, merchandise planning, procurement and selling functions. Offered fall semester. Prerequisite(s): BIZ 2511.

4711 - Sales and Customer Relationship Management
3 Credits
Aspects of the behavioral approach to selling in the context of the marketing concept. Selling techniques which build long term customer relationships. Prospecting, ethics, qualifying, presenting, product demonstrations, handling objections, closing and follow up techniques, and international selling. Also listed as PHBU 4711. Offered fall semester. Prerequisite(s): BIZ 2511.
4731 - Supply Chain Management
3 Credits
Move-storage activities that are necessary to deliver products to the right place, at the desired time, in the appropriate condition and at the lowest cost. Warehousing, transportation, order processing, inventory and material handling are key topics. Emphasis is given to the development of decision skills which will provide the best minimum total cost service to the customer. Also listed as PHBU 4731. Offered spring semester. Prerequisite(s): BIZ 2331 and BIZ 2511.

4761 - Business to Business Marketing
3 Credits
Basic business marketing systems as distinguished from consumer marketing. Characteristics of manufacturer’s goods, channels of distribution, pricing, vendor and value analysis, commercial buying, advertising, and meeting product specifications. Prerequisite(s): BIZ 2511.

4901 - Special Topics in Marketing
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4961 - Independent Study in Marketing
1 to 3 Credits
An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Permission must be obtained in writing from the faculty mentor and the Dean of the College prior to registration. Offered fall and spring semesters.

4991 - Advanced Marketing
3 Credits
Integrative capstone in marketing which brings together all of the functional areas of marketing and requires development of marketing strategies and their application to problem situations. A group case approach is used. Also listed as PHBU 4991. Offered spring semester.

Subject - Pharmaceutical Business (PHBU)

1901 - Special Topics in Pharmaceutical Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

2901 - Special Topics in Pharmaceutical Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

3051 - Introduction to Pharmaceutical Science
3 Credits
Basic and pharmaceutical sciences including medical terminology, pharmacology, toxicology, medicinal chemistry, pharmacokinetics and pharmacodynamics. The role of pharmaceutical sciences in the health care system. Offered spring semester. Prerequisite(s): (BIOL 1101 and BIOL 2311 and CHEM 1201).

3171 - Pharmaceutical Industry Legal Environment
3 Credits
Law and regulations related to the pharmaceutical industry. Offered spring semester. Prerequisite(s): BIZ 2131.

3341 - Marketing Research
3 Credits
Research design, data collection methods, sampling techniques, tabulation, analysis and presentation of information concerning problems in marketing. Provides a working knowledge of the concepts and methods of marketing research. Also listed as MRKT 3341. Offered fall semester. Prerequisite(s): BIZ 2511 and STAT 1561.

3521 - Consumer Behavior
3 Credits
Determinants of behavior which influence the purchase of goods and services. Consumer characteristics, situation analysis and product attributes are key topics covered in this area of behavior. Sociocultural, psychological, economic and communication theories used to create unique marketing mixes for specialized target markets. Also listed as MRKT 3521. Offered spring semester. Prerequisite(s): BIZ 2511.

3631 - Product Development
3 Credits
Issues in the development and marketing of new products and services. Also listed as MRKT 3631. Offered fall semester. Prerequisite(s): BIZ 2511.

3651 - Introduction to Health Care Systems Finance and Economics
3 Credits
Basic concepts, principles, and practices associated with the economic and financial aspects of the U.S. health care delivery system. Also listed as FINC 3651. Offered fall semester. Prerequisite(s): BIZ 2021 and BIZ 3621 Minimum Grade of C.

3661 - Pharmaceutical Economics
3 Credits
Economic analysis of the pharmaceutical industry. Cost and benefit analysis of industry choices; drug therapy costs and health care outcomes; market structure analysis; patents and trademarks; and government policy impacts. (Discipline: Economics.) Also listed as IBEC 3661. Offered fall semester. Prerequisite(s): BIZ 2021 and BIZ 2031.

3751 - Management Decision Making
3 Credits
Qualitative and quantitative management tools and techniques used in problem solving and decision making. Qualitative tools include brainstorming, cause and effect diagrams, the nominal group technique, the Delphi technique, focus groups, force field analysis, competitive analysis, and value chain analysis. Quantitative methods concentrate on linear programming and forecasting. Also listed as MGMT 3751. Offered fall semester. Prerequisite(s): BIZ 2641.

3901 - Special Topics in Pharmaceutical Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4121 - Health Care Management
3 Credits
Special management issues in the health sector: governance, human resources, financial statements and resource seeking, and performance assessments. Also listed as MGMT 4121. Offered spring semester. Prerequisite(s): BIZ 2331.

4151 - Compensation Management
3 Credits
Compensation and benefits fundamentals, strategies, practices, and current issues, including wage level determinants, job requirements, wage and salary structures, incentive systems, methods of job evaluation and wage payments, fringe benefits. Also listed as MGMT 4151. Offered spring semester. Prerequisite(s): MGMT 3611.

4301 - Econometrics
3 Credits
Introductory econometrics. Application of statistical methods to economic, business and social science topics. Also listed as IBEC 4301. Offered spring semester. Prerequisite(s): BIZ 2031 and STAT 2561.

4311 - Seminar in Pharmaceutical Economics
3 Credits
In-depth analysis of the pharmaceutical industry. Topics will vary. Guest speakers to include industry leaders, researchers, and government officials. Also listed as IBEC 4311. Prerequisite(s): IBEC 3661 or PHBU 3661.
4571 - Project Management
3 Credits
Managerial planning and control. Tools and techniques involved in managing projects. Exercises in decision making and critical thinking. Also listed as MGMT 4571. Offered spring semester. Prerequisite(s): BIZ 2331.

4711 - Sales and Customer Relationship Management
3 Credits
Aspects of the behavioral approach to selling in the context of the marketing concept. Selling techniques which build long term customer relationships. Prospecting, ethics, qualifying, presenting, product demonstrations, handling objections, closing and follow up techniques, and international selling. Also listed as MRKT 4711. Offered fall semester. Prerequisite(s): BIZ 2511.

4731 - Supply Chain Management
3 Credits
Move-storage activities that are necessary to deliver products to the right place, at the desired time, in the appropriate condition and at the lowest cost. Warehousing, transportation, order processing, inventory and material handling are key topics. Emphasis is given to the development of decision skills which will provide the best minimum total cost service to the customer. Also listed as MRKT 4731. Offered spring semester. Prerequisite(s): BIZ 2331 and BIZ 2511.

4901 - Special Topics in Pharmaceutical Business
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters.

4991 - Advanced Marketing
3 Credits
Integrative capstone in marketing which brings together all of the functional areas of marketing and requires development of marketing strategies and their application to problem situations. A group case approach is used. Also listed as MRKT 4991. Offered spring semester.

Subject - Forensic Accounting & Auditing (FAAS)

5011 - Professional Ethics and Sarbanes Oxley Compliance
3 Credits
Ethical reasoning, integrity, objectivity, independence and other core values as defined by the American Institute of Certified Public Accountants are discussed. A discussion of the provisions of the Sarbanes-Oxley Act provides the students with an appreciation of the legal constraints that result from lapses in ethical reasoning, integrity and objectivity in the accounting profession. Also listed as TAX 5011. Offered fall semester.

5201 - Corporate Governance
3 Credits
The structured system of policies and processes established and maintained by the board of directors to oversee an organization’s strategic activities, accountability and openness in conducting its activities for the long-term. Focus on board size, structure, membership, member nomination, election and tenure; committee structure and the nature, composition and duties of the committees; rights, responsibilities and relationship of directors, management, and shareholders; policies and procedures related to accounting, auditing, executive compensations and financial reporting. Also listed as TAX 5201. Offered spring semester.

5341 - Fraud Examination
3 Credits
Survey of the types of occupational fraud with the goal of understanding how and why people commit fraud, how fraudulent conduct might be deterred, and how allegations of fraud should be investigated and resolved. Also listed as ACCT 3071. Offered fall semester.

5381 - Information Technology Auditing and Risk Management
3 Credits
This course covers management’s role in controlling information technology and addressing the major risks related to technology. Topics include information security, contingency planning, desktop computer controls, systems development controls, computer center operation controls, assurance of information related to on-line, client-server, web-based, intranet and other advanced computer systems. Students will learn approaches to evaluating and addressing technology risk throughout the organization from the perspective of internal and external audit in addition to the view of every end user. Topics included in the class will include coverage of all areas to prepare students to take the Certified Information Systems Auditor (CISA) examination. Offered fall semester.

5421 - Internal Auditing
3 Credits
The course will cover internal audit from a broad perspective that includes information technology, business processes, and accounting systems. Topics include internal auditing standards, risk assessment, governance, ethics, audit techniques, and emerging issues. The course covers the design of business processes and the implementation of key control concepts and will use a case study approach that addresses tactical, strategic, systems, and operational areas. Improvement in effectiveness and efficiency will be covered in the areas of operations, finance and technology. This course’s content follows the recommended curriculum of the Institute of Internal Auditors’ Internal Auditing Educational Partnership program. Topics included in the class will assist students in preparing to take the Certified Internal Auditor examination. Offered fall semester.

5601 - Business Valuation
3 Credits
Assessment of organizational health and value via business strategy, accounting, financial, and prospective analysis. Calculation of values using the income and market approaches. Selection of appropriate standard of value. Financial statement adjustments and calculation of premiums, discounts, and capitalization rates. Use of research and database resources. The curriculum of this course follows recommendations set forth by the National Association of Certified Valuation Analysts. Students passing the final examination in this course will earn 16 credit hours toward the training requirement necessary to sit for the NACVAs Accredited Valuation Analyst (AVA) certification examination. Ohio Northern University is an educational partner with the NACVA. Also listed as TAX 5601. Offered spring semester.

5701 - Basics of Expert Testimony
3 Credits
Legal aspects of the forensic engagement, including rules of evidence and procedure. Also listed as TAX 5701. Offered fall semester.

5801 - Internship in Forensic Accounting and Auditing
1 to 15 Credits
Offered fall, spring, and summer semesters.

5841 - Computer Forensics and Investigation
3 Credits
This course introduces students to the techniques and tools of computer forensics investigations. Students will receive step-by-step explanations on how to use the most popular forensic tools. The course maps to the objectives of the International Association of Computer Investigative Specialists (IACIS) certificate, and includes coverage of the latest technology including PDAs, cell phones, and thumb drives. Many hands-on activities are included, which allow students to practice skills as they are learned. Offered spring semester.

5881 - Advanced Topics in Auditing
3 Credits
This is a seminar course which covers current issues in auditing. Content varies each year. Offered spring semester.
Subject - Taxation (TAX)

5101 - Professional Ethics and Sarbanes Oxley Compliance
3 Credits
Ethical reasoning, integrity, objectivity, independence and other core values as defined by the American Institute of Certified Public Accountants are discussed. A discussion of the provisions of the Sarbanes-Oxley Act provides the students with an appreciation of the legal constraints that result from lapses in ethical reasoning, integrity and objectivity in the accounting profession. Also listed as FAAS 5101. Offered fall semester.

5201 - Corporate Governance
3 Credits
The structured system of policies and processes established and maintained by the board of directors to oversee an organization's strategic activities, accountability and openness in conducting its activities for the long-term. Focus on board size, structure, membership, member nomination, election and tenure; committee structure and the nature, composition and duties of the committees; rights, responsibilities and relationship of directors, management, and shareholders; policies and procedures related to accounting, auditing, executive compensations and financial reporting. Also listed as FAAS 5201. Offered spring semester.

5331 - Federal Income Tax
3 Credits
The fundamentals of federal income tax, emphasizing its application to individuals. Gross income (inclusions and exclusions); adjusted gross income; deductions; taxable income; taxable credits; identification of the taxpayer; general tax accounting principles; and basic federal tax procedure. The application of the income tax law to business and investment property, including capital gains and losses, depreciation, and recapture. A consideration of the non-recognition and deferral of income, and other factors affecting the computation of tax liability. Offered fall semester.

5371 - Research Methods
3 Credits
Legal research methods with a focus on tax law, including distinctions between primary and secondary sources and location of materials in electronic and printed form. Methodology to determine, research, resolve and communicate tax law issues. Offered fall semester.

5411 - Taxation of Partnerships and Partners
3 Credits
Taxation of partnerships and partners. The federal tax law applying to the relationship between the partnership and its partners. The formation, operation, and liquidation of partnerships, as well as the sale of a partnership, interest, and the retirement of a partner. Offered fall semester.

5431 - Taxation of Estates, Gifts, and Trusts
3 Credits
The operation and use of federal tax provisions applicable to inter vivos and testamentary dispositions of property with particular emphasis upon matters of federal estate and gift taxation. Offered fall semester.

5451 - Non-Profit Organizations
3 Credits
The rules affecting charitable organizations, including tax-exempt income, unrelated business income, lobbying and political activities, and the deduction of contributions. Offered fall semester.

5601 - Business Valuation
3 Credits
Assessment of organizational health and value via business strategy, accounting, financial, and prospective analysis. Calculation of values using the income and market approaches. Selection of appropriate standard of value. Financial statement adjustments and calculation of premiums, discounts, and capitalization rates. Use of research and database resources. The curriculum of this course follows recommendations set forth by the National Association of Certified Valuation Analysts. Students passing the final examination in this course will earn 16 credit hours toward the training requirement necessary to sit for the NACVAs Accredited Valuation Analyst (AVA) certification examination. Ohio Northern University is an educational partner with the NACVA. Also listed as FAAS 5601. Offered spring semester.

5701 - Basics of Expert Testimony
3 Credits
Legal aspects of the forensic engagement, including rules of evidence and procedure. Also listed as FAAS 5701. Offered fall semester.

5801 - Internship in Taxation
1 to 15 Credits
Offered fall, spring, and summer semesters.

5831 - Taxation of Corporations
3 Credits
Federal income taxation of corporate activities, with emphasis on consequences to individual shareholders. Offered spring semester.

5871 - Business Planning
3 Credits
State substantive law and securities and tax law in planning the formation and change of business entities. Proposing solutions to the problems presented by the business client, the preparation of better explaining proposals to the client, and drafting documents that will carry out the proposed plan. Problems involving both incorporated and unincorporated business entities. Offered spring semester.

5891 - Estates, Wills & Trusts
3 Credits
The law of intestate and testate succession; formal requirements of wills, testamentary capacity, undue influence, fraud and mistake, holographic and nuncupative wills integration and incorporation by reference; revocation, republication, revival and amendment. The nature, creation, and elements of a trust; rights, liabilities and duties of settler, trustee and beneficiary; creditors rights against trust property; modification and termination of a trust, charitable trusts; resulting and constructive trusts, and general fiduciary responsibilities and administrative problems. Offered spring semester.

5931 - International Taxation
3 Credits
Basic survey of international taxation law, including source of income and expense allocation rules, international tax credits, transfer pricing, antidelay rules, withholding taxes, income tax treaties, tax incentives, and expatriate issues. Offered spring semester.
THE THOMAS JEFFERSON SMULL COLLEGE OF

Engineering
THE THOMAS JEFFERSON SMULL COLLEGE OF

Engineering

Eric T. Baumgartner, Dean

Accreditation and Association
Bachelor's degree programs in civil, computer, electrical and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET and the computer science program is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD, 21202-4012; (410) 347-7700. The College is a member of the American Society for Engineering Education and the Association for Computing Machinery and is recognized by the Ohio Board of Registration for Professional Engineers and Surveyors.

History and Tradition
In 1871 the first catalog of the University included a course in surveying. A department of Civil Engineering was organized in 1880 with its first graduate in 1882 followed by Electrical Engineering in 1898, and Mechanical Engineering in 1904. The Electrical and Computer Engineering department was formed in 1998 and in 2001 the department of Electrical & Computer Engineering and Computer Science was established. Over 4,000 engineers have graduated from the Thomas Jefferson Smull College of Engineering. All programs continue to meet the highest standards of engineering excellence.

The tradition of the College is to treat each student as an individual, to keep class size small, and to maintain a close faculty-student relationship.

The following faculty chairs have been established to enhance the educational tradition of the college.

Herbert F. Alter Chair of Engineering Science established in 1983 by Mrs. Alter in memory of her late husband, class of 1911 in mechanical engineering. The 2010-11 recipient of the chair is Dr. Ken Reid, associate professor of electrical and computer engineering.

Engineering Alumni Chair established in 1983 by donations from engineering alumni and friends in celebration of the college’s centennial year. The 2010-11 recipient is Dr. Robert Ward, professor of civil engineering.

Leroy H. Lytle Distinguished Chair of Mechanical Engineering established in 1983 from the estate of Leroy H. Lytle, 1923 graduate of ONU. The 2010-11 recipient of the chair is Dr. David Mikesell, assistant professor of mechanical engineering.

Departments
There are three departments in the College of Engineering: civil engineering, electrical & computer engineering and computer science, and mechanical engineering.

Vision Statement
The vision of the T.J. Smull College of Engineering is to be nationally recognized for excellence in its undergraduate engineering and computer science programs.

Mission Statement
The mission of the College of Engineering of Ohio Northern University is to provide the highest quality undergraduate engineering programs in an environment that supports student endeavors, encourages faculty scholarship and provides for the personal growth of all community members. We aspire to provide a teaching/learning environment that maximizes opportunities for student success. By instilling broad problem solving, design, and social skills, encouraging service to society, ethical behavior, and career-long learning, we prepare students for satisfying careers in which they can contribute to the betterment of society. We expect this preparation will enable graduates to become highly regarded throughout their professional careers, thereby bringing recognition to themselves and the institution.

Toward this end we will:
• Maximize learning by incorporating new and effective pedagogical methods
• Develop leading edge curricula which are based on fundamentals
• Be responsive to technological advances
• Be adaptive to our industrial and student clients
• Prepare graduates who possess professional, technical and social skills
• Create a positive environment for the critical evaluation of new ideas

Guiding Principles
The College of Engineering is committed to the guiding principles below.

Community members:
• will exhibit dignity, integrity, respect, and professionalism
• will assist all members of the College of Engineering - students, staff, and faculty to achieve their full potential
• will instill a spirit of pride, cooperation, and accountability
• believe that personal contact with, and concern for, our students are essential
• have a passion for the total development of the student
• recognize that in diversity there can be strength
• are committed to providing engineering programs of the highest quality, which provide breadth, and incorporate theoretical and experiential components
• are committed to career-long learning and service to society
• recognize that the College of Engineering is one component of the educational environment, and will offer support for other programs within the university.

Admission Standards
Early application is advisable. Students interested in engineering or computer science are encouraged to obtain advice on programs of study from the dean of the college and to request appropriate information and application materials from the Office of Admissions, Ohio Northern University, Ada, OH 45810.

In addition to the general requirements for admission to the University stated in this catalog, high school graduates must have 16 acceptable units of work. For engineering students, ten of these units are as follows: 4 units in English; 4 units in mathematics; and 2 units in science (1 unit in physics and preferably 1 unit in chemistry). For computer science students, fourteen of these units are as follows: 4 units in English; 4 units in mathematics; 6 units (in any combination) in history, social studies, languages or natural sciences. Acceptable scores on the American College Test or the College Entrance Examination Board Test are expected of all candidates.

Students who meet the admission standards of the University but are deficient in the mathematics or physics requirements of the college will be required to make up their deficiency. The college requires that prospective students make up their high school deficiencies before entering as freshmen. Prospective students who do not meet the minimum requirement for admission to the college as freshmen may be admitted as General Science majors, and subsequently be admitted to the College of Engineering as sophomores providing they maintain a GPA of at least 2.00 during their freshman year.

Transfer students from other accredited universities or colleges may be admitted with advanced standing if they have an honorable dismissal and are eligible to return to the universities or colleges they previously attended. Transfer students who conceal their previous college attendance will have their admission to the college revoked. The college will accept transfer credits earned with a grade of C or better (C- is not acceptable). Transfer credit for engineering courses will normally only be accepted from an ABET accredited program. A maximum of 96 hours of transfer work will be accepted.
### Degree Requirements

**Bachelor of Science degree in civil, computer, electrical or mechanical engineering**

#### General Education Requirements

College faculty and staff are dedicated to educating the whole person and not simply producing technically competent graduates. Therefore our goal is to graduate engineers and computer scientists who conform to the general education learning objectives of the university that have been previously stated in the catalog.

All students are required to complete a general education requirement. The requirement includes specific courses and electives in the Humanities and Social Sciences: Writing Seminar, Extra Disciplinary Seminar, Professional Ethics, and General Education Electives (4).

Each student should consider carefully the selection of electives for the general education requirements. While the student is given choices in this selection it is mandatory that these choices be discussed and approved by the academic advisor.

Because the courses available change from year to year, they are not listed in this catalog. An approved Honors Seminar may fulfill a requirement listed above. For specific information, see the office of the dean.

#### Bachelor of Science in Civil Engineering Curriculum

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>Calculus 1 and 2 (MATH 1631, 1641)</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 1 and Lab (CHEM 1501 and 1551)</td>
<td>4</td>
</tr>
<tr>
<td>Physics 1 and Lab (PHYS 2311, 2341)</td>
<td>4</td>
</tr>
<tr>
<td>Writing Seminar (ENGL 1221 or 1231)</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Orientation (ENGR 1001)</td>
<td>0</td>
</tr>
<tr>
<td>Introduction to Engineering 1, 2 (ENGR 1041, 1051)</td>
<td>6</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>6</td>
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<td><strong>TOTAL</strong></td>
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**Sophomore Year**

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<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Calculus 3 (MATH 2631)</td>
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<tr>
<td>Differential Equations (MATH 2651)</td>
<td>4</td>
</tr>
<tr>
<td>Physics 2 (PHYS 2321)</td>
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<tr>
<td>Science Elective</td>
<td>4</td>
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<tr>
<td>Statics (ENGR 2131)</td>
<td>3</td>
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<tr>
<td>Strength of Materials (ENGR 2231)</td>
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<td>Surveying (CE 2031)</td>
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<tr>
<td>Engineering Science Elective 1</td>
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<tr>
<td>Extra Disciplinary Seminar</td>
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<tr>
<td>General Education Elective</td>
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<td><strong>TOTAL</strong></td>
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**Junior Year**

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<tr>
<td>Structural Analysis (CE 3411)</td>
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<tr>
<td>Highway Engineering and Traffic Analysis (CE 3511)</td>
<td>3</td>
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<tr>
<td>Engineering Fluid Mechanics (CE 3611)</td>
<td>3</td>
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<tr>
<td>Reinforced Concrete Design (CE 3431)</td>
<td>4</td>
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<tr>
<td>Pavement Analysis and Design (CE 3531)</td>
<td>3</td>
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<td>Water Resources Engineering (CE 3631)</td>
<td>3</td>
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<tr>
<td>Environmental Engineering and Science (CE 3231)</td>
<td>3</td>
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<tr>
<td>Statistics for Scientists and Engineers (STAT 2501)</td>
<td>3</td>
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<tr>
<td>Engineering Science Elective 2</td>
<td>3</td>
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<tr>
<td>Business Elective</td>
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<td><strong>TOTAL</strong></td>
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**Senior Year**

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<th>Course</th>
<th>Hours</th>
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<tr>
<td>Civil Engineering Seminar (CE 4101)</td>
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<tr>
<td>Project Management (CE 4141)</td>
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<tr>
<td>Structural Steel Design (CE 4441)</td>
<td>3</td>
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<tr>
<td>Water and Wastewater Treatment (CE 4241)</td>
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<tr>
<td>Geotechnical Principles (CE 4341)</td>
<td>3</td>
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<td>Geotechnical Design (CE 4351)</td>
<td>3</td>
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<tr>
<td>Civil Engineering Design Project (CE 4151)</td>
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<tr>
<td>Civil Engineering Electives</td>
<td>6</td>
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<tr>
<td>Professional Ethics (PHIL 2401)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

### Bachelor of Science in Electrical Engineering Curriculum

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus 1, 2 (MATH 1631, 1641)</td>
<td>8</td>
</tr>
<tr>
<td>Physics 1 &amp; Lab (PHYS 2311, 2341)</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry (CHEM 1501)</td>
<td>4</td>
</tr>
<tr>
<td>Writing Seminar (ENGL 1221 or 1231)</td>
<td>3</td>
</tr>
<tr>
<td>Orientation (ENGR 1001)</td>
<td>0</td>
</tr>
<tr>
<td>Introduction to Engineering 1, 2 (ENGR 1041, 1051)</td>
<td>6</td>
</tr>
<tr>
<td>Programming 1 (ECCS 1611, 1621)</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>33</strong></td>
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</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Signal Processing (ECCS 3311)</td>
<td>3</td>
</tr>
<tr>
<td>Electronics (ECCS 3331)</td>
<td>4</td>
</tr>
<tr>
<td>Microprocessors (ECCS 3351)</td>
<td>3</td>
</tr>
<tr>
<td>Networks and data Communication (ECCS 3631)</td>
<td>3</td>
</tr>
<tr>
<td>Operating Systems (ECCS 3661)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Architecture (ECCS 3611)</td>
<td>4</td>
</tr>
<tr>
<td>Embedded Systems (ECCS 3241)</td>
<td>3</td>
</tr>
<tr>
<td>Statistics for Sci. &amp; Engr. (STAT 2501)</td>
<td>3</td>
</tr>
<tr>
<td>Professional Ethics (PHIL 2401)</td>
<td>3</td>
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<tr>
<td><strong>TOTAL</strong></td>
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**Senior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Design 1, 2 (ECCS 4711, 4721)</td>
<td>5</td>
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<tr>
<td>Engineering Economy (ECCS 4391)</td>
<td>1</td>
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<tr>
<td>VLSI System Design (ECCS 4211)</td>
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<tr>
<td>Computer Engineering Electives</td>
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<tr>
<td>Engineering Elective</td>
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<tr>
<td>Math/Science Elective</td>
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<tr>
<td>General Education Electives</td>
<td>6</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

### Bachelor of Science in Computer Engineering Curriculum

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus 1, 2 (MATH 1631, 1641)</td>
<td>8</td>
</tr>
<tr>
<td>Physics 1 &amp; Lab (PHYS 2311, 2341)</td>
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<td>Writing Seminar (ENGL 1221 or 1231)</td>
<td>3</td>
</tr>
<tr>
<td>Orientation (ENGR 1001)</td>
<td>0</td>
</tr>
<tr>
<td>Introduction to Engineering 1, 2 (ENGR 1041, 1051)</td>
<td>6</td>
</tr>
<tr>
<td>Programming 1 (ECCS 1611)</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
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<td>Digital Signal Processing (ECCS 3311)</td>
<td>3</td>
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<tr>
<td>Electronics (ECCS 3331)</td>
<td>4</td>
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<tr>
<td>Microprocessors (ECCS 3351)</td>
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<tr>
<td>Networks and data Communication (ECCS 3631)</td>
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<td>Computer Architecture (ECCS 3611)</td>
<td>4</td>
</tr>
<tr>
<td>Embedded Systems (ECCS 3241)</td>
<td>3</td>
</tr>
<tr>
<td>Statistics for Sci. &amp; Engr. (STAT 2501)</td>
<td>3</td>
</tr>
<tr>
<td>Professional Ethics (PHIL 2401)</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Logic (ECCS 2721)</td>
<td>3</td>
</tr>
<tr>
<td>Signals and Systems (ECCS 2321)</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>33</strong></td>
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**Senior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Design 1, 2 (ECCS 4711, 4721)</td>
<td>5</td>
</tr>
<tr>
<td>Programming 1, 2 (ECCS 1611, 1621)</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>
Bachelor of Science - Engineering Education Curriculum

Starting in the Fall 2011, the College of Engineering established a new program leading to a Bachelor of Science degree with a major in Engineering Education. This degree will provide a graduate with a foundation in engineering, mathematics and education and meets the curriculum and experience requirements for the teacher licensure program in AYA Mathematics (7-12) based on the standards of the National Council of Teachers of Mathematics (NCTM). Graduates of the Engineering Education program are also required to conform to the general education learning objectives of the university that have been previously stated in the catalog.

Freshman Year
- Calculus I (MATH 1631) 4 hours
- Calculus II (MATH 1641) 4 hours
- General Education Elective 3 hours
- Total 11 hours

Sophomore Year
- Calculus III (MATH 2651) 4 hours
- General Education Elective 3 hours
- Technical Elective 3 hours
- Total 10 hours

Junior Year
- Calculus IV (MATH 2631) 4 hours
- General Education Elective 3 hours
- Technical Elective 3 hours
- Total 10 hours

Senior Year
- Senior Design I and II (ME 4111, 4121) 6 hours
- Engineering Design (ME 4511) 3 hours
- Technical Elective 3 hours
- Total 12 hours

Bachelor of Science in Mechanical Engineering Curriculum

Freshman Year
- Digital Logic (ECCS 2721) 3 hours
- Signals and Systems (ECCS 2321) 3 hours
- Professional Ethics (PHIL 2401) 3 hours
- Total 9 hours

Sophomore Year
- Electromagnetics (ECCS 3111) 3 hours
- Digital Signal Processing (ECCS 3311) 3 hours
- Electronics (ECCS 3331) 4 hours
- Energy Systems I (ECCS 3121) 4 hours
- Control Systems (ECCS 3141) 4 hours
- Communication Systems (ECCS 3191) 4 hours
- Statistics for Sci. & Engr. (STAT 2501) 3 hours
- Engineering Elective 3 hours
- Extra Disciplinary Seminar 3 hours
- Total 31 hours

Junior Year
- Heat Transfer (ME 3321) 4 hours
- Fluid Mechanics (ME 3311) 3 hours
- Heat Transfer (ME 3321) 4 hours
- Technical Elective 3 hours
- Extra Disciplinary Seminar 3 hours
- Statistics for Scientists and Engineers (STAT 2701) 3 hours
- Experimental Methods (ME 3511) 2 hours
- Manufacturing Laboratory (ME 3411) 1 hour
- Total 2 hours

Senior Year
- Capstone I and II (ME 4111, 4121) 6 hours
- Engineering Analysis (ME 4511) 3 hours
- Technical Electives 9 hours
- General Education Electives 9 hours
- Science/Math Elective 3 hours
- Total 30 hours
Bachelor of Science - Computer Science Curriculum

College faculty and staff are dedicated to educating the whole person and not simply producing technically competent graduates. Therefore our goal is to graduate computer scientists who conform to the general education learning objectives of the university that have been previously stated in the catalog.

All students are required to complete a general education requirement. A list of electives and approved science courses is available from the Electrical & Computer Engineering and Computer Science Department Office. An approved Honors Seminar may fulfill a general education requirement.

Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus 1, 2 (MATH 1631, 1641)</td>
<td>8</td>
</tr>
<tr>
<td>Science Electives &amp; Labs</td>
<td>8</td>
</tr>
<tr>
<td>Writing Seminar (ENGL 1221 or 1231)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td>CS Orientation (ECCS 1101)</td>
<td>1</td>
</tr>
<tr>
<td>Net-Centric Computing (ECCS 1421)</td>
<td>3</td>
</tr>
<tr>
<td>Programming 1, 2 (ECCS 1611, 1621)</td>
<td>8</td>
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<tr>
<td><strong>TOTAL</strong></td>
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Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Discrete Mathematics (MATH 3061)</td>
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<tr>
<td>Linear Algebra (MATH 3261)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>6</td>
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<tr>
<td>Business Elective</td>
<td>3</td>
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<tr>
<td>Data Structures and Algorithms 1, 2 (ECCS 2671, 2681)</td>
<td>6</td>
</tr>
<tr>
<td>Design Patterns (ECCS 2411)</td>
<td>3</td>
</tr>
<tr>
<td>Operating Systems (ECCS 3661)</td>
<td>3</td>
</tr>
<tr>
<td>Databases (ECCS 3481)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Architecture (ECCS 3611)</td>
<td>4</td>
</tr>
<tr>
<td>Statistics for Sci. &amp; Engr. (STAT 2501)</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>Math Elective</td>
<td>3</td>
</tr>
<tr>
<td>Extra Disciplinary Seminar</td>
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<td><strong>TOTAL</strong></td>
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Junior Year

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Theory of Computation (ECCS 3431)</td>
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<tr>
<td>Computer Security (ECCS 3411)</td>
<td>3</td>
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<tr>
<td>User Interface Design (ECCS 3451)</td>
<td>3</td>
</tr>
<tr>
<td>Operating Systems (ECCS 3661)</td>
<td>3</td>
</tr>
<tr>
<td>Databases (ECCS 3481)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Architecture (ECCS 3611)</td>
<td>4</td>
</tr>
<tr>
<td>Statistics for Sci. &amp; Engr. (STAT 2501)</td>
<td>3</td>
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<tr>
<td>Science Elective</td>
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</tr>
<tr>
<td>Math Elective</td>
<td>3</td>
</tr>
<tr>
<td>Extra Disciplinary Seminar</td>
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<td><strong>TOTAL</strong></td>
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Senior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CS Capstone 1, 2 (ECCS 4471, 4472)</td>
<td>5</td>
</tr>
<tr>
<td>Programming Languages (ECCS 4411)</td>
<td>3</td>
</tr>
<tr>
<td>Networks and Data Communication (ECCS 3631)</td>
<td>3</td>
</tr>
<tr>
<td>CS Electives</td>
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</tr>
<tr>
<td>Ethics</td>
<td>3</td>
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<tr>
<td>General Education Elective</td>
<td>3</td>
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<tr>
<td>Free Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

Requirements for the Computer Science Minor

The student must take Programming 1 (ECCS 1611), Programming 2 (ECCS 1621), Data Structures and Algorithms 1 (ECCS 2671) and three more computer science courses, one of which must be at least a junior level course.

Students who are interested in a computer science minor are advised to contact the Electrical & Computer Engineering and Computer Science department for more details.

Graduation Requirements

A student qualifies for graduation by meeting specific course requirements as listed in the catalog year by year for the specific program at specific levels and by earning a minimum number of academic hours as defined by their particular program. In addition, a student must attain at least a 2.00 cumulative grade point average in all courses and at least a 2.00 cumulative grade point average in all engineering and computer science courses.

All degree candidates are required to spend their senior year in academic residence.

At commencement engineering students receive the Bachelor of Science degree in either civil, computer, electrical, or mechanical engineering. Computer science and engineering education students receive the Bachelor of Science degree.

General Regulations

Each department in the college lists term by term the standard course load for a student. The normal maximum load is that which is listed by the department for that term at that level or 19 hours, whichever is larger. The dean, upon recommendation of the student's advisor, may permit a student to enroll for extra hours at an additional charge. See page 10 for overload charges beyond 19 credit hours. The normal requirement is a cumulative grade point average of at least 3.00. Except where noted, credit hours earned in repeated courses can be counted only one time among the total hours required for graduation.

S/U Grade Option

Students in the College of Engineering are not permitted to register for courses on an S/U (Satisfactory/Unsatisfactory) basis if the course is offered on a graded basis.

Classification of Students

For purposes of classification, the minimum requirements for sophomore standing are 30 semester credit hours of completed academic work; for junior standing, 60 semester credit hours; and for senior standing, 90 semester credit hours.

Academic Standing

A student is in good academic standing when the cumulative grade point average is equal to or greater than 2.00. When the cumulative grade point average falls below 2.00, a student is placed on probation. In addition, any student with a term grade point average of 1.00 or lower may be placed on probation or suspended. The status of probation may occur for two successive semesters if conditions and evidence indicate that the student is improving academically. Students on probation cannot participate in competitive activities of individuals, teams, or other groups officially designated as representing the University.

Registration as a Professional Engineer

Registration as a Professional Engineer by the state, necessary for professional practice, requires licensing examinations and four years of experience after completing the Bachelor of Science degree. ONU senior engineering students are strongly encouraged to take the Fundamentals of Engineering (FE) exam which is offered in April each year. Typically more than 90% of graduating seniors take the exam and more than 90% pass the exam. The dean provides full information to students in their senior year.

Students may also write the Secretary of the State Board of Registration for Engineering (FE) exam which is offered in April each year. Typically more than 90% of graduating seniors take the exam and more than 90% pass the exam. The dean provides full information to students in their senior year.

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Any student on probation whose term grade point average for the following semester is below 2.00 will have his/her record reviewed by the appropriate department chairman and may be recommended to the dean for academic actions which may include suspension or dismissal. Unless otherwise indicated, suspension is for a period of two regular academic semesters. Students who have been suspended may petition the academic dean for lifting of the suspension.

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Students may also write the Secretary of the State Board of Registration for Professional Engineers and Surveyors, 77 South High Street, Room 1698, Columbus, OH 43215-6108.
Engineering Graduates and Law School
Graduating seniors of the T.J. Smull College of Engineering interested in entering the Pettit College of Law at Ohio Northern should refer to the program description material on page 20 of this catalog.

Dual Degree Programs
Information concerning dual degree programs involving the College of Engineering appears on page 19 of this catalog. Students may receive further details from the academic dean.

Cooperative Education Program
Cooperative education is a plan of educational development designed to integrate classroom study with planned and supervised work experiences. Engineering and computer science co-op students normally are employed in semiprofessional capacities in research, development, manufacturing, and engineering departments of industrial companies, consulting firms, and in federal and state agencies. The program also includes the opportunity for the students to work for an international firm in an international environment. The employment sessions begin in the summer following the sophomore year and include a contracted four to six terms of co-op experience. The international co-op component is modified to include courses in the appropriate language and culture and a six-month overseas assignment during the junior year. This five-year program is optional and currently available for civil, computer, electrical, and mechanical engineering students and computer science students.

GENERAL ENGINEERING COURSES

Subject - Engineering (ENGR)

1001 - Engineering Orientation
0 Credits
Student introduction to the College of Engineering, introduction to the profession, and a forum for first-year advising. Offered fall semester.

1041 - Introduction to Engineering 1
3 Credits
The engineering profession and application of the engineering design and analysis processes: individual and team based projects requiring problem solving with consideration of assumptions, criteria and constraints, through the application of standard engineering techniques; communication of results in standard formats. Engineering ethics. Offered fall semester.

1051 - Introduction to Engineering 2
3 Credits
A team-based humanitarian engineering conceptual design project based on the engineering design method: preparation of proposal, analysis of design alternatives, constraints and criteria, testing and verification by prototyping, preparation and presentation of project report. Offered spring semester. Prerequisite(s): ENGR 1041.

1901 - Special Topics
1 to 3 Credits
Selected topics of current interest in general engineering. May be repeated as topic varies. Permission of instructor. Offered fall and spring semesters.

1911 - Special Topics
1 to 3 Credits
Topics in engineering. Enrollment is restricted to student with specific engineering experiences, such as attendees of programs such as Summer Honors Institute or Project Lead The Way. May be repeated as topics or experiences vary. Graded S/U. Offered fall and spring semesters.

1951 - Independent Study
1 to 3 Credits
Individual study of topic of particular interest to the student and instructor in general engineering. Permission of instructor. Offered fall and spring semesters.

2131 - Statics
3 Credits
Fundamental principles of statics with vector methods. Emphasis on free body diagrams and equations of equilibrium. Topics include resultants of force systems, centroids, centers of gravity, moments of inertia, equilibrium, shear and moment diagrams, loads, trusses, and internal forces. Offered fall and spring semesters. Prerequisite(s): (PHYS 2311 or PHYS 231) and (MATH 1641 or MATH 159 or MATH 164).

2141 - Dynamics
3 Credits
Fundamental principles of mechanics with vector methods as applied to dynamics. Topics include: kinematics, absolute and relative motion, force, mass and acceleration, work and energy, and impulse and momentum. Offered spring semester. Prerequisite(s): (ENGR 2131 Minimum Grade of C or GE 113 Minimum Grade of C) and (MATH 1641 or MATH 159 or MATH 164).

2231 - Strength of Materials
3 Credits
Elastic analysis of deformable bodies using concepts of stress and strain. Topics include: members subjected to tension, compression, torsion, and flexure; development and application of Mohr's circle, determinate beam deflection, material properties, pressure vessels, and composite beams. Offered spring semester. Prerequisite(s): (ENGR 2131 or GE 133).

2501 - Introduction to Career Development
1 Credit
An introduction to career development including an introduction to industry, the industrial work environment, resume writing, interviewing and job search techniques. Course is designed to prepare a sophomore engineering or computer science student for the industrial experience. Sophomore standing required. Graded S/U. Formerly GE 250. Offered fall semester.

2901 - Special Topics
1 to 3 Credits
Selected topics of current interest in general engineering. May be repeated as topic varies. Permission of instructor. Formerly GE 280. Offered fall and spring semesters.

2951 - Independent Study
1 to 3 Credits
Individual study of topic of particular interest to the student and instructor in general engineering. Permission of instructor. Formerly GE 290. Offered fall and spring semesters.

3101 Engineering Education 1
4 Credits
To include topics from history of engineering and math/science that apply to engineering, an overview of the mathematical foundation of engineering, graphing and the use of technology in a K-12 classroom. Admission to Teacher Education required. Offered spring semester. Restricted to Engineering Education majors.

3501 - Professional Practice
1 Credit
Cooperative education (co-op) employment in a semi-professional capacity. Students work full-time (40 hours per week) in the research, development, manufacturing, or engineering department of an industrial company, consulting firm or governmental agency. A student report on the assignment and an employer's evaluation are required. Course may be repeated up to a total of five hours. Junior standing required, as well as successful completion of GE 2501 and CUM GPA of 2.5 minimum. Graded S/U. Formerly GE 350. Offered fall, spring and summer semesters. Prerequisite(s): (ENGR 2501 or GE 250). This course may be repeated 5 times.
4101 - Engineering Education 2
4 Credits
To include topics from history of engineering and math/science that apply to engineering, an overview of the mathematical foundation of engineering, graphing and the use of technology in a K-12 classroom. Admission to Teacher Education required. Offered spring semester. Prerequisite: ENGR 3101. Restricted to Engineering Education majors.

4201 - Engineering Education Senior Design 1
3 Credits
Educational aspects within a team-based design project in area in or related to a specific discipline within engineering issues regarding effective teamwork and conflict resolution. Utilization of project management standards. Establishment of project capabilities, requirements and constraints. Pedagogy and/or policy issues as applied to projects. Restricted to Engineering Education majors.

4211 - Engineering Education Senior Design 2
3 Credits
Continuation of Engineering Education Senior Design 1. Demonstration of educational aspects of project capabilities. Acceptance testing. Project deliverables. Prerequisite: ENGR 4201.

DEPARTMENT OF CIVIL ENGINEERING

Professors Smalley (Chair), Ward; Assistant Professors Abdel-Mohti, Khasawneh and Zechman.

Mission Statement
The mission of the civil engineering department is to provide an overall scholarly, collegial, and professional atmosphere of undergraduate education by which students are prepared for careers in civil engineering.

To implement the mission, the department will:

1. Provide a program that prepares students for entry-level professional employment or advanced studies at the graduate level by offering a curriculum based on a strong background in the fundamentals of engineering, science, and mathematics structured for breadth of coverage of civil engineering principles.
2. Provide for areas of concentration, minors, and an opportunity for work experience through a cooperative education program.
3. Provide for a student body of appropriate quality and size that is active in the university community.
4. Provide a faculty who excel in undergraduate scholarship and who are active in their profession.
5. Provide state-of-the-practice physical facilities, including classrooms, laboratories, and support areas.
6. Provide for institutional commitment for support in the areas of administration, financial resources, and institutional facilities.

Program Educational Objectives
Within five to ten years of graduation, we expect our program alumni to have:

1. Advanced to a professional position within civil engineering by virtue of their knowledge, skills and attitudes;
2. Solved engineering problems and developed design solutions that consider aesthetics, safety and sustainability;
3. Conducted professional endeavors in a responsible and ethical manner; and
4. Continued their professional development through a commitment to career long learning.

Program Outcomes
Each Civil Engineering graduate will:

1. be able to use an engineering methodology to formulate, analyze, and solve engineering problems in sub-discipline areas of civil engineering.
2. be able to use an engineering methodology to design a component, process, or system in sub-discipline areas of civil engineering.
3. demonstrate proficiency in the required mathematics, science, and basic engineering courses.
4. be able to conduct standard laboratory and field procedures, or to devise procedures when necessary, and to analyze and interpret the resulting data.
5. have experienced an academic environment that promotes professionalism.
6. demonstrate proficiency in required and elective social science and humanities courses.
7. attend meetings, seminars, or workshops of an appropriate professional organization.
8. be able to formulate, draft, and critique technical writing.
9. be able to develop, deliver, and critique oral technical presentations.
10. be able to produce, read, and interpret graphical presentations.

Subject - Civil Engineering (CE)

2031 - Surveying
3 Credits
Plane surveying; use of level, distance measurement devices, data collectors, and total stations; traversing, roadway applications, and topographic mapping, and introduction to coordinate geometry, GIS and GPS applications. Offered fall semester. Prerequisite(s): MATH 1611 or MATH 1631.

3031 - Advanced Surveying
3 Credits
A second surveying course that expands on the basic surveying skills presented in CE 2031. Topics include: history of Ohio land surveys, Ohio surveying law, boundary surveying fundamentals, gathering of surveying field data, and preparation of preliminary engineering site drawings. Offered spring semester. Prerequisite(s): CE 2031.

3131 - Numerical and Statistical Methods
3 Credits
Principles of numerical methods used in solving civil engineering problems. Topics include numerical solutions of single variable equations, systems of non-linear equations, integration and differentiation, differential and partial differential equations by finite differences, and statistical techniques. Offered spring semester. Prerequisite(s): MATH 2651.

3231 - Environmental Engineering and Science
3 Credits
The sources and characteristics of pollutants, their effects on the environment, humans, and animals. Emphasis placed on interdisciplinary approach to reduce and treat wastes. Offered spring semester. Prerequisite(s): CHEM 1501.

3251 - Environmental Systems Analysis
3 Credits
Introduction to principles of environmental systems analysis. Principles of optimization, mathematical simulation, uncertainty, economic analysis, risk and reliability are applied for decision support in human-altered environmental systems. Methods are demonstrated using case studies from environmental engineering within air, surface and subsurface pollution modeling and abatement. Some programming experience is recommended. Offered spring semester. Prerequisite(s): CE 3231.

3411 - Structural Analysis
4 Credits
Analytical methods for analyzing trusses and frames in determinate and indeterminate systems. Topics include deflections, displacements, stress, principle of superposition, and moment distribution method. Offered fall semester. Prerequisite(s): ENGR 2231.

3431 - Reinforced Concrete Design
4 Credits
Survey of structural concrete and its use in the design and construction of reinforced concrete (RC) elements. Analysis of concrete beams, columns, slabs, and footings. Offered spring semester. Prerequisite(s): CE 3411.
3511 - Highway Engineering and Traffic Analysis  
3 Credits  
Components of transportation systems, traffic flow modeling, geometric design of highways, horizontal and vertical curves, traffic control devices, the use of statistical analysis techniques in traffic engineering, principles of traffic engineering, capacity, and level of service, intersection analysis and design. Offered fall semester. Prerequisite(s): CE 2031.

3531 - Pavement Analysis and Design  
3 Credits  
Design of pavements for transportation facilities, material properties and their impact on pavement design. Offered spring semester. Prerequisite(s): ENGR 2231 and CE 3511.

3551 - Highway Materials  
3 Credits  
Fundamental understanding of the behavior of highway materials including aggregates, asphalt binder, and asphalt mixes. Covers mix design, material testing procedures, and specifications. Offered spring semester. Prerequisite(s): ENGR 2231.

3611 - Engineering Fluid Mechanics  
3 Credits  
Principles of the mechanics of fluids; engineering properties of fluids, fluid statics, fluid dynamics by continuity, momentum and energy principles; steady flow in pipes, to include series and parallel pipes and pipe networks. A water distribution term project is required. ENGR 2141 is strongly recommended before you take this course. Offered fall semester. Prerequisite(s): ENGR 2131.

3631 - Water Resources Engineering  
3 Credits  
Pump design, and water hammer; flow measurement and dimensional analysis and similitude. Estimates of population, water usage and wastewater generation; the hydrologic cycle, precipitation and stream flow data measurement and analysis; runoff prediction, hydrographs, flood routing, and open channel flow. A design term project is required. Offered spring semester. Prerequisite(s): CE 3631.

3711 - Urban Planning  
3 Credits  
Principles of city and regional planning; land-use, zoning, subdivision regulations, metropolitan problems and urban development. Topics will cover applications in the transportation planning and the environmental areas. Junior standing. Offered spring semester.

3901 - Special Topics  
1 to 3 Credits  
Selected topics of current interest in civil engineering. Permission of instructor.

3951 - Independent Study  
1 to 3 Credits  
Independent study of a topic of particular interest to the student in civil engineering. Permission of instructor.

4101 - Civil Engineering Design Seminar  
1 Credit  
Engineering design process; selection of senior design project; oral and written presentation of project proposal. Civil Engineering senior standing. Offered fall semester. Must be enrolled in one of the following Fields of Study: Civil Engineering.

4141 - Project Management  
3 Credits  
Principles of organization, management, and control of civil engineering projects. Topics include present and emerging legal and technical issues, critical path methods, project estimating and engineering economics. Senior standing. Offered fall semester.

4151 - Civil Engineering Design Project  
3 Credits  
Capstone design project under the specific guidance of a civil engineering faculty member. Offered spring semester. Prerequisite(s): CE 4101.

4241 - Water and Wastewater Engineering  
4 Credits  
Physical, chemical, and biological processes in drinking water and wastewater treatment systems. Offered fall semester. Prerequisite(s): CE 3231 and CE 3631.

4251 - Watershed Water Quality Analysis  
3 Credits  
Integrated lecture and field laboratory course experience to delve more deeply into the mass balance and kinetic relationships in environmental processes presented in CE 3231 Environmental Engineering & Science. Students will participate in laboratory and field experiences to determine common environmental water quality parameters and their impacts on surface water quality. Report preparation included. Offered spring semester. Prerequisite(s): CE 3231.

4341 - Geotechnical Principles  
3 Credits  
Physical characteristics, index properties, classification, and compaction of soils. Principles of mechanics of soils, settlement, and consolidation. Offered fall semester. Prerequisite(s): ENGR 2231.

4351 - Geotechnical Design  
3 Credits  
Analysis and design of structural foundations, retaining structures, and slope stability. Offered spring semester. Prerequisite(s): CE 4341.

4441 - Structural Steel Design  
3 Credits  
Load and resistance factor design concept (LRFD), and design of tension and compression members, beam, columns, beam-column members, and simple connections. Instability of steel members. Offered fall semester. Prerequisite(s): CE 3411.

4451 - Structural Design  
3 Credits  
Design of structural projects. Offered spring semester. Prerequisite(s): CE 3431 and CE 4441.

4661 - Advanced Open Channel Hydraulics and Ground Water  
3 Credits  
Continuation of open channel flow analysis with sewer design and modeling water surface profiles. Groundwater topics of confined and unconfined aquifers, steady and unsteady groundwater hydraulics, aquifer pumping tests, and mathematical groundwater modeling. Offered spring semester. Prerequisite(s): CE 3631.

4901 - Special Topics  
1 to 3 Credits  
Selected topics of current interest in civil engineering. Permission of instructor.

4951 - Independent Study  
1 to 3 Credits  
Independent study of a topic of particular interest to the student in civil engineering. Permission of instructor.
DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING AND COMPUTER SCIENCE

Professors Al-Olimat (Chair), Estell, Hurtig, Vemuru; Associate Professors Reid (Director of Freshman Engineering), Retterer; Assistant Professors Bird, Hassan, Khorbotly, Bucks (Visiting).

Mission and Purpose Statement
The mission of the electrical & computer engineering and computer science department is to develop graduates who are creative, productive, ethical, and contributing members of society.

It is the purpose of the department to provide:

- a professional and approachable faculty who are dedicated to mentoring students.
- accessible, hands-on, practical laboratory experiences using relevant equipment and disciplined practices.
- opportunities for students to develop and practice oral and written communications skills.
- a broad-based curriculum that stresses fundamentals and the development of a professional work ethic.
- an environment that will produce students who are creative problem solvers while considering ethical and societal implications.

COMPUTER SCIENCE
Program Educational Objectives
Graduates of the Computer Science Program will:
1. be successful in their chosen career.
2. engage in career-long learning.
3. be effective communicators with those inside and outside of computer science.
4. practice professional and ethical responsibilities.
5. be equipped to accept challenging assignments and responsibilities.

Program Outcomes
By the time of graduation, students majoring in Computer Science will be enabled to:
(a) an ability to apply knowledge of mathematics, science, and engineering.
(b) an ability to design and conduct experiments, as well as to analyze and interpret data.
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, and health and safety, manufacturability, and sustainability.
(d) an ability to function on multidisciplinary teams.
(e) an ability to identify, formulate, and solve engineering problems.
(f) an understanding of professional and ethical responsibility.
(g) an ability to communicate effectively.
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
(i) a recognition of the need for, and an ability to engage in lifelong learning.
(j) a knowledge of contemporary issues.
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ELECTRICAL ENGINEERING
Program Educational Objectives
Graduates of the Electrical Engineering program will:
1. be successful in their chosen career.
2. engage in career-long learning.
3. be effective communicators with those inside and outside of electrical engineering.
4. practice professional and ethical responsibilities.
5. be equipped to accept challenging assignments and responsibilities.

Program Outcomes
By the time of graduation, students majoring in Electrical Engineering will be enabled to:
(a) an ability to apply knowledge of mathematics, science, and engineering.
(b) an ability to design and conduct experiments, as well as to analyze and interpret data.
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
(d) an ability to function on multidisciplinary teams.
(e) an ability to identify, formulate, and solve engineering problems.
(f) an understanding of professional and ethical responsibility.
(g) an ability to communicate effectively.
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
(i) a recognition of the need for, and an ability to engage in lifelong learning.
(j) a knowledge of contemporary issues.
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Subject - Electrical & Computer Engineering and Computer Science (ECCS)

1101 - Computer Science Orientation
1 Credit
Introduction to the ECCS Department with primary emphasis on the Computer Science Program. Understanding of the curriculum and the role played by Computer Scientists in society. A discussion about how the general education learning outcomes may relate to the students career with a focus on critical and creative thinking. All requirements of the General Education Transitions Experience are met by this course. Offered fall semester. Must be enrolled in Computer Science.
1421 - Net-Centric Computing
3 Credits
Software development tools and techniques appropriate for application development on the World Wide Web. HTTP, HTML, Cascading Style Sheets, client-side scripting, server-side scripting, server-side data storage and retrieval, relational databases. Offered spring semester.

1611 - Programming 1
4 Credits

1621 - Programming 2
4 Credits
Continuation of Programming 1. Focus on the object-oriented programming paradigm: classes, objects, methods, information hiding, inheritance, polymorphism. Software engineering: tools, design, testing, validation. Graphical user interfaces and their fundamental widgets. Event-driven programming. Offered spring semester. Prerequisite(s): ECCS 1611 or ECCS 164.

2311 - Electric Circuits
4 Credits
DC and AC circuits. Basic laws, analysis techniques, and circuit theorems. Op amps, first-order circuits, sinusoids and phasors, ac power analysis, ideal transformers and three phase circuits. Computer simulation. Integrated laboratory experience. Offered fall semester. Prerequisite(s): MATH 1641 or MATH 164 or MATH 159.

2321 - Signals and Systems
3 Credits
Signal and system analysis in the time domain. Frequency domain analysis using Laplace transform, Fourier series, Fourier transform, and Discrete Fourier transform. Discrete-time signal analysis using Z-transform. Offered spring semester. Prerequisite(s): ECCS 2311 or GE 202 and MATH 2651 or MATH 275.

2411 - Software Design Patterns
3 Credits
Named problems occurring in object-oriented design featuring the 23 fundamental Gang of Four design patterns, applications and use. Offered fall semester. Prerequisite(s): ECCS 1621 or ECCS 165.

2421 - Software Engineering
3 Credits
Requirements, design, implementation, testing, deployment, and maintenance. Team work, individual work, walkthroughs, constructive criticism (give and take). Focus on Agile Software Development Practices. Offered spring semester. Prerequisite(s): (MATH 3061 or MATH 336) and (ECCS 2671 or ECCS 268).

2431 - Programming Environments
3 Credits
Use of a software environment to build a large project. Solutions incorporate third party library code and student generated libraries. Students work independently. Offered fall semester. Prerequisite(s): ECCS 1621 or ECCS 165.

2671 - Data Structures & Algorithms 1
3 Credits
Basics of algorithm analysis and creation. Standard sorting algorithms. Trade-offs of various algorithms. Classical data structures: arrays, heaps, queues, priority queues, hash tables, linked lists, binary trees. Offered fall semester. Prerequisite(s): ECCS 1621 or ECCS 166.

2681 - Data Structures & Algorithms 2
3 Credits

2721 - Digital Logic
3 Credits
Analysis and design of combinational circuits. Analysis and design of sequential systems. Design using standard combinational and sequential modules. Application of VHDL and Xilinx software design tools. Verification of digital systems in FPGAs and ModelSim simulation. Offered spring semester. Prerequisite(s): MATH 3061 or MATH 336.

2991 - External Research Experience
1 to 3 Credits
A planned learning experience involving participation in an approved off-campus research program. A paper and an oral presentation regarding the research experience are required. Department approval required prior to research experience. Graded S/U. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

3111 - Electromagnetics
3 Credits
The study of electrostatics, magnetostatics and time-varying fields in different coordinate systems using various laws and principles through the application of vector calculus and vector algebra. Analysis of transmission lines using both mathematical and graphical techniques. Offered fall semester. Prerequisite(s): (ECCS 2311 or GE 202) and (MATH 2631 or MATH 263).

3121 - Energy Systems 1
4 Credits
Electric machines and power electronics. Analysis, performance characteristics, operation principles, and applications of power transformers, rotating machines, converters, inverters, and switched-mode power supplies. Computer Simulation. Integrated laboratory experience. Offered spring semester. Prerequisite(s): ECCS 3111 or ECCS 337.

3141 - Control Systems
4 Credits
Fundamental concepts of feedback control systems. Control systems analysis and design by conventional methods: transient-response and steady-state error analysis, root-locus analysis, frequency-response and stability analysis, design and compensation techniques. Computer simulation. Integrated laboratory experience. Offered spring semester. Prerequisite(s): ECCS 2321 or ECCS 314 or ECCS 380.

3191 - Communication Systems
4 Credits
Analog and digital communication systems; modulation and demodulation techniques. Noise and bandwidth requirements. System design and performance analysis. Integrated laboratory experience. Offered spring semester. Prerequisite(s): ECCS 2321 or ECCS 414 or ECCS 380.

3221 - Operations Research
3 Credits
Linear programming simplex method, duality, sensitivity analysis, PERT/CPM. Standard O.R. applications including transportation, maximum flow, and shortest path problems, among others. Also listed as MATH 3221. Offered alternate spring semesters. Prerequisite(s): (MATH 2651 or MATH 275 or MATH 3061 or MATH 272).

ELECTRICAL & COMPUTER ENGINEERING AND COMPUTER SCIENCE 163
3241 - Embedded Systems
3 Credits
UML and model-based embedded system design, microprocessor/digital signal processor/network processor instruction sets, CPUs, bus-based system design, embedded computing platform, program design and analysis, real time operating systems and processes, hardware accelerators, networks and distributed embedded architectures, and systems design techniques, multicore embedded systems; integrated laboratory experimental activities. Offered fall semester. Prerequisite(s): (ECCS 3351 or ECCS 362 or ECCS 3611 or ECCS 365).

3311 - Digital Signal Processing
3 Credits
Analog to digital and digital to analog conversions. Analysis of discrete-time signals and systems in both time domain and Z-domain. Design and implementation of FIR and IIR systems. Using MATLAB to simulate and model discrete-time systems. Intergrated laboratory experience. Offered fall semester. Prerequisite(s): ECCS 2321 or ECCS 314 or ECCS 380.

3331 - Electronics
4 Credits
Analysis and design of analog and digital electronic circuits using semiconductor diodes, transistors and integrated circuits. Computer techniques will be combined with laboratory work for several projects. Offered fall semester. Prerequisite(s): (ECCS 2311 or GE 202) and (ECCS 2321 or ECCS 314 or ECCS 380) and (ECCS 2721 or ECCS 260).

3351 - Microprocessors
3 Credits
Microprocessors and microcontroller system design, microprocessor structure, registers, RAM and ROM addressing, machine cycles and timing relationships, input and output ports and addressing, assembly level programming, embedded C programming, microcontroller structure, timer systems, analog-to-digital converters, serial and parallel communication, use of development systems and design simulators, embedded microcontroller design projects; integrated laboratory experimental activities. Offered fall semester. Prerequisite(s): (ECCS 2311 or GE 202) and (ECCS 2321 or ECCS 314 or ECCS 380) and (ECCS 2721 or ECCS 260).

3411 - Computer Security
3 Credits
Social engineering, cryptography, access control, protocols, software vulnerabilities, risk analysis, attack methodologies, legal and ethical issues. Junior standing. Offered fall semester.

3431 - Theory of Computation
3 Credits
A mathematical approach to the theory of computation with emphasis on rigorous arguments of various sorts. Regular and Context-Free Languages. Turing machines. The implications of these issues to the discipline of computing. Offered fall semester. Prerequisite(s): MATH 3061 or MATH 336.

3451 - User Interface Design
3 Credits
Human-Computer Interaction topics as related to graphical user interfaces encountered in software applications and web sites. User-centered interface development methodology and life cycle. Style, structure, layout, and organizational design guidelines. Color, typography, accessibility, globalization, and personalization issues. Offered fall semester. Prerequisite(s): ECCS 2671 or ECCS 268.

3481 - Databases
3 Credits
Overview of data models and applications. Relational Algebra. Structured Query Language (SQL). Security issues. Offered spring semester. Prerequisite(s): ECCS 2671 or ECCS 268.

3611 - Computer Architecture
4 Credits
Aspects of computer hardware; computer arithmetic, micro-architecture design (both datapath and control unit), instruction sets, storage hierarchies. Current families of microprocessors illustrating design tradeoffs. Integrated laboratory experience. Offered spring semester. Prerequisite(s): ECCS 2721 or ECCS 260.

3631 - Networks & Data Communications
3 Credits
The Internet Protocol Stack. Coverage of the application, transport, network, data link and physical layers with project assignments. Protocols used to implement communication over the Internet. Offered fall semester. Prerequisite(s): ECCS 2671 or ECCS 268.

3651 - Computer Vision
3 Credits
Extraction of useful information from captured images to make decisions about the real world modeling cameras, calibration, feature extraction, feature synthesis, segmentation, still and video image processing. Define and produce an individualized course-long project that utilizes computer vision to solve a problem of the student’s choice. Recommended: MATLAB and/or C++ experience. Offered spring semester. Prerequisite(s): (ECCS 1621 or ECCS 165) and (MATH 1641 or MATH 164).

3661 - Operating Systems
3 Credits

3901 - Special Topics
1 to 3 Credits
Selected topics in electrical or computer engineering or computer science of current interest. May be repeated for credit. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

3951 - Independent Study
1 to 3 Credits
Individual study of topic in electrical or computer engineering or computer science of particular interest to the ECCS student. May be repeated for credit. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

3991 - External Research Experience
1 to 3 Credits
A planned learning experience involving participation in an approved off-campus research program. A paper and an oral presentation regarding the research experience are required. Department approval required prior to research experience. Graded S/U. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

4111 - Energy Systems 2
3 Credits
Power systems fundamentals, single line diagrams and per unit calculations, transmission lines modeling, load flow techniques, economic dispatch, fault analysis, and power systems control. Computer simulation. Team-oriented design cases. Offered fall semester. Prerequisite(s): (ECCS 2311 or GE 202) and ECCS 3121.
4121 - Advanced Power
3 Credits
Selected advanced topics in power engineering. Senior standing. Offered spring semester.

4131 - Advanced Communications
3 Credits
Selected advanced topics in communications. Offered spring semester. Prerequisite(s): (ECCS 3191 or ECCS 458).

4141 – Information Theory
3 Credits
Introduction to information theory; channel coding techniques and their trade-offs; compression techniques of voice, image, and video; encryption and decryption analysis techniques. Offered spring semester. Prerequisite(s): (ECCS 2721 or ECCS 260) and (STAT 2501 or STAT 280).

4191 - System Design
1 Credit
Integration of different areas of electrical engineering in the design of a complete practical system. The process of defining the architecture, components, modules, and interfaces for a system to satisfy specified requirements. Senior standing. Offered fall semester.

4211 - VLSI System Design
3 Credits
VLSI Fabrication Process, CMOS logic gate implementations, combination logic networks, clocking, subsystem design, floorplanning and layout, architecture design, FPGA technology, high level synthesis, testing and verification. Industry standard computer-aided design tools will be used to simulate, design and layout VLSI/FPGA circuits in the laboratory. Offered fall semester. Prerequisite(s): (ECCS 2721 or ECCS 260) or (ECCS 360 or ECCS 261) and (ECCS 3331 or ECCS 321).

4311 - Advanced DSP
3 Credits
Selected topics in Digital Signal Processing techniques and their applications in 1-D and 2-D spaces. Offered fall semester. Prerequisite(s): ECCS 3311 or ECCS 411.

4321 - Computer Networks
3 Credits
Select Topics in computer/wireless networks. Offered spring semester. Prerequisite(s): (ECCS 3631 or ECCS 366 or ECCS 3191 or ECCS 459).

4341 - Advanced Electronics
3 Credits
Advanced topics in electronics. Offered spring semester. Prerequisite(s): ECCS 3331 or ECCS 321.

4391 - Engineering Economy
1 Credit
Decision making based on criteria of economic factors including present worth, future worth, internal rate of return, cost benefit ratio, depreciation, and taxes. Offered fall semester. Corequisite(s): ECCS 4711.

4411 - Programming Languages
3 Credits
Constructs of programming languages in different programming paradigms: syntax analysis, semantic analysis. Offered fall semester. Prerequisite(s): ECCS 2671 or ECCS 268).

4471 - Computer Science Capstone 1
2 Credits
Team-based design or research project in computer science. Application of design and development principles and methods as appropriate to a project featuring a relevant and current subject. Development and delivery of project proposal. Senior standing in Computer Science. Offered fall semester.

4481 - Computer Science Capstone 2
3 Credits
Continuation of Computer Science Capstone 1. Delivery of a project featuring a relevant and current subject. Demonstration and verification of project capabilities as appropriate to project. Development and delivery of documentation as appropriate to project. Offered spring semester. Prerequisite(s): ECCS 4471.

4611 - Numerical Analysis
3 Credits
Review of programming concepts using MATLAB or other programming software. Errors that occur in representing numbers on a computer and approximating solutions; methods for locating roots of a non-linear equation; interpolation, numerical differentiation; and numerical integration. Numerical solution of differential equations and of systems of linear algebraic equations. Splines. Also listed as MATH 4611. Offered alternate spring semesters. Prerequisite(s): (MATH 2651 or MATH 275) and (MATH 360 or MATH 360).

4711 - Senior Design 1
2 Credits
Team-based design project in area in or related to computer engineering, computer science, and/or electrical engineering. Utilization of project management standards. Establishment of project capabilities, requirements, and constraints. Fundamentals of economics and entrepreneurship as applied to projects. Development of project proposal. Prototyping. Issues regarding effective teamwork and conflict resolution. Senior standing. Offered fall semester. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

4721 - Senior Design 2
3 Credits
Continuation of Senior Design 1. Demonstration of project capabilities. Acceptance testing. Project deliverables. Offered spring semester. Prerequisite(s): ECCS 4711. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

4901 - Special Topics
1 to 3 Credits
Selected topics in electrical or computer engineering or computer science of current interest. May be repeated for credit. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering. This course is repeatable.

4951 - Independent Study
1 to 3 Credits
Individual study of topic in electrical or computer engineering or computer science of particular interest to the ECCS student. May be repeated for credit. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.

4991 - External Research Experience
1 to 3 Credits
A planned learning experience involving participation in an approved off-campus research program. A paper and an oral presentation regarding the research experience are required. Department approval required prior to research experience. Graded S/U. Permission of instructor. Offered fall and spring semesters. Must be enrolled in one of the following Fields of Study: Computer Engineering, Computer Science, or Electrical Engineering.
DEPARTMENT OF MECHANICAL ENGINEERING

Professors Yoder (Chair), Rider, Marquart; Associate Professor Sawyers; Assistant Professors Laird, Mikesell, Shen

Mission Statement
The mission of the mechanical engineering department is to produce graduates who are prepared for professional practice or further studies, and who have the skills needed for lifelong success. We will provide our students with a solid foundation of technical knowledge through quality teaching and facilities. We will encourage our students to become well-balanced individuals who are able to practice their profession for the benefit of society, and who are prepared for a lifetime of learning.

Program Education Objectives
Graduates of the Mechanical Engineering program will:
1. Be able to use a variety of tools (e.g. software packages, manufacturing practices) and practices (e.g. specifications, analysis techniques) found in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

Program Outcomes
By the time of graduation, students majoring in Mechanical Engineering will:
1. Be able to apply their knowledge of mathematics, science, and engineering.
2. Be able to design and conduct experiments, then analyze and draw conclusions from the resulting data.
3. Be able to apply the engineering design method to specify a product or process that meets customer requirements while satisfying appropriate constraints.
4. Be prepared to participate as an active member of a multi-disciplinary team.
5. Be able to identify, formulate and solve problems in the areas of mechanical and thermal systems.
6. Be prepared to work ethically, professionally, and responsibly.
7. Demonstrate effective professional communication skills including technical writing, oral presentation, technical drawing, and listening skills.
8. Understand and accept that their actions and decisions are to contribute to the good of humankind.
9. Develop the skills needed for career-long learning, including preparation for graduate school and continuing professional development.
10. Have knowledge of contemporary issues and an understanding of how mechanical engineering relates to the global society.
11. Be able to use a variety of tools (e.g. software packages, manufacturing tools) and practices (e.g. specifications, analysis techniques) found in the professional workplace.

Subject - Mechanical Engineering (ME)

1411 - Engineering Material Science
3 Credits
Fundamental physical and microstructural characteristics of materials and how these relate to their mechanical properties. Evaluation of these properties for material selection. Metallurgical aspects including equilibrium diagrams. Includes hands-on experiences in material science. Offered spring semester.

1901 - Special Topics
1 to 3 Credits
Selected topics of current interest in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

1951 - Independent Study
1 to 3 Credits
Independent study of a topic of particular interest to the student in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

2311 - Thermodynamics
3 Credits
Fundamentals of classical thermodynamics. Work, heat transfer, and thermodynamic properties. The First and Second Law of Thermodynamics. Application to power and refrigeration cycles. Offered fall and spring semesters. Prerequisite(s): (PHYS 2311 or PHYS 232).

2511 - Computer Applications
3 Credits
Mechanical engineering problem solving using computer software, including MATLAB. Prerequisite(s): ENGR 2131.

2901 - Special Topics
1 to 3 Credits
Selected topics of current interest in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

2951 - Independent Study
1 to 3 Credits
Independent study of a topic of particular interest to the student in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

3111 - Mechanical Design 1
3 Credits
Introduction to mechanical design with the computer used as a tool for solid modeling and design layout. Synthesis and analysis of linkages along with cam design. Offered fall semester. Prerequisite(s): (ENGR 2141 or GE 214) and (ME 2511 or ECCS 1611 or ECCS 160 or ECCS 164).

3121 - Mechanical Design 2
3 Credits
Advanced mechanics of materials. Design and selection of various machine elements such as screws, bearings, welds, and gears, etc. Offered spring semester. Prerequisite(s): ME 3111 and (ENGR 2231 or GE 223).

3211 - Dynamic Systems 1
3 Credits
Fundamentals of dynamic system behavior. Mathematical modeling of mechanical, thermal, fluid, and electrical systems; analytical and computer solution methods. Transfer function and state variable methods. Free and forced vibration analysis, vibration suppression, multiple DOF. Offered fall semester. Prerequisite(s): (MATH 2651 or MATH 275) and (ENGR 2141 or GE 214) and (ME 2511 or ECCS 1611 or ECCS 160 or ECCS 164).

3221 - Dynamic Systems 2
4 Credits
Modeling, analysis and design of linear feedback control systems. LaPlace transforms, transfer functions and frequency response. Digital controls and logic. Laboratory work in digital logic design and performance studies of real systems. Offered spring semester. Prerequisite(s): (ME 3211).

3231 - Automotive Engineering
3 Credits
Studies in land vehicle dynamics and driveline systems. Specific topics include acceleration and braking performance, suspension steering, tire-road interface, and current developments in powertrain and safety systems. Offered spring semester. Prerequisite(s): (ENGR 2141 or GE 214).

3311 - Fluid Mechanics
3 Credits
Fundamentals of fluids phenomena, including hydrostatics, conservation of mass, momentum, and energy, dimensional analysis, internal and external flow, compressible flow. Offered spring semester. Prerequisite(s): (MATH 2651 or MATH 275) and (ME 2311 or ME 365).
3321 - Heat Transfer
4 Credits
Principles of the three mechanisms of heat transfer (conduction, convection, radiation) in solid, fluid and vacuum media. Development of the control volume approach, as well as numerical solution techniques. Applications to engineering problems and systems. Prerequisite(s): (PHYS 2311 or PHYS 232) and (MATH 2651 or MATH 275) and (ME 3311 or ME 366).

3411 - Manufacturing Laboratory
1 Credit
Introduction to the machines and processes involved in the manufacturing process. Students will operate the machines and perform manufacturing of parts and systems. Offered fall semester.

3421 - Manufacturing Processes
3 Credits
Manufacturing engineering and technology including casting, rolling, forging, extrusion, drawing, sheet forming, machining, welding, SPC, etc. The basic theories of casting, forming processing and machining. Prerequisite(s): (ME 1411 or GE 243).

3511 - Experimental Methods
2 Credits

3521 - Finite Element Analysis
3 Credits
The finite element method techniques are studied. These techniques are used to solve engineering continuum problems, both ‘by hand’ and using the general purpose commercial FEA package, ANSYS. Applications to engineering design of static and dynamic structures, as well as thermal systems. Offered spring semester. Prerequisite(s): ENGR 2231 or (GE 223 and ME 371).

3901 - Special Topics
1 to 3 Credits
Selected topics of current interest in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

3951 - Independent Study
1 to 3 Credits
Independent study of a topic of particular interest to the student in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

4011 - Process of Design
3 Credits
The process of design is covered with a focus on problem-solving methodology, project management, and engineering economy. Teamwork tools and design are used on a team project. ME senior standing. Offered fall semester. Corequisite(s): ME 4111.

4111 - Capstone 1
1 Credit
Initiation of capstone design project as a team effort. ME senior standing. Offered fall semester. Must be enrolled in one of the following Fields of Study: Mechanical Engineering.

4121 - Capstone 2
2 Credits
Completion of capstone design project as a team effort. Offered spring semester. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Prerequisite: ME 4111.

4211 - Industrial Controllers
3 Credits
Applications in control systems concentrating on PLCs and ladder logic. Advanced control theory explored. Laboratory work concentrates on PLC applications. Offered fall semester. Prerequisite(s): ME 3221 or ME 339.

4221 - Intelligent Systems
3 Credits
Students will learn to model and control actual systems. Systems from a variety of disciplines will be used. Students will apply a variety of algorithms to control and test these systems in a laboratory setting. Offered spring semester. Prerequisite(s): (ME 3211 Minimum Grade of C or ECCS 3141 Minimum Grade of C) or (ME 339 or ECCS 344).

4311 - Computational Fluid Dynamics
3 Credits
The theory and methods of computational fluid dynamics, including grid generation, flow solution, and postprocessing analysis. Implicit and explicit methods are studied, as well as direct and iterative solution techniques, and stability criteria. Students develop their own computer programs, as well as working with Fluent, Pointwise, Cobalt, and Fieldview. Lab time is primarily spent using commercial CFD codes to perform flow analyses, but some computer programming may be required. Offered fall semester. Prerequisite(s): ME 3311 or ((ME 371 or ME 471) and (ME 366 or ME 464)).

4321 - Renewable Energy
3 Credits
An overview of renewable energy sources such as solar, wind, water, and biomass. Current and potential technologies for extracting, storing, and converting renewable energy into electricity. Economic and social issues that impact renewable energy projects. Offered spring semester. Prerequisite(s): (ME 2311 and ME 3311) or (ME 365 and ME 366).

4331 - Advanced Thermodynamics
3 Credits
Application of thermodynamic laws to the analysis of advanced cycles and processes. Modifications to the basic Rankine, Brayton and piston engine power cycles, including topping cycles and cogeneration. Basic and advanced refrigeration and heat pump cycles. Prerequisite(s): (ME 2311 and ME 3311) or (ME 366 and ME 367).

4411 - Biomaterials and Medical Devices
3 Credits
Properties and application of materials that are used in contact with biological systems. Structures and properties of human tissues. Biomechanics related to implant design. Host reactions to implants. Offered fall semester.

4511 - Engineering Analysis
3 Credits
Solution of a wide range of mechanical engineering problems using various analytical and numerical techniques. Prerequisite(s): ME 2511 and ME 3121 and ME 3221 and ME 3321.

4901 - Special Topics
1 to 3 Credits
Selected topics of current interest in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.

4911 - Advanced Thermal Sciences
3 Credits
Application of fundamental concepts from thermodynamics, fluid mechanics, and heat transfer to the analysis of complex thermal systems, including combustion and psychrometrics, compressible flow, and convective and radiative heat transfer. Offered fall semester. Prerequisite(s): (ME 3311 or ME 366) and (ME 3321 or ME 367).

4921 - Mechanical Design of Components
3 Credits
Design and selection of various machine elements. Offered fall semester. Prerequisite(s): ME 319.

4951 - Independent Study
1 to 3 Credits
Independent study of a topic of particular interest to the student in mechanical engineering. Permission of instructor. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. This course is repeatable.
THE RUDOLPH H. RAABE COLLEGE OF Pharmacy
THE RUDOLPH H. RAABE COLLEGE OF PHARMACY

Jon E. Sprague, Dean

Accreditation and Affiliations
The Raabe College of Pharmacy’s Doctor of Pharmacy degree program is accredited by the Accreditation Council for Pharmacy Education (ACPE). The degree is recognized by the Board of Pharmacy of the State of Ohio as meeting the educational requirement for licensure examination. The College of Pharmacy is a member of the American Association of Colleges of Pharmacy, and the Council of Ohio Colleges of Pharmacy.

Departments
Department of Pharmaceutical and Biomedical Sciences (PHBS)
Department of Pharmacy Practice (PHPR)

Office
Office of Experiential Education (OEE)

Mission Statements
The Ohio Northern University Raabe College of Pharmacy is committed to:

- Preparing students to enter the practice of pharmacy with the knowledge base and skills required to provide pharmacist-delivered patient care and effectively contribute to the profession. Inherent to the fulfillment of this commitment, students will be provided with the ability to develop problem-solving and life-long learning skills which will facilitate their scholarly achievement. As an entry-level program, this commitment also includes assuring the quality of the basic science curriculum and providing a General Education program that facilitates the development of well-rounded individuals with the values necessary to serve society;
- Contributing to the knowledge base of the practice of pharmacy, pharmacy education, and the scientific disciplines represented by its faculty. Also, the College will encourage, and provide opportunities for student participation in these endeavors;
- Providing information, support and services to students, colleagues, the profession of pharmacy, other health care disciplines, and the university community at large, consistent with the expertise of its faculty. Also, the College will encourage and provide opportunities for students to perform similar services.

The mission of the Department of Pharmaceutical and Biomedical Sciences (PHBS) reflects its commitment to education, research, and service. PHBS is committed to:

- Providing a curriculum which will assure the scientific competence of the pharmacist;
- Providing the fundamental background necessary for the development of the pharmaceutical scientist of the future;
- Contributing to the development and advancement of the foundational knowledge base through research in the pharmaceutical and biomedical sciences;
- Providing information, support and services to students, colleagues, the profession of pharmacy, the respective pharmaceutical sciences, the University, and the community at large, consistent with the expertise of the Department faculty.

The mission of the Department of Pharmacy Practice (PHPR) reflects its commitment to education, research, and service. PHPR is committed to:

- Providing a curriculum which will assure the competence of the pharmacy practitioner by providing excellent teaching in the pharmacy practice-related courses, providing innovative advanced practice training, and imparting a quest for life-long learning and professional service;
- Contributing to the development of the foundational knowledge base through research and clinical practice in the discipline areas represented in the Department;
- Providing activities that demonstrate the value of service as a part of learning for students, colleagues, the pharmacy profession, the pertinent pharmacy practice disciplines, and the community at large.

The Office of Experiential Education is committed to:

- Preparing pharmacy students to enter pharmacy practice as generalists with the knowledge, skill, attitudes and values necessary to optimize drug therapy and provide quality patient care in various practice settings.
- Encouraging doctoral graduates to expand the depth of their training through postgraduate experiences and/or formalized training.

Admission Standards
Persons seeking admission to the College must provide the necessary information and meet the general requirements for admission to the University as listed in that section of this catalog. Selected applicants are required to complete a personal interview.

High School Graduates. It is recommended that high school graduates should have completed the college preparatory course including four units of English, four units of mathematics and four units of science (biology, chemistry, and physics recommended) and six units of history, social studies, languages or any combination thereof. Priority may be granted to students with additional credits delete.

Transfer Students. A student desiring to transfer from another accredited college or university must present authenticated academic transcripts from all institutions attended. Credit will be allowed for any course in which a grade of C or better was received provided such work is parallel to the requirements for graduation from this institution (grades of C- are not transferable). Grades of P (passing) or S (satisfactory) are accepted when the academic institution certifies their equivalence to a C or better. Approval for admission and advanced placement will be determined upon review of the student’s previous record. Students entitled to advanced standing may enter at the time approved by the dean of the College of Pharmacy. All transfer decisions are based on space availability in the program.

Doctor of Pharmacy Degree Requirements
The Doctor of Pharmacy program is an advanced professional program that provides a foundation in the basic sciences of pharmacy as well as a comprehensive understanding of health care settings. Specifically, the graduate will have training in clinical skills which will allow entry into advanced practice settings. The program of study leading to the degree of Doctor of Pharmacy is a combination of general education courses, basic sciences, professional pharmacy courses, and electives.

This program requires a minimum of 216 semester hours of study divided according to the following:

General education courses 30 hours
Basic science courses 44 hours
Professional courses 131 hours
Electives 11 hours

Pharmacy General Education Requirements.
The general education component of the pharmacy degree curriculum consists of 30 semester hours and intends to contribute significantly to the student’s becoming an educated professional and a responsible citizen. These foundation courses conform to the university general education learning objectives as previously stated on page 18.

Communication Competence
Writing Seminar
Oral Communication

Culture and Society
Social Science
Literature
History
Business Foundation

Aesthetic Sensibility
Fine Arts

Human Values
World Perspective
Ethics
Extra-disciplinary Seminar

PHARMACY 169
An approved Honors Seminar may fulfill a requirement listed above. For specific information, see the office of the dean.

Basic Science Requirements.
Basic sciences are needed in the pharmacy curriculum to provide not only the background required for professional pharmacy courses but also to contribute to developing a scientific literacy necessary to function in an increasingly complex and technical world.

Introductory Chemistry 1711, 1721
Organic Chemistry 2511, 2521
General Biology 1201
Human Anatomy and Histology 1341
Human Anatomy and Histology Laboratory 1361
Physiology 3311, 3321
Biosciences Laboratory 3221
Medical Microbiology 3131
Calculus for Life Sciences 1461
Statistics for Pharmacy 1761

Professional Pharmacy Requirements.
Courses offered by the departments of Pharmaceutical and Biomedical Sciences and Pharmacy Practice as well as the collaborative efforts demonstrated in the area of Biomedical Science and Patient Care, are designed to meet the intellectual standards that are expected of the modern pharmacist, including the high ethical behavior American society envisions of its pharmacists.

Pharmaceutical and Biomedical Sciences
Applied Sciences of Pharmacy 2901
Biochemistry 3411, 3421
Immunology 3751
Pharmaceutical Sciences Modules 3311, 4321
Pharmacy Applications Laboratory 3201
Biomedical Sciences Modules 4431, 4441

Pharmacy Practice
The Profession of Pharmacy 1011, 1021, 2011, 2021, 3011, 3021
OTC/Home Diagnostics 3311
Patient Care Assessment Module 4101
Biomedical Sciences and Patient Care Modules 4411, 4421, 5431, 5441, 5451
Capstone 5461
Pharmaceutical Administration Module 5501
Special Populations 5531
Advanced Pharmacy Practice Experiences 6501-6509

Electives
Elective course hours for the pharmacy program may be selected from courses in Arts and Sciences, Business Administration, and the College of Pharmacy. Students may plan elective courses for personal enrichment or to satisfy a minor; a secondary academic program, or a dual degree.

Doctor of Pharmacy Degree Curriculum

First Year
Introductory Chemistry 1711, 1721, 10 hours
General Biology 1201 4 hours
Human Anatomy and Histology 1341, 1361 4 hours
Calculus 1461 3 hours
The Profession of Pharmacy 1011, 1021 2 hours
Wellness Fitness/Life Activity 1 hour
General Education/Electives 12 hours
TOTAL 36 hours

Second Year
The Profession of Pharmacy 2011, 2021 4 hours
Organic Chemistry 2511, 2521 8 hours
Statistics for Pharmacy 1761 3 hours
Applied Sciences of Pharmacy 2901 3 hours
Med Micro 3131 3 hours
General Education/Electives 15 hours
TOTAL 36 hours

Third Year
The Profession of Pharmacy 3011, 3021 4 hours
Biochemistry 3411, 3421 6 hours
OTC/Home Diagnostics 3311 3 hours

Immunology 3751 3 hours
Physiology 3311, 3321 8 hours
Pharmaceutical Sciences 3311 2 hours
Pharmacy Applications Laboratory 3201 1 hour
Biosciences Laboratory 3221 1 hour
General Education/Electives 8 hours
TOTAL 36 hours

Fourth Year
Pharmaceutical Sciences Modules 4321 8 hours
Biomedical Sciences Modules 4431, 4441 11 hours
Patient Care Assessment Modules 4011 2 hours
Biomedical Science and Patient Care Module 1441 6 hours
Biomedical Science and Patient Care Module 24421 6 hours
Electives 3 hours
TOTAL 36 hours

Fifth Year
Biomedical Science and Patient Care Module 35431 6 hours
Biomedical Science and Patient Care Module 4 5441 6 hours
Biomedical Science and Patient Care Module 55451 6 hours
Pharmacy Administration 5501 6 hours
Capstone 5461 6 hours
Special Populations 5531 3 hours
Electives 3 hours
TOTAL 36 hours

Sixth Year
Advanced Pharmacy Practice Experiences 6501-6509 36 hours

General Administrative and Academic Regulations
General administrative and academic regulations for the College of Pharmacy are established by the dean and faculty of the college to assist students as they select courses and attempt to fulfill graduation requirements. Additional regulations may be adopted during the academic year or changes may be made to the following:

1. Students who wish to register for more than 19 hours of academic studies in a single semester need the written permission of the dean of the College of Pharmacy.
2. A pharmacy student may take no more than six semester hours in any summer term with a maximum of twelve semester hours, total, for the two summer terms.
3. A prerequisite for the introductory and the advanced pharmacy practice experiences (PHRP 6501-6509) is a certificate of registration as an Ohio pharmacy intern. The Ohio Board of Pharmacy may deny the issuance of the certificate if an individual has been convicted of a felony, has been convicted of violating any state or federal pharmacy or drug law, is not of good moral character and habits, is addicted to or abusing alcohol, drugs, has been disciplined by the Ohio Board of Pharmacy pursuant to section 4729.16 of the revised code, or has been disciplined by any board of pharmacy (OAC 4729-5-04).
4. Students registered for an advanced pharmacy practice experience who wish to register for any additional elective courses need the written permission of the experiential office and the dean of the College of Pharmacy prior to registering for the additional courses.
5. Students should not expect to register for courses that have conflicting time schedules. On rare occasions a student may be allowed to do so. The student will need the written permission of both the faculty members and the dean of the College of Pharmacy. Permission is never given to allow a student to recover from a bad grade, whether the need for a time conflict is created directly or indirectly.
6. Students are encouraged to register for activity courses in art, music, theatre, and health and physical education. There is no maximum number of activity course credits that may be used for fulfilling elective graduation requirements.
7. All pharmacy students in the Lower Division (P1-P3 Ranking) must have a cumulative GPA of 2.00 or higher and a letter grade of “C” or better in all required courses prior to entering the P4 year. Those students not meeting this requirement will maintain the class rank of P3 and may not take any P4 level course work until all stated requirements are met. Rules 7.1-7.6 pertain to all students P1-P6. All “D” and/or “F” grades are included (cumulative) regardless of being repeated and/or replaced.
7.1 A warning letter (with conditions) will be sent to the student and advisor with the first deficient grade of (D or F), regardless of the student’s overall cumulative grade point average (GPA) and will go into an “Academic Watch Program. See the College Student Handbook for additional information.

7.2 Students receiving a 2nd deficient grade (D or F), regardless of overall GPA, in any course work will continue within the “Academic Watch Program.” See the College Student Handbook for additional information.

7.3 A third deficient grade (D or F), regardless of overall GPA, in any course work will cause the student to be suspended for up to 1 year.

7.4 A fourth deficient grade (D or F), regardless of overall GPA, in any course work will cause the student to be suspended for at least 1 year.

7.5 A student receiving a 5th deficient grade (D or F) in any course work, regardless of GPA, will result in dismissal from the College of Pharmacy.

7.6 All students who are repeating courses or modules because of earned “D” or “F” grades will have a maximum of three (3) opportunities (two repeat attempts) to earn a grade of C or better. Failure to earn a “C” or better after the second repeat attempt (third time total) will result in the student’s dismissal from the College of Pharmacy.

8. In addition to items 7.1-7.6, the following regulation pertains to students in the Upper Division (P4 to P6 Ranking):

8.1 All students who receive a deficient grade during the first part of a semester (e.g., the first BSPC module of two normally taken in succession in a single semester) are permitted to take the subsequent module in that semester.

8.2 Except where noted, credit hours earned in repeated courses can be counted only one time among the total hours required for graduation.

8.3 All students enrolled in either the first, second or third of two or three sequential modules offered in the same semester may drop any module before, but no later than the 20th day of class in that module.

8.4 All Doctor of Pharmacy degree requirements must be completed no later than two years after the anticipated graduation date from the time the student first enrolls in the Raabe College of Pharmacy. A verifiable personal emergency may justify an extension as determined by the dean or dean’s designate of the Pharmacy College.

This academic action rule is effective for all students in the program. Continuing students in academic year 2009-10 will be held to the anticipated graduation date as of the start of the 2009-2010 academic year.

**S/U Grade Option**

Students may utilize the S/U grade option only as noted in the College of Pharmacy catalog course descriptions. Otherwise, students are not permitted to register for courses on an S/U basis if the course is offered on a graded basis.

**Classification of Students**

Students may be advanced to the following classifications upon meeting the stated requirements.

P-2: a minimum of 36 semester hours of credit including completion of the following courses or their articulated equivalent: Chemistry 1711, 1721; Biology 1201, 1341, 1361; and Math 1461.

P-3: a minimum of 72 semester hours of credit including completion of the following courses or their articulated equivalent: Chemistry 2511, 2521; Statistics for Pharmacy 1761 and Applied Sciences of Pharmacy.

P-4: a minimum of 108 semester hours of credit including completion of all lower division basic science and pharmacy course work, plus completion of all general education requirements.

P-5: a minimum of 144 semester hours of credit.

A cumulative GPA of 2.00 or higher and have successfully completed Biomedical Science and Patient Care (BSPC) 4411, 4421; PHBS 4321, 4441; and PHPR 4011.

P-6: a minimum of 180 semester hours of credit.

A cumulative GPA of 2.00 or higher and have successfully completed Biomedical Science and Patient Care (BSPC) 5431, 5441, 5451; PHPR 5501 modules and received a letter grade of “C” or better in BSPC 5461.

Other information relative to the requirements for reclassification of standing may be obtained in the office of Pharmacy Student Services of the College of Pharmacy.

**Academic Standing**

A student who fails to maintain the prescribed standards of scholarship will be subject to one of the following actions, namely: 1) probation, 2) continued probation, 3) suspension from the college, or 4) dismissal from the college.

Following the first semester a student’s cumulative grade point average (GPA) falls below 2.00, the student will be placed on probation. If a student on probation fails to obtain good academic standing (cumulative GPA 2.00 or higher) after the following semester, the student will be placed on continued probation. If good academic standing is not achieved by the end of the following semester, the student should expect to be suspended. Any student with a semester GPA of less than 1.00 may be placed on probation or suspended.

When a student is on probation, the college may impose special conditions for continued enrollment. Students on probation cannot participate in competitive activities of individuals, teams, or other groups officially designated as representing the University.

When action is taken to suspend a student, the suspension will be for a specified period of time after which the student will be eligible to apply for readmission. Readmission is not automatic. If readmission is granted, the faculty will establish specific conditions of academic performance expected of the student. A student GPA of less than 2.00 in any of the first two semesters after readmission may lead to dismissal. Dismissal is a terminal action and the student is not eligible to apply for readmission to the College of Pharmacy at any time thereafter.

**Pharmacy/Biology Dual Degrees Program**

The pharmacy/biology dual degrees program is a six-year curriculum that provides for educational, practice and research experiences in both pharmacy and biology. The Doctor of Pharmacy degree and the biology degree are awarded upon completion of the program of study. A more detailed description about this program is available from the Office of Student Services in the College of Pharmacy or the Department of Biological and Allied Health Sciences Office.

**Dual Degree Programs**

Information concerning other undergraduate dual degree programs involving the College of Pharmacy appears on page 19 of this catalog. Students may receive further details in the Office of Pharmacy Student Services.

**Student Services**

The College of Pharmacy provides specialized services to students and alumni through the staff of the Office of Pharmacy Student Services, including college admissions, academic advising, personal counseling, career counseling, and job placement. The staff of the office also coordinates professional organization functions, student group activities, and serves as the focus for special project planning and implementation.

**Student Conduct**

Students enrolled in the College of Pharmacy are expected to uphold high professional standards. The use or possession of narcotics, stimulants, or hallucinogens without the supervision of his/her own physician is unacceptable conduct and can subject the student to dismissal. A student who has been convicted of a felony or who has violated any state or federal pharmacy or drug law can be dismissed from the college.

**Special Notice**

Because of rapid developments in the health professions, the curriculum and academic standards of the College of Pharmacy are constantly being reviewed by the faculty. The faculty of the college reserves the right, without advance notice, to change the content, duration and sequence of any course included in the curriculum, or to increase or decrease the number of credit hours leading to the degree. The faculty also reserves the right without advance notice to change the academic standards of the college.

PHARMACY

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DEPARTMENT OF PHARMACEUTICAL & BIOMEDICAL SCIENCES

Professors Christoff, Kinder, Kisor (Chair), Milks, Sprague; Associate Professors Hrometz, Olah, Rorabaugh; Assistant Professors Jarrahian, Mahfouz, Rojeab, Stockert, Talbot; Instructor Myers

Subject - Pharmaceutical and Biomedical Sciences (PHBS)

2901 - Applied Sciences of Pharmacy
3 Credits
Fundamental principles and professional applications of basic and applied sciences, such as physics and biostatistics, are explored in relation to advanced science topics and integrated clinical sciences. Drug discovery and development, medical imaging, and the science of alternative medicine are discussed in the context of applications to pharmacy practice. Model drug compounds are presented to illustrate the critical need for thorough understanding and broad integration of basic science principles when considering the multitude of related professional applications in the practice of pharmacy. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 3 hours.

3101 - Drug Abuse Education
2 Credits
Development of skills in educating community groups regarding drugs and drug abuse. Emphasis on the development, mastery and delivery of concept-oriented lectures, and the effective use of learning materials in providing drug abuse education to various community groups, especially middle school and high school students. Background information, presentation techniques and approaches, and various current topics relating to drug abuse and chemical dependency. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 2 hours.

3111 - Service Learning in Drug Abuse Education
1 Credit
Community service-oriented presentation of drug abuse education talks to various community groups, including middle school and high school students. Opportunity to further develop skills in conveying health information to the public, focusing on issues relating to drug abuse and chemical dependency. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course can be repeated for a total of 9 hours.

3201 - Pharmacy Applications Laboratory
1 Credit
Clinical skills and problem-solving laboratory experiences examining basic science and clinical applications in pharmacy. In vitro and in vivo laboratory experiences as well as clinically-based exercises emphasizing patient care. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 1 hour.

3311 - Pharmaceutical Sciences 1
2 Credits
Physical pharmacy applications in the pharmaceutical sciences. Application of physico-chemical principles applied to pharmaceutical preparations. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 2 hours.

3411 - Biochemistry 1
3 Credits
The chemistry of living organisms with emphasis on the human system. Topics include acid-base balance, buffers, chemistry of amino acids, proteins, enzymes, carbohydrates, lipids, vitamins, nucleic acids and porphyrins. Biochemical genetics and genetic disorders are also covered. Offered fall semester. Prerequisite(s): (CHEM 251; CHEM 2511) and (CHEM 252; CHEM 2521) and (CHEM 253). Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 3 hours.

3421 - Biochemistry 2
3 Credits
The major metabolic processes that are essential for human life, including biochemical energetics, the electron transport system, Krebs cycle, the metabolism of carbohydrates, lipids and amino acids, and the biosynthesis of purines, pyrimidines, nucleic acids and proteins. Offered spring semester. Prerequisite(s): (PHBS 3411) Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 3 hours.

3501 - Basic Nutrition
2 Credits
Basic principles of nutrition. Topics include a description of essential nutrients, methods of evaluating individual dietary adequacy, and dietary methods for weight control. Offered spring semester. This course is repeatable for a total of 2 hours.

3751 - Immunology
3 Credits
Modern immunology and immunotherapy. The principles of basic and clinical immunology, historical background, host defense mechanisms, types of immune responses, nature of antigens and antibodies, antigen-antibody interactions leading to immunological disease, and transplantation and cancer immunology. The use of immunobiologies currently available in the USA for prevention and treatment of most common infections and immunologic diseases. The role of biotechnology as a source of immunobiologies will be discussed. Offered spring semester. Prerequisite: (PHBS 3411). Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 3 hours.

4321 - Pharmaceutical Sciences 2
8 Credits
Basic and clinical pharmacokinetics, and concepts of pharmacokinetics related to physiology and pathophysiology, Pharmaceutic and biopharmaceutic aspects of a variety of drug dosage forms and delivery systems. Offered fall semester. Prerequisite: (PHBS 3311). Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 8 hours.

4431 - Biomedical Sciences 1
5 Credits
An interdisciplinary focus on the mechanisms by which diseases, drugs and chemicals alter normal biochemical and physiological processes. The sciences of pathophysiology, pharmacology, toxicology, and medicinal chemistry are integrated to provide an in-depth understanding of these mechanisms. The course progresses from factors affecting sub-cellular mechanisms to those of whole organ systems. Includes small group recitation and student-presented seminar sections in order to introduce the basic and clinical scientific literature and provide activities which illustrate the pharmacotherapeutic applications of the material. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 5 hours.

4441 - Biomedical Sciences 2
6 Credits
Continuation of PHBS 4431. Offered spring semester. Prerequisite(s): (PHBS 4431) and (PHBS 4321) and (PHPR 4011). Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 6 hours.

5621 - Survey of Research Areas in the Pharmaceutical and Biomedical Sciences
1 Credit
Presentation of the research areas in the pharmaceutical and biomedical areas. Opportunities in these areas are defined. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 1 hour.
5651 - Research in the Pharmaceutical and Biomedical Sciences
2 Credits
A research experience for students who may pursue graduate studies in the pharmaceutical or biomedical sciences or related areas. Participation in all aspects of the design, implementation, model preparation, instrumentation, and reporting of specific research problems. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 18 hours.

5901 - Special Topics in Pharmaceutical and Biomedical Sciences
1 to 3 Credits
Distinct special topics in the pharmaceutical and/or biomedical sciences. Permission of the instructor is required. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 1 hour.

5971 - Independent Study - Pharmaceutical and Biomedical Sciences
1 to 3 Credits
Independent study in the pharmaceutical and/or biomedical sciences. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 18 hours.

DEPARTMENT OF PHARMACY PRACTICE


Subject - Pharmacy Practice (PHPR)

1011 - The Profession of Pharmacy 1
1 Credit
The profession of pharmacy, the concept of patient care, and the operation of the University and College of Pharmacy will be covered. Traditional classroom presentations are reinforced through structured experiential rotations in health care and service learning sites. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

1021 - The Profession of Pharmacy 2
1 Credit
The profession of pharmacy, the delivery of patient care, and the drug distribution processes are covered. Traditional classroom presentations are reinforced through small group discussions, active learning and structured experiential activities in a variety of health care and community service sites. Offered spring semester. Prerequisite(s): PHPR 1011. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2001 - Spirituality and Health
1 Credit
Implications of spiritual outlook and practice on patient compliance, coping skills and other aspects of health care. Permission of the instructor is required. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2011 - The Profession of Pharmacy 3
2 Credits
Continuation of professional development and understanding of pharmacy services and patient care delivery. Addresses issues relevant to pharmacy internship and advanced pharmacy course work. Offered fall semester. Prerequisite(s): PHPR 1021. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2021 - The Profession of Pharmacy 4
2 Credits
Continuation of professional development and understanding of pharmacy services and patient care delivery. Addresses issues relevant to patient communication and advanced pharmacy course work. Prerequisite(s): PHPR 2011. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2301 - Ethics in Professional Practice
2 Credits
Guided discussions show that there are ethical problems in life and that there are better and worse ways of dealing with those problems. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2411 - Contemporary Pharmacy Practice 1
2 Credits
Multiple practice settings including retail, institutional, manufacturing, distribution, association, government, and health care. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

2421 - Contemporary Pharmacy Practice 2
2 Credits
Current topics from multiple practice settings including retail, institutional, manufacturing, distribution, health care/pharmacy associations, and government will be discussed and includes how each is implementing a pharmaceutical care mission. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy or Business. Must be enrolled in one of the following Fields of Study: Pharmaceutical Business or Pharmacy.

2511 - Preventive Medicine: Issues and Education
2 Credits
Important health issues in the United States and the applications that these disease states have on individual health, health care costs, and productivity. Special emphasis on learning teaching methods that can be effective in increasing public awareness and modifying behavior in order to prevent disease. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy or Business. Must be enrolled in one of the following Fields of Study: Pharmacy.

3011 - The Profession of Pharmacy 5
2 Credits
Continued professional development, understanding, and reinforcement of pharmacy services and patient care delivery. The functional practice of pharmacy, including product (medication and information) distribution systems and evaluation of their quality and impact on professional, legal, and patient care. Offered fall semester. Prerequisite(s): PHPR 2021. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3021 - The Profession of Pharmacy 6
2 Credits
Continuation of PHPR 3011. Offered spring semester. Prerequisite(s): PHPR 3011. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

301 - Smoking Cessation
2 Credits
An overview of the complexities of smoking behavior. Discussion of the types of nicotine replacement therapies and skills enhancement that will allow students to counsel patients on smoking cessation and develop a comprehensive plan to help patients quit. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3021 - Drug Literature Evaluation
2 Credits
A web based approach to strengthen reading, understanding, and applying information from published literature to solve patient-specific pharmacotherapy problems. Emphasis placed on developing skills sufficient to answer questions about the literature and application of research methodology to create a research proposal. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.
3311 - OTC Products

3 Credits
Development of appropriate counseling and guidance to patients who desire to conduct self-medication or self-therapy with non-prescription drug products. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3401 - Women's Health Issues

2 Credits
This 2-credit hour course will introduce students to timely and important topics in women’s health through a discussion-based approach guided by the course instructor. This course will broadly cover a number of issues that impact women’s health and affect the provision of healthcare to women in the U.S. and internationally, both from a clinical health and public health perspective. Students will be presented with a holistic view of women’s health across the lifespan and will be introduced to topics such as the biological basis for sex-related differences and subsequent health outcomes, the involvement of women in clinical trials, and maternal and child health. Students will also be exposed to social and economic issues that impact women’s health in the U.S. and internationally. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3411 - Introduction to Natural Product Therapeutics

2 Credits
The course will help the pharmacy students understand the use of therapeutics and natural products in modern medical practice and the role of the pharmacist within the practice. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3431 - Chemical Dependency

2 Credits
This course educates the pharmacy student about the disease of chemical dependency, the risks to pharmacists, consequences of use (personal and professional) and treatment methods and recovery. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3451 - Pharmacy Ownership

2 Credits
A step wise approach to establishing a pharmacist owned business. Starting with a review of the various business opportunities available for someone with a pharmacy degree, the course begins with the philosophy of business ownership and then leads the student through the steps needed to open a business. Market and site analysis, business forms, lease review, developing a business plan, understanding financial considerations, capital needs, acquiring startup monies, layout, human resources and promotional strategy are all reviewed. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

3551 - Life Skills for Pharmacists

2 Credits
This course is designed to help student pharmacists learn about life skills that will be important for them as students as well as after graduating from pharmacy school. The course will provide education about skills that are necessary for both the professional and personal lives of the students. Topics that will be covered during this course will be skills such as the importance of professional networking, developing good leadership skills, learning about effective interviewing skills, a refresher on how to write CVs and resumes, and business and professional writing. Business related areas that will be covered include financial aspects such as budgeting, investing, financial and retirement planning, and entrepreneurship. The final area of the course will deal with issues relating to the importance of having malpractice insurance as a pharmacist. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

4011 - Patient Care Assessment Module 1

2 Credits
Preparation for subsequent therapeutic modules. Development and enhancement of analytical and communicative skills required to prepare a drug therapy problem list. Offered fall semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

4411 - Biomedical Science and Patient Care Module 1

6 Credits
An integrated approach to organ system disorders including the rational use of pharmacological agents used to treat them. Comprehensive discussion of drug design and structure activity relationships is integrated with the therapeutic and toxicologic actions of the drugs. Basic principles of the pharmacokinetic and pharmaco-dynamic properties of the drugs used in these disorders are presented and discussed. Offered spring semester. Prerequisite(s): PHBS 4411 and PHBS 4441. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

4421 - Biomedical Science and Patient Care Module 2

6 Credits
Continuation of PHPR 4411. An integrated approach to organ system disorders including the rational use of pharmacological agents used to treat them. Comprehensive discussion of drug design and structure activity relationships is integrated with the therapeutic and toxicologic actions of the drugs. Basic principles of the pharmacokinetic and pharmaco-dynamic properties of the drugs used in these disorders are presented and discussed. Offered spring semester. Prerequisite(s): PHPR 4411. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5251 - Drugs of Abuse

2 Credits
Major issues regarding drug abuse, with special emphasis on the specific agents, their sources, common distribution modes, patterns of substance abuse, pharmacological effects, mechanisms, toxicological concerns, treatment modalities, and approaches to drug abuse education. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5301 - Geriatric Pharmacotherapy

2 Credits
An introduction to the principles regarding population specific alterations in pharmacokinetics drug interactions, mental status, disease state presentation, and pharmacotherapy in the elderly. Social and psychological issues will also be addressed. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5401 - Patient Counseling and Communications

2 Credits
To be a pharmacist is to be an educator and communicator of health and medication information. Counseling patients regarding prescription and over-the-counter medications is a skill that usually develops with practice and professional guidance. The purpose of this course is to give the interested student some constructive critical evaluation in the art of patient counseling. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5431 - Biomedical Science and Patient Care Module 3

6 Credits
Continuation of PHPR 4421. An integrated approach to organ system disorders including the rational use of pharmacological agents used to treat them. Comprehensive discussion of drug design and structure activity relationships is integrated with the therapeutic and toxicologic actions of the drugs. Basic principles of the pharmacokinetic and pharmaco-dynamic properties of the drugs used in these disorders are presented and discussed. Offered fall semester. Prerequisite(s): PHPR 4411 PHPR 4421. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.
5441 - Biomedical Science and Patient Care Module 4
6 Credits
Continuation of PHPR 5431. An integrated approach to organ system disorders including the rational use of pharmacological agents used to treat them. Comprehensive discussion of drug design and structure activity relationships is integrated with the therapeutic and toxicologic actions of the drugs. Basic principles of the pharmacokinetic and pharmacodynamic properties of the drugs used in these disorders are presented and discussed. Offered fall semester. Prerequisite(s): PHPR 4411, PHPR 4421 and PHPR 5431. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5451 - Biomedical Science and Patient Care Module 5
6 Credits
Continuation of PHPR 5441. An integrated approach to organ system disorders including the rational use of pharmacological agents used to treat them. Comprehensive discussion of drug design and structure activity relationships is integrated with the therapeutic and toxicologic actions of the drugs. Basic principles of the pharmacokinetic and pharmacodynamic properties of the drugs used in these disorders are presented and discussed. Offered fall semester. Prerequisite(s): PHPR 4411, PHPR 4421, PHPR 5431 and PHPR 5441. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5461 - Capstone in Pharmacy Practice
6 Credits
The module requires the student to utilize accumulated pharmaceutical education and apply learned principles to organize and synthesize relevant information to describe, optimize and critique drug therapy in unique and classic diseases. Information will be presented in written and oral, formal and informal formats. Activities include case presentations, reviews of ‘the literature,’ literature critiques and other formats that allow demonstration of proficiency in effective, safe, and ‘patient specific’ application of drug therapy. Students work in small groups when possible to demonstrate interpersonal skills. Culminates with an encompassing final exam which is a prerequisite for clinical rotations. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5501 - Pharmacy Administration Module
6 Credits
An interdisciplinary approach to the practice of pharmacy as it fits into the contemporary health-care system and the business environment. Includes theoretical concepts as well as practical methodology techniques to assess the external and internal economic, social, philosophical, ethical, and legal influences on the practice. Planning, evaluating, and decision making through financial report analysis and case study is stressed. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5531 - Special Populations
3 Credits
The course will educate students in the clinical guidelines and therapeutics of special patient populations including pediatrics, geriatrics, pregnancy and lactation, and others. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5541 - Advanced Topics in Psychiatric Medicine
2 Credits
This course will emphasize the process of learning and evaluating information pertaining to the treatment of psychiatric illnesses. A single illness will provide the context for learning with the hope that the skills introduced and used during this process will help to facilitate self-learning on the part of the student and prove applicable to a wide variety of student inquiries. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5551 - Emergency Medicine
2 Credits
An overview of unscheduled medical appointments and emergencies. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5561 - Palliative Care
2 Credits
Discuss and understand related pathophysiology changes and apply related therapeutics to various chronic disease states that warrant palliation of related symptoms. The role of the interdisciplinary team including pharmacists, nurses, physicians, chaplains and related social support will be explored as a pivotal point for successful palliative care. Pharmacokinetic and pharmacodynamic implications of geriatric patients will be discussed in relation to therapeutic selection and various disease progression models. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5571 - Pediatrics
2 Credits
The purpose of this course is to orient and expose the student to the challenges confronting the pharmacist in dealing with issues of the pediatric patient and to educate the student in pediatric disease and pharmacotherapy. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy.

5941 - Seminar in Pharmacy Practice
1 to 3 Credits
Can be repeated as the topic varies. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 1 hour.

5971 - Independent Study-Pharmacy Practice
1 to 16 Credits
Can be repeated as the topic varies. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. This course is repeatable for a total of 16 hours.

650X - Advanced Pharmacy Practice Experience (1-9)
4 Credits
Full-time experiential program emphasizing delivery of pharmaceutical care in primary, secondary and tertiary patient care settings, as well as a means of integrating facts and principles received from antecedent courses. The process will occur in both institutional and ambulatory settings. At each practice setting, the student is expected to become a functioning component of the ongoing pharmaceutical care services through faculty instruction, self-learning, and by observing the modeling of attendant faculty members. Completion of all BSPC and PHPR coursework with a C or better is required. Restricted to Pharmacy majors.

800X - Advance Practice - Rotation (1-6)
The following course description describes the experiential coursework for non-traditional pharmacy majors. The “X” denotes the number 1 through 9 as all nine experiences are required for graduation.
3 Credits
Experiential program emphasizing delivery of pharmaceutical care in primary, secondary and tertiary care settings. At each practice setting, the pharmacist is expected to become a functioning component of the ongoing pharmaceutical care services through faculty instruction and self-learning. Prerequisites: PHPR 701, 7710, 720, 730, 740, 750, 755, 760, 765, 770, 775, 780, 785, and 790.
THE CLAUDE W. PETTIT COLLEGE OF LAW

David C. Crago, Dean

Professors Brant, Clarke, Fenton, French, Gerber, Hill, Lobenhofer, Martin, O’Melinn, Raack, Traster, Veltre (Associate Dean), Ward, Young; Associate Professor Frohmen, Lewis, and Sabol; Assistant Professors Francis, Helmer, Kao; Visiting Assistant Professor Kamatili; Instructors Cridler, Easterday, Mittendorf, Taggart Library: Professor Armstrong; Associate Professors Petrow, Siebesma

Founded in 1885, the College of Law of Ohio Northern University is accredited by the American Bar Association and is a member of the Association of American Law Schools.

Ohio Northern maintains an intellectually challenging curriculum in which each student refines the analytical, interpersonal and communication skills essential for success. Students are prepared for the legal profession by nationally recognized scholars who are committed to producing extremely skilled graduates who can compete in today’s challenging legal world.

The Fred L. Carhart Memorial Program in Legal Ethics was established in 2007. The program brings eminent scholars, jurists, and lawyers to Ohio Northern to actively engage in lectures, seminars and panel discussions for the benefit of our students, the college and university communities, and the public, as well as the bench and bar. The Carhart program will fund lectures and symposia in alternating years. The first lecture was held in 2007-2008.


Dr. Steven W. and Helen E. Kormendy Law Lecture Fund. Established in 1987 by Mrs. Helen Kormendy and family in memory of her husband, Dr. Steven W. Kormendy, JD ’28, LL’D ’85. The income from the fund is used to bring a prominent legal figure to the campus to address matters of law in a public forum and in class settings.

Laurence N. Woodworth Endowed Lectureship in United States Tax Law and Policy. Laurence Neal Woodworth, a 1940 graduate, devoted his entire professional career to the formulation and implementation of tax law and policy at the highest level. The university and the College of Law established the lectureship in 1995 in his honor as a preeminent forum for the articulation of new ideas and new directions in tax policy in the United States. The lecture is given annually by a nationally prominent figure in the tax field.

For more detailed information about the academic programs in the College of Law, consult the College of Law catalog. Copies can be requested from the Law Admissions Office.

Mission Statement

The mission of the College of Law is to provide an excellent legal education emphasizing service to a diverse community and profession.

Faculty and Facilities

The College of Law is located in Tilton Hall, built in 1973 and expanded and remodeled in 1983 and again in 1998. The law college contains faculty and student activity offices, two courthouses, two student lounges, and the library. Wireless connectivity is available throughout the entire law college building. The Taggart Law Library houses more than 430,000 volumes in both hard copy and microform and offers computerized legal research services including LEXIS, WESTLAW, and a growing number of Internet subscription services. The library is a federal depository and contains a significant collection of government-related materials. Students are taught to use library materials and computers in their first year, and individualized instruction is available thereafter. A free, statewide, resource-sharing network (OhioLINK) provides faculty and students with direct online borrowing privileges at more than 80 college and university libraries. The library offers ample study carrels and tables and a computer lab. Additional network and power connections are available for notebook computers in the library and at several other locations in the law building. The law college has attracted an outstanding faculty. As publishing scholars and experienced practitioners, the faculty contributes both professionally and personally to the student body and to the enhancement of the quality of student life. The Alumni Moot Court Room was renovated in 2011 to contain the latest in courtroom technology.

Program of Instruction

The basic program of study leads to the awarding of the Juris Doctor (J.D.) degree. This program requires three years of full-time study. Each academic year consists of two semesters. There are no part-time or evening programs.

Over one-half of the 88 semester hours needed to receive the J.D. degree consists of required courses, providing a solid foundation in all traditional legal subjects from a national perspective. A wide range of electives is available to the student to round out the program of study and develop an individual focus, including courses from the following areas: bankruptcy, commercial and business law, taxation, international and comparative law, environmental law, government regulatory law, employer-employee relationship law, civil liability law, and property law.

Well-established clinical and legal extern programs and a judicial externship also play an important role in the curriculum. The College of Law offers a program of clinical legal studies and extern placement for academic credit that incorporates both classroom instruction and actual law office and courtroom experience.

Each semester those students receiving a minimum grade point average of 3.50 are named to the Dean’s List of the College of Law. They are recognized with a certificate at the annual awards ceremony.

LL.M. in Democratic Governance and Rule of Law and Concurrent J.D./LL.M. Degrees

Lawyers from transitional countries and emerging democracies can pursue a Master of Laws in a one academic year program in the College of Law. The program is designed to train lawyers from the public sector in skills that will assist them in building stable democratic institutions in their home countries and develop systems that will support the rule of law in a market economy. The two-semester, twenty-four credit program is more fully described in materials available from the College of Law. The College of Law also offers a concurrent J.D./LL.M. program that can be completed within three years.

Student Activities

Many student organizations complement the academic life of the law college and provide an opportunity for further professional and personal development.


The law college’s strong Moot Court program sends teams to national and international competitions. In addition, three internal competitions are conducted. These competitions offer students ample opportunity to hone their research, writing and speaking skills.

The Ohio Northern University Law Review, a highly respected and award-winning law journal, is edited and published by law students. Published three times a year, the Law Review consists of leading articles on current legal topics, student comments on cases and legislation, and selected symposia presentations on varied legal topics.

Student Body

The student body is comprised of men and women who represent a wide range of ages, cultures, interests, abilities, and accomplishments. Nearly 200 undergraduate institutions are represented by the law college’s enrollment of approximately 320 students.
## Admissions Process

The College of Law endeavors to select a first-year class which reflects the geographical and cultural diversity of the United States and in which women, persons with disabilities, and minorities are fairly represented. Applicants must have a bachelor’s degree from an accredited college or university. First-year students are admitted for the fall or summer semester only, but transfer students may enter during either spring or fall semesters. Under some circumstances part-time programs in compliance with the regulations of the American Bar Association may be approved by the Associate Dean for Academic Affairs.

Registration with the Law School Data Assembly Service (LSDAS) is required to provide the Admissions Committee with an official copy of the applicant’s score report, an analysis of the undergraduate transcripts(s), and a copy of the applicant’s LSAT writing sample. Although there is no deadline for applying to the College of Law, students are encouraged to apply as early as possible to avail themselves of the most consideration for admission and financial aid awards. The Admissions Committee will review files beginning in late fall and will make decisions until the entering class is filled. Two seat deposits are required for accepted students by April 1 and mid-June.

While LSAT score and undergraduate academic record are given considerable weight in the admissions process, other factors may be considered by the committee. These factors may include the applicant’s intellectual growth as exhibited by the completion of other advanced degrees, work experience that has increased the applicant’s analytical and communication skills, and ethnic, racial and/or socioeconomic barriers that had to be overcome by the applicant.

### Financial Aid

Scholarships, grants and loans are awarded by the College of Law to qualified applicants. The Legal Scholar Program recognizes students who have excelled academically. Awards range from $5,000 to $28,500. Students who meet these criteria will be automatically notified of their awards, and no separate application is required. Scholarships are renewable in the second and third years of law school as long as the student meets the grade point average requirement stated in the acceptance form. Additional scholarship awards, which are also renewable, are made to students who distinguish themselves academically during their first year.

Students will be awarded grants subject to funding availability. Generally, grants are renewable if the student’s financial statement, which is filed annually, continues to show need.

Financial aid is also made available in the form of federally-insured student loans and student loans from private sources. A FAFSA application is required for student loans. Applications and additional information about loan programs may be obtained from the Ohio Northern University Financial Aid Office.

### LAW COLLEGE CALENDAR 2011-12

#### Fall Semester 2011

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1</td>
<td>Last day for payment of fees (Mon.)</td>
</tr>
<tr>
<td>August 24</td>
<td>Law students arrive; check-in residence halls</td>
</tr>
<tr>
<td>August 25-26</td>
<td>New law student orientation</td>
</tr>
<tr>
<td>August 29</td>
<td>Late registration</td>
</tr>
<tr>
<td>August 29</td>
<td>Law classes begin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>September 2</th>
<th>Last day to add a course</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 5</td>
<td>Labor Day - Classes recess</td>
</tr>
<tr>
<td>September 6</td>
<td>Classes resume</td>
</tr>
<tr>
<td>September 12</td>
<td>Beginning of “W” period for withdrawals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>October 20-23</th>
<th>Classes recess</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 24</td>
<td>Classes resume</td>
</tr>
<tr>
<td>October 31</td>
<td>Last day to withdraw</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>November 7</th>
<th>Last day to remove “incomplete”</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 22</td>
<td>Law classes end</td>
</tr>
<tr>
<td>November 24-25</td>
<td>Thanksgiving recess</td>
</tr>
<tr>
<td>November 29-Dec. 9</td>
<td>Law finals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>December 10-Jan. 2</th>
<th>Christmas recess</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 18</td>
<td>Fall Graduation</td>
</tr>
<tr>
<td>December 23-28</td>
<td>Reading days</td>
</tr>
</tbody>
</table>

#### January Term 2012

<table>
<thead>
<tr>
<th>January 3</th>
<th>Law students arrive; check in</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 4</td>
<td>Classes begin</td>
</tr>
<tr>
<td>January 5</td>
<td>Last day to add a class or section</td>
</tr>
<tr>
<td>January 9</td>
<td>Beginning of “W” period for withdrawals</td>
</tr>
<tr>
<td>January 13</td>
<td>Last day to withdraw</td>
</tr>
<tr>
<td>January 16</td>
<td>Martin Luther King (class recess)</td>
</tr>
<tr>
<td>January 17</td>
<td>Classes resume</td>
</tr>
<tr>
<td>January 20</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>January 21-23</td>
<td>Reading days</td>
</tr>
<tr>
<td>January 24-25</td>
<td>Exams</td>
</tr>
</tbody>
</table>

#### Spring Semester 2012

<table>
<thead>
<tr>
<th>January 30</th>
<th>Law Spring semester begins</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>February 15</th>
<th>Beginning of “W” period for withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 5</td>
<td>Last day to add a course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>March 5-11</th>
<th>Spring recess</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 12</td>
<td>Classes resume</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>April 3</th>
<th>Last day to withdraw</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 5-9</td>
<td>Easter recess</td>
</tr>
<tr>
<td>April 10</td>
<td>Classes resume</td>
</tr>
<tr>
<td>April 10</td>
<td>Last day to remove “incomplete”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>May 1</th>
<th>Classes end</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2-6</td>
<td>Reading days</td>
</tr>
<tr>
<td>May 7-18</td>
<td>Law finals</td>
</tr>
<tr>
<td>May 20</td>
<td>Commencement (Sun.)</td>
</tr>
</tbody>
</table>

#### Summer Session 2012

Classes: May 29-July 18
Reading days: July 19-22
Final exams: July 23-25
TUITION, FEES, AND OTHER CHARGES 2011-12

College of Law

Students enrolled and attending classes for the 2011-12 academic year

Tuition & General Fee L-1 Per Semester
• Full-time student $14,985
• Part-time student (less than 12 hrs.) (per hour) $1190
• Academic overload fee (per hour) $895
• January Term (per hour) $1240

Tuition & General Fee L-2 & L-3 Per Semester
• Full-time student $15,706
• Part-time student (less than 12 hrs.) (per hour) $1,309
• Academic overload fee (per hour) $982
• January Term (per hour) $1,240

Tuition & General Fee LLM Per Semester
• Full-time student $19,188
• Part-time student $1,599
• Academic overload fee (per hour) $1,200
• January Term (per hour) $1,599

Summer Session 2012
1. College Fees, per credit hour
   • College of Law $1229
2. Apartment Rental
   • Double $371 per month

Technology Fee Per Semester
• Full-time student $120
• Part-time student $45

Room
• Campus Apartments (double occupancy) $3802

   Additional funds are needed for books, supplies, and incidentals. A minimum of $500 per term should be budgeted for these purposes. Books and supplies are sold at the ONU Bookstore on a cash basis or by credit card.

   Tuition and fees cover use of the library, laboratories, Health Center, Sports Center, McIntosh Center, cultural activities, co-curricular programs, and admission to athletic events and most other events on campus, the student newspaper, literary magazine, and yearbook if full-time during the two semesters of the academic year.

PAYMENT PLANS

The university makes available to parents and students a variety of plans which can be used to make fee payments. Please contact the controller’s office for more information on these plans.

Regular Billing Schedule
For students selecting courses during the advance registration period, the fall semester billing will be sent through the TouchNet EBill System. Students will receive an email at their ONU email address when a bill is available for viewing. Any arrangements for loans or financial aid should be made well in advance of each semester so that all fees are paid by the date they are due.

For students registering at the beginning of the semester, full payment is required as a part of the registration process.

MasterCard/Discover/American Express Payment fees may be made by MasterCard, or Discover. A convenience fee of 2.75% will apply.

Educational loans are available through a variety of loan firms and financial institutions. Many offer monthly payments which can be spread over a variety of repayment times. Information regarding these loans may be obtained from the financial aid office.

DUE DATES FOR FEE PAYMENT FOR 2011-12

Fall Semester August 1, 2011
Spring Semester December 19th, 2011

OTHER CHARGES

1. Auditing Fee, per semester hour (when permitted) $15.00
2. Applied Music Lessons
   For music minors and non-music majors-for each semester hour. $225.00
3. Late Registration Fee
   The late registration fee is assessed if course registration is not completed at the established time each semester or if re-registration is required. $100.00
4. Late Payment Fee
   If fees are not paid in full when due, a $25.00 charge is assessed. If fees are then not paid by the first day of class, a charge of 1 1/2% of the unpaid balance will be assessed. Thereafter, interest at 1 1/2% per month (18% annual rate) will be charged on any unpaid account balance at the end of each month.
5. Student Bar Dues
   (full-time law students only) $20.00
6. Law Review Fee (all law students)
   Fall semester only $20.00
7. Application Fee, non-refundable, payable with application for admission $40.00
8. Advance Deposit
   Fall Matriculants:
   • Upon receiving an offer of admission to Ohio Northern Law School, an advance deposit of $200.00 will be required by April 1.
   • A second deposit of $400.00 is required by June 15. No portion of the first or second deposit is refundable.
   Summer Matriculants:
   • Students offered admission to the Summer Starter Program will be required a deposit of $500.00 by April 1.
   • Summer or Fall matriculants admitted after a due date will be required a partial or full payment within 7-14 days of the admission date.
9. Transcript Fee
   • There is no charge for ONU transcripts, with the limitation of three free transcripts issued per day.
   • Transcripts are processed within two working days, depending upon the time within a term, after receipt of the request. Transcripts are sent via regular U.S. mail.
   • For special handling: more than three in one day or priority processing, there is a charge of $20 per transcript.
10. Lost/stolen/damaged ID Card Fee $25.00
11. Returned Check Fee $25.00
12. Residence Halls
   a. Improper check-out $100.00
   b. Room key replacement $100.00
   c. Room lock replacement $40.00
13. Motor Vehicles
   On-Campus Parking Permit
   Full Year $60.00
   Per Semester $40.00

Schedule of Fines
   Improper parking $15.00
   Driving or parking on grass $30.00
   Driving on sidewalks $30.00
   Reckless operation of a motor vehicle $35.00
   Parking without parking permit $50.00
Motor vehicle regulations are designed to protect the safety and welfare of the campus community and promote good order. Violations are issued by security officers. Cited violators may appeal to an appeals committee within three working days of the violation.

Charges for Damages to University Property
Students will be billed for any damages to university equipment or property. The charges include the estimated cost of replacement parts or materials, labor for repair or replacements, and overhead expenses associated with the clean-up, repair, or replacement.

Payment of University Accounts
Students should pay all financial obligations to the university promptly. Registration for a succeeding semester and issuance of a diploma or transcript are dependent upon the student’s paying all financial obligations to the university.

Student Identification Cards
The first student ID card is issued to registered students without charge. Replacement will be charged for lost, stolen or damaged ID cards. The ID card allows free admission to athletic events, reduced admission to theatre productions, and the artist series. This card is also required for library check-out, meal contract registration, and resale of textbooks at the university bookstore. ID cards are also required for some labs and entrance to on-campus housing.

Refunds
Tuition and General Fee If a student withdraws from the university or is suspended for disciplinary reasons, refunds of tuition will be made on the basis shown below.

Students attending Ohio Northern University are entitled to a pro-rata refund calculation through the 60% point of the semester. Financial aid adjustments will be calculated based upon mandated federal refund calculations. A 100% refund is granted on or before the first day of class each semester. After that, the percentage is based on the number of days in attendance for the semester. There is no refund after the first 60% of the semester.

Also, keep in mind, students who drop from full-time to less than full-time during the first 60% of the semester will have adjustments made to their financial aid and tuition.

Housing
The university makes available well-maintained living facilities at a moderate cost for both male and female students. Off-campus apartments, rooms, and houses are available in the village of Ada. The university publishes lists of off-campus housing throughout the year.

Career Services
The Law Career Services Office provides counseling in the job application and interviewing process, as well as serving as a career opportunity and information resource for students and alumni. The director coordinates workshops, speakers, and on-campus recruitment. As a member of the Ohio Law Placement Consortium and the National Association of Law Placement, the College of Law also participates in the placement activities of the OLPC and NALP.

Correspondence
Inquiries should be directed to Law Admissions, Claude W. Pettit College of Law, Ohio Northern University, Ada, Ohio 45810. Phone 419/772-2211 or 1-877-452-9668.
Scholarships and Loan Funds

General Scholarships

The scholarships and loans listed below are made possible through gifts to the university in the names of generous donors who wish to assist students. This list is intended to recognize their generosity. Special applications for a specific scholarship or loan are not required. (If a student is eligible for one of these named scholarships or loans the Student Financial Aid Office will place his/her name on the list of possible recipients for such awards.)

• The David and Catherine Kegerreis Albright Scholarship is an unrestricted scholarship.

• The American Trim Scholarship was established by American Trim, formally the Superior Metal Products Company of Lima, Ohio, for a qualified student(s) in the College of Engineering and the College of Business.

• The Andrews Student Aid Fund was established by Mrs. Mabel Andrews Beacher of Celina, Ohio in honor of her brothers and sisters who attended Ohio Northern University. Income from the fund shall each year be awarded to a worthy student with financial need. Members of the family who attended Ohio Northern included Charles, Ralph, James, Mabel, Louise and Alice Andrews.

• The Clyde and Frances Augsburger Scholarship Fund was established by Robert R. Augsburger and his wife, Jean Ann, as a memorial to his mother, Frances Russell Augsburger, AA 1888, and his father, Clyde Augsburger, BSCE 1921, for an arts and/or engineering student selected in accordance with university policy.

• The Woodrow W. Bailey Scholarship was established by Mary Banfield Bailey to honor her husband, Woodrow “Woody” Bailey, BSEd 1937. Mr. Bailey was an excellent student athlete and was inducted into the ONU Hall of Fame in 1996. The scholarship assists an academically worthy student athlete.

• The Dr. Byron Evans Baker Scholarship is presented to a qualified student with recognized financial need.

• The Kendall and Toby Baker Scholarship was established by the University Trustees in honor of Ken and Toby, BSFA 2006, upon their retirement from the University. Dr. Baker served as President of the University from 1999-2011.

• The John Banyas Scholarship was established by Mr. Banyas to assist general university students.

• The Clyde and Frances Augsburger Scholarship Fund was established by Robert R. Augsburger and his wife, Jean Ann, as a memorial to his mother, Frances Russell Augsburger, AA 1888, and his father, Clyde Augsburger, BSCE 1921, for an arts and/or engineering student selected in accordance with university policy.

• The Woodrow W. Bailey Scholarship was established by Mary Banfield Bailey to honor her husband, Woodrow “Woody” Bailey, BSEd 1937. Mr. Bailey was an excellent student athlete and was inducted into the ONU Hall of Fame in 1996. The scholarship assists an academically worthy student athlete.

• The Robert and LaVelva Chandler Scholarship was established through the generosity of Mrs. LaVelva Chandler to assist academically worthy students with financial need. To be eligible for the scholarship, the recipient must have graduated from Ada High School.

• The Robert and LaVelva Chandler Scholarship was established through the generosity of Mrs. LaVelva Chandler to assist academically worthy students with financial need. To be eligible for the scholarship, the recipient must have graduated from Ada High School.

• The John S. Canterbury Memorial Scholarship was established by Pauline Canterbury in honor of her husband. The scholarship is awarded to students with financial need.

• The Kathryn Reese Canterbury Memorial Scholarship, established by Dr. John S. Canterbury in memory of his wife, is presented to students with recognized financial need and preferably a graduate of Ada High School, Ada, Ohio.

• The Sally Jo Carlton Scholarship was established by Mr. and Mrs. William H. Carlton of Lima in memory of their daughter, Sally Jo, BA 1968. Scholarships are to be made to qualified female undergraduate students.

• The American Trim Scholarship was established by American Trim, formally the Superior Metal Products Company of Lima, Ohio, for a qualified student(s) in the College of Engineering and the College of Business.

• The Class of 1933 Scholarship Fund, established by members of the Class of 1933 during their 50th year reunion, is presented to qualified students with financial need.

• The Class of 1939 Scholarship was established by members of the Class of 1939 during their 50th reunion year.

• The Class of 1992 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1990 Scholarship Fund was established by the senior class of 1990. Scholarship will rotate among all four undergraduate colleges with the Deans of the colleges making recommendations for the recipient who must be a senior or P5 status.

• The Class of 1991 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1993 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1994 Scholarship provides two scholarships to students who are in their final undergraduate year. One merit-based and one need-based scholarship are awarded.

• The E.J. Brookhart Scholarship, established by Mrs. Dora M. Brookhart in memory of her husband, a graduate in 1903 and a trustee of ONU, is provided to students with recognized financial need.

• The Brubaker Endowed Student Aid Fund was established by the estate of Ralph E. Brubaker, in memory of his wife, Thelma Hughey Brubaker, and is restricted to students from Defiance, Fulton, Henry, Lucas, Putnam or Wood Counties. The Brubakers were active members of the United Methodist Church.

• The Class of 1992 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1993 Scholarship provides one annual scholarship to a student in his/her final undergraduate year.

• The Class of 1994 Scholarship provides two scholarships to students who are in their final undergraduate year. One merit-based and one need-based scholarship are awarded.

• The Class of 1990 Scholarship Fund was established by the senior class of 1990. Scholarship will rotate among all four undergraduate colleges with the Deans of the colleges making recommendations for the recipient who must be a senior or P5 status.

• The Class of 1991 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1992 Scholarship provides two annual scholarships to students in their final undergraduate year.

• The Class of 1993 Scholarship provides one annual scholarship to a student in his/her final undergraduate year.

• The Class of 1994 Scholarship provides two scholarships to students who are in their final undergraduate year. One merit-based and one need-based scholarship are awarded.
• The Clevenger Financial Aid Fund was established by Millard and Rowena O. Clevenger of Lima, Ohio. The award is to be made to any worthy, qualified student with financial need with preference given to students in Allen County.

• The Eugene S. and Catherine K. Coleman Fund was established through the estate of Eugene S., BSED 1944, and Catherine K. Coleman to provide scholarship support for student athletes. Gene was very grateful for his education and this scholarship is designed to help students who love sports and to make it possible for them to attend Ohio Northern University.

• The Columbia Gas of Ohio Scholarship was established by Columbia Gas Foundation and is awarded to a qualified undergraduate student who is a graduate of an Ohio high school.

• The Frank Cooper Financial Aid Fund, established by Mrs. Frances Brown Cooper as a memorial to her husband, Dr. Frank B. Cooper, is awarded to students from Hardin or adjacent counties.

• The Richard Cooper Memorial Award was established for an outstanding fraternity man.

• The Helen I. Craig Memorial Scholarship was established through a bequest of Helen I. Craig, BSED 1966. Recipients are selected on the basis of university financial aid policy.

• The Thomas L. and Warren J. Cremeen Scholarship was established by Dr. and Mrs. Ken Cooper.

• The William W. Crumling Scholarship Fund was established by the estate of Isabel M. Thomas in memory of her husband, who received a BSCE from ONU in 1925. Student awardees are selected according to institutional financial aid policy.

• The Helen Davis Memorial Scholarship was established by friends and family to honor the memory of Helen Davis who died in 2006 after a long battle with cancer. Since 1991, Helen had been the Box Office Manager and Arts Information Officer at Ohio Northern University’s Freed Center for the Performing Arts.

• The Bertha Dicus Dickason and Oren Dickason, Sr. Scholarship Fund was established to provide for the continuing assistance of ONU from three generations of the Dickason family.

• The Dicke Financial Aid Fund was established by Mrs. Lula T. Dicke in memory of her husband, Oscar H. Dicke, BSEE 1911. It is awarded to students from New Bremen or Auglaize County who have financial need.

• The Louis P. Diefenbach Scholarship Fund is awarded to needy students from the Middletown area.

• The Dobbins Family Memorial Scholarship is given to worthy students with financial need from the College of Arts and Sciences and the College of Engineering. There is a long history between the Dobbins family and Ohio Northern University.

• The David F. Domizi Scholarship Fund, established through the will of David F. Domizi, supports a student with a demonstrated work ethic and strong academic background, or high academic potential, having financial need. Holder of the scholarship must maintain a 3.00 GPA. Scholarships from the fund shall be considered gifts to the recipient. However, it is the donor’s hope that the recipient(s) will be successful and, in appreciation, will reimburse the fund if he or she is able to do so.

• The Helen (Lowrie) Downing and Roger L. Downing Scholarship Fund was provided under the will of Helen Marie Downing. This endowment shall be used for scholarships for students who are from Roundhead Township, Hardin County, Ohio, or Goshen Township, Auglaize County, Ohio, or if there are no students from these townships, then for students who are from the closest areas to these two townships.

• The Robert L. Dunipace and Grace B. Shantz Dunipace Scholarship was established by the estate of Marjorie Dunipace Shipley in memory of her parents, Robert L. and Grace B. Shantz Dunipace. Robert Dunipace was a former student of Ohio Northern. The award is to be made to any qualified student in the University.

• The Education Incentive Scholarship for Minority Students was established by alumni and friends of the University and is awarded to a qualified minority student.

• The Joe S. and Theresa B. Edwards, Jr. Fund was established by Joe and Theresa Edwards to augment the Serge F. Edwards Family Scholarship. Dr. Edwards was a trustee of the University from 1986-2007. The income from the fund will be added to the Serge F. Edwards Family Scholarship each year.

• The Serge F. Edwards Family Scholarship is awarded first to students from Leipsic, Ohio; second, students from Putnam County, Ohio; finally, students from the State of Ohio.

• The Eley - Crouse Student Aid Fund was presented by Mrs. Gladys Eley Crouse, AA 1924, BSED 1955, in memory of her husband, Daniel H. Crouse. Available to students from Wyandot County who have financial need.

• The Elmer L. Faber Perpetual Scholarship was established through the generosity of Dr. Elmer L. Faber to assist academically worthy students at the University, with a preference for student athletes. Dr. Faber was an outstanding athlete as an undergraduate. He served the University in numerous ways as an alumnus, including as a member of the board of trustees and as president of the “N” Men’s Association.

• The Reverend E. Eugene and Mary Jane Frazer Scholarship was instituted by the members of the Trinity United Methodist Church of Columbus, Ohio, in honor of their outstanding commitment to the church and community. The award is for pre-ministerial students enrolled at the University.

• The DeBow Freed Leadership Award. Given each year to the senior male and female chosen as the outstanding campus leader.

• The Ethel L. Frost Scholarship Fund was established by a bequest from Miss Frost.

• The G.A.R. Foundation Scholarship was established by the G.A.R. Foundation of Akron. Scholarships are awarded to qualified students from the state of Ohio.

• The Mozelle Coles Gamber and Ralph J. Gamber Scholarship was established in loving memory of Mozelle O. Coles (AA 1931) by her husband, Ralph J. Gamber (BSME 1931), and family. Students needing financial assistance are eligible for the annual award.

• The Ernest R. Genovese Scholarship, established by Mr. (XLLB 1929) and Mrs. Ernest R. Genovese of Cuyahoga Falls, Ohio, is to be awarded to a qualified student in one of the four undergraduate colleges of the University.

• The Ginder Student Aid Fund, established by Clyde O. Ginder of Lima, Ohio, is to be awarded to a worthy student with financial need, with preference given to students from Allen County; also with special preference given to students from the First Baptist Church of Lima (Cable Road, Lima).

• The Grand Lodge of Free and Accepted Masons of Ohio Scholarship is awarded to Ohio residents with both academic ability and financial need.

• The Henry and Ruth Gray Scholarship was established through a bequest by Ruth Gray of Lyndhurst, Ohio. Henry Gray, her husband, had received an honorary degree in Public Service in 1975 from Ohio Northern University. The scholarship is available to students, including entering freshmen with preference for, but not restricted to students in the College of Pharmacy.

• The Frederick Earhart and Mildred Howard Guthery Scholarship was established by the estate of Robert B. Mautz, son-in-law of the Guthery family. Frederick Guthery was a well-known attorney and bank president of Marion, Ohio.

• The Helena R. Hall Scholarship was established by a bequest from Helena Ruth McCrea Hall, a friend of Ohio Northern University whose mother, Mrs. Trella McCrea, graduated from Ohio Northern in 1920. Income from the fund will be used to assist students, including entering freshmen, who are deemed worthy of financial assistance as judged by appropriate college officials, are United States citizens, and legal residents of the State of Ohio.

• The J. Jay Hampson Memorial Scholarship was established by an estate gift of J. Jay Hampson, BA 1973, JD 1976, ACI. 1996, LLD 1998, for students from Lancaster and/or Fairfield County, Ohio.
The Jennette Cochrun Hapner Award is granted to students from Spen-
cerville with financial need.

The George and Faye Harris Scholarship was established by the late Mr.
and Mrs. Harris of Polson, Montana, for qualified undergraduate students. Mr. Harris was a 1912 ONU graduate.

The Robert Sanders Hegele and Nova Focht Hegele Scholarship Fund
was established by bequest in the will of Nova Irene (Focht) Hegele, BA
1913, in the name of herself and her husband, Robert Sanders Hegele,
who also attended Ohio Northern, for deserving students who wish to
attend Ohio Northern University.

The Dr. George W. Herd Scholarship was established by the members of
the First United Methodist Church, Lancaster, Ohio, for students selected
by the church.

The Alice and Robert H. Hilliard Scholarship was provided by the estate
of Robert H. Hilliard, professor of history from 1947-74; it awards two an-
nual scholarships for students having financial need. Deserving students
from Hocking and Ross Counties of Ohio are given preference.

The Robert E. Hillier Family Scholarship Fund was established by the
Robert E. Hillier Family Foundation of Akron, Ohio—Colon, C, Ruth E.,
and Pleads A. Hillier, founders—to honor the memory of their father, Robert E.
Hillier. It is awarded to high school students with outstanding academic
records.

The Harold C. Hodson Scholarship will assist deserving students in all of
the undergraduate colleges who are eligible to receive the award.

The Jonas Elias and Nellie Hosler Scholarship Fund was established
through the generosity of J.E. (Bob) Hosler in honor of his parents, Nellie
and Jonas Elias Hosler.

The Merrill and Frances Insley Scholarship Fund, was established by
Dr. Susan Insley, JD 1977, and her brother, Thomas Insley, to honor their
father and mother, Merrill, BSPh 1936, DS 1970, and Frances Insley, AA
1933, BSEd 1935.

The Mary G. Kennedy Memorial Fund was established through a be-
quest of Mary G. Kennedy, Hon. DH 1981. Mary was the granddaughter
of Henry Solomon Lehr, founder of Ohio Northern University. The scholar-
ship is for the benefit of deserving students attending Ohio Northern
University.

The Charles and Carla Kim Scholarship was established by Charles H.,
BSBA 1998, and Carla (Bender) Kim, BA 1997, of Boston, MA, gift recipi-
ent of the scholarship will be a female student who is at least sophomore
status. First preference, the student must be majoring in biology, chemis-
try, environmental sciences or any related natural sciences with a minor
or demonstrated interest in business or finance. Second preference, the
female student must be majoring in economics, finance, accounting or
any type of the related business majors with a minor or demonstrated
interest in mathematics or science.

The Donald C. Kinsey Memorial Scholarship was established through
the will of Mr. Kinsey, XBSEME 1933, to provide scholarship assistance for
deserving students at the University.

The A.E. Knowlton Scholarship was established by Mr. Knowlton, whose
construction company built several university buildings. Gift was made in
memory of Mrs. F. Bringle McIntosh and is presented to worthy students.

The Dr. John G. and Alice C. Koontz Scholarship Fund was established
by the estate of John G. Koontz, DD 1965, to assist students preparing for
the Christian ministry.

The Donald E. LaRue Endowed Scholarship was established through a
bequest of his daughter, Stella Alice LaRue, BSED 1952, of Ada, Ohio.
The award will go to a student who participates in sports.

The Herbert W. and Winfred Leicy Scholarship was established in mem-
ory of Dr. Leicy, BSPH 1934, DS 1971, trustee of the university, 1965-
1999, and Mrs. Leicy by the family and friends for a qualified student from
the Stuebenville area.

The Nathan L. Lindabury and Family Scholarship was established by Na-
than L., BSED 1940, his wife, Mary, and their children, Virginia L. Hoxie
and Thomas L. Lindabury of Connecticut to provide financial assistance
to qualified and worthy students.

The Cleo R. and Dorothy Ludwig Scholarship was presented by Dr. Cleo
Ludwig to students with high academic achievement and demonstrated
financial need.

The Lybarger Student Aid Fund, established by Sadie Lybarger, LA 1905,
in memory of her family, longtime residents of Nevada, Ohio, for students
with financial need.

The Everett L. and Mary E. Maffett Scholarship is established as a
general university scholarship to provide financial assistance for Native
Americans to attend Ohio Northern University.

The Joseph and Bruno Malone Scholarship was established by Judge
Joseph P. Malone, BSED 1939, JD 1950, and friends, to honor the
memory of his brother, Bruno A. Malone, BSED 1942, HF 1980 and as-
sist students from the Geneva High School system.

The Jane Ann McBeth Matteson Scholarship Fund was established by a
bequest from Ellen E. Matteson, BA 1924, for worthy and deserving
students. Graduates of Upper Sandusky High School, Upper Sandusky,
Ohio, receive first preference.

The Maynard - Bulen Fund awards scholarships to worthy students with
recognized financial need.

The Donald L. Mays Scholarship was established through the generosity
of Dr. Donald L. Mays, who served as Vice President for Development at
Ohio Northern from 1987 through 1999. The scholarship provides aid to
any student pursuing a career in public service.

The Methodist Crusade Fund was established by the Methodists of Ohio
in a campaign for higher education conducted in 1964-65 among Method-
ists throughout the state. Income from the fund is used each year for
scholarships for Ohio United Methodists enrolled in one of Northern’s four
undergraduate colleges.

The Samuel L. and Martha R. Meyer Scholarship, was established by
Walter and Marian English in recognition of Dr. Meyer’s twelve year
tenure as president of Ohio Northern University. This award is made
available to worthy students with high academic abilities and recognized
financial need.

The Oscar J., BA 1972, and Judith D. (Jacobs), BS 1970, Miseduc
Emergency Financial Aid Fund was established to provide financial aid to
students who, without assistance, would not be able to continue attending
Ohio Northern University.

The Dean Keith Miller Scholarship was established by former students
and friends of Dean Miller in his honor.

The Wilbur and Ethel Mitchell Scholarship Fund was established by a
bequest from Ethel Mitchell and designated for worthy and deserving
students from Hardin County high schools.

The James L. and Dolores W. Moore Family Memorial Scholarship was
established by Dolores Moore to provide financial assistance to under-
grade students in good standing who are graduates of a West Virginia
high school.

The Mortar Board Scholarship is provided by the Aurora Chapter at Ohio
Northern University to a student selected by them.

The National Lime and Stone Scholarship was established for worthy
students with financial need.

The National Methodist Scholarships are provided by The General Con
ference from Methodist Student Day annual offerings for students with
established financial need.

The Lou Ann Neubert Memorial Scholarship was presented by James
and Louella Neubert in memory of their daughter, Lou Ann Neubert,
alumna of Ohio Northern University.

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established financial need.

The Lou Ann Neubert Memorial Scholarship was presented by James
and Louella Neubert in memory of their daughter, Lou Ann Neubert,
alumna of Ohio Northern University.

The Oborn Scholarship was established by George K. Oborn in memory
of his wife, Pauline (Polly). It is presented to students with both superior
academic abilities and financial need.

The ONU License Plate Scholarship was established through the vol-
untary annual contribution fees from alumni and friends who participate
in the State of Ohio collegiate license plate program. The fees provide
general scholarship funds.
• The ONU Women’s Endowed Scholarship Fund, established by the women of Ohio Northern University community, awards five equal need-based scholarships each year to one female student in each of the five colleges.

• The Ohio Northern University Secretarial Association Scholarship is given to a deserving student.

• The PNC Bank Scholarship was established through the generosity of the PNC Bank of Ohio to assist worthy students at the University to receive a quality education. A preference is given to students from southwest Ohio, as well as locations of PNC Bank of Ohio operations.

• The Lucille Palmer Scholarship was established as a general university scholarship, with preference given to students from Williams and adjoining counties and Logan County, but not limited to these students.

• The Pepsi-Cola Scholarship was established by the Pepsi-Cola Bottling Company to assist deserving students.

• The Harlan D. and Sara G. Pickett Memorial Scholarship was established through the Pickett estate for students from the city of Marion and Marion County.

• The Ezra and Mary Place Scholarship is awarded to graduates of Elida, Lima, Perry or Shawnee High Schools.

• The Raymond I. and Ruth C. Gallant Potter Scholarship was established by Mr. Raymond Potter and his wife, Mrs. Ruth Gallant Potter, in remembrance of their undergraduate years at ONU.

• The Avery and Elizabeth Powell Scholarship was established by Dr. Avery, BA 1924, and Mrs. Powell of Tiffin. Award is to go to qualified undergraduate students.

• The Brigadier General Harrison Jackson Price Scholarship was established by a bequest from the estate of his daughter, Lucille Price Jessup, in memory of her father, who graduated from ONU in 1891 and who taught Military Science and Tactics here. Preference is given to a male student enrolled in ROTC.

• The Virginia H. Redick Scholarship was established by Virginia H. Redick, BSED 1964. Income from the fund, as determined under applicable University policy, shall be used to provide scholarships to qualified students at Ohio Northern University.

• The Julia M. Reeder Scholarship Fund was established through the will of Mrs. Homer F. (Julia M.) Reeder for worthy students from Allen or Hancock Counties.

• The Ritchie Family Scholarship was established by Helen M. Maddock to honor her grandmother, Anna M. Ritchie, who attended ONU; her mother, Doris Ritchie Maddock, Ped. Grad. 1918; her great uncle, Tom Hall Ritchie, BSEd 1921; and her grand nephew, Troy A. Essex, BS 1997, for a qualified student with financial need with preference given to students from Paulding and surrounding counties in northwestern Ohio.

• The Robby” fund was established by friends of Bill Robinson, BSEd 1961, to be used at Mr. Robinson’s discretion to aid students as deemed necessary.

• The Robertson Financial Aid Fund was presented by Howard N. (Jim) Robertson, PHG 1924 and his wife, Edith, for qualified and worthy students with financial need.

• The Robuck Memorial Scholarship was established in memory of Dr. and Mrs. O.S. Robuck by their family.

• The Karl and Kay Roider Scholarship was established at Karl’s passing by his family—wife, Kay; son, Karl, Jr.; and daughter, Ruth—to assist worthy undergraduates at Ohio Northern University. Karl Roider was on the music department faculty for 31 years, served as chair of the department for 24 years, and was given an honorary doctorate from the University in 1985. Kay Roider was a member of the mathematics department for 18 years.

• The Rothrock Student Aid Fund was established by George B. Rothrock, BSME 1923, a native of Ada, Ohio, in memory of his father, George B. Rothrock, Ada businessman for forty years. The scholarship is awarded to either a graduate of Ada or Hardin Northern High Schools or to graduates of Upper Scioto Valley, Allen East, Bluffton or Cory-Rawson High Schools who have financial need.

• The Richard W. Routh Scholarship was created through a bequest from Helen W. Routh of Cuyahoga Falls, Ohio, in memory of her deceased son.

• The Arthur and Marian Rudd Scholarship was established by the estate of Mrs. Rudd to assist deserving, undergraduate students, with preference to those from Allen and Auglaize Counties of Ohio.

• The Charlotte R. Schmidlapp Scholarship was established by the Charlotte R. Schmidlapp Fund, Fifth Third Bank, Trustee, of Cincinnati, Ohio, to endow a scholarship to support women majoring in mathematics and the sciences, including Pharmacy, who are deemed worthy of financial assistance. Preference will be given first to students from Piqua, Ohio, or the greater Cincinnati/Northern Kentucky area, with second preference for a young woman from the State of Ohio.

• The Jacob G. Schmidlapp Scholarship establishes a loan fund for students and was created by the Fifth Third Bank of Cincinnati.

• The Lucile Grappy Schneider Scholarship was established by the estate of Lucile Grappy Schneider, a retired Lima school teacher, who received an education degree from ONU in 1926.

• The Ralph Sealand Scholarship was established by Mrs. Arabella Canfield Sealand in memory of her son. The scholarship is awarded to a worthy student with recognized financial need.

• The Seiler Student Aid Fund was presented by Dr. M.S. Seiler, LLB 1910, in memory of his wife, Marie, for a student with financial need in the health professions.

• The Richard L. and Fred D. Shanely Scholarship is given in memory of Fred D. Shanely, BSCE 1925, by his family. It is awarded to academically qualified students with preference given to students participating in athletics.

• The Yousef K. Shuhaibar Scholarship for International Students was established by Dr. Shuhaibar, BSCE 1964, D. Engr. 1988, prominent engineer, businessman, and consultant in his homeland of Kuwait.

• The Isabel Sloan Award was established by Isabel Sloan, BA 1929, for a worthy female student who graduated from Kenton High School.

• The Albert and Harriet Smith Scholarship is given to a student in accordance with university financial aid policy.

• The Marjorie Detrick Snyder and John M. Snyder Scholarship Fund was established by the estate of John M. Snyder in memory of his wife (AA 1928) to aid in defraying tuition costs for worthy and needy students of the University.

• The Martin Luther and Ola Snyder Scholarship was established in memory of Martin Luther Snyder, BA 1894, and Ola Fiss Snyder, BS 1895, by their sons Mr. and Mrs. Barton Snyder and Mr. Ralph Snyder.

• The Danford Spence Scholarship Fund was created by a gift from the estate of Danford Spence for students from Noble County.

• The Avanel Stambaugh Scholarship is awarded to worthy graduates of Ada High School.

• The John and Rhea Stambaugh Scholarship was established by a bequest of Mrs. Rhea Stambaugh of Plymouth, Ohio, for general university scholarships.

• The Dr. and Mrs. David L. Steiner Scholarship Fund was established through the generosity of Dr. and Mrs. Steiner to assist academically worthy students with financial need at Ohio Northern.

• The Reba Stemen Scholarship Fund was established by a bequest from the will of Reba Harriett Stemen, AA 1934, BA 1936, to assist worthy students attending the University.

• The Stanisloki - Romans Scholarship was established by Donald W. Stanisloki and Patricia A. Stanisloki née Romans to support an undergraduate Native American student.

• The Glenn and Lucille Stout Scholarship Fund is awarded by a Lancaster church to a student selected by them.
• The Weir - Gray Family Scholarship was established through the generosity and efforts of David Weir, BSCE 1959, and Judy Reed Weir, BSED 1960, and the Weir and Gray families to assist academically worthy engineering and psychology students with financial need and who are active in campus activities.

• The Dana E. and Gladys B. Welsh Scholarship was established through a bequest of Gladys Blair Welsh, AA 1928. The scholarship will be awarded in alternate years in the College of Pharmacy and the College of Arts & Sciences. Preference will be given to a graduate of Ada High School.

• The Whirlpool Corporation Scholarship, to assist academically eligible students at ONU, was established through the generosity of the Whirlpool Foundation. It was established to honor the service of several ONU graduates working for the Whirlpool Corporation.

• The W.K. Whitehead Scholarship was established through a gift from John C. Stahler, M.D. to assist academically worthy students with financial need from the Riverside Local School District, DeGrall, Ohio.

• The David V. Wisher Scholarship was established by the estate of David and Helen Wisher to provide financial assistance for two students from the Spencerville, Ohio school district enrolled in the fields of engineering or pharmaceutical studies at Ohio Northern University. Mrs. Wisher obtained the AA degree in 1937 and a BSED degree in 1942.

• The Helen E. Wisher Scholarship was established by the estate of David and Helen Wisher to provide financial assistance for two students from the Spencerville, Ohio school district enrolled in the fields of engineering or pharmaceutical studies at Ohio Northern University. Mrs. Wisher obtained the AA degree in 1937 and a BSED degree in 1942.

• The Geraldine Wright Wilkinson Fund was established by bequest of Charlotte Wilkinson to honor the memory of her sister. The award is made annually to a worthy student.

• The President and Mrs. Robert Williams Scholarship Fund was established by their daughter, Mrs. Larry (Florence) Zehner, XBA 1944. Dr. Williams was president of Ohio Northern University 1930-43.

• The Moston and Opal Wood Student Aid Fund was established by a bequest from the estate of Opal M. Wood, widow of Moston W. Wood, BA 1932, to assist worthy students to attain a college education.

• The Ronald L. Woofler Scholarship was established by Mr. and Mrs. Stanley Woofler in honor of their son, Ronald, BA 1961, who was president of the ONU Alumni Association, 1985-87.

• The D. Carl Yoder Scholarship was established by bequest from his daughter, Dorothy L. Yoder.

**Arts and Sciences Scholarships**

• The Ada Community Theatre Award was provided by the former Ada Community Theatre group for Ada area students who contributed most to theatre.

• The Jean and Walter Armes Scholarship was established by Walter, BSED 1961, and Jean Armes for students preparing for a teaching career in the public school system.

• The College of Arts & Sciences Alumni Scholarship was established by alumni of the College to perpetuate scholarship in the arts and sciences. The scholarship will be awarded to a student in the College of Arts & Sciences with financial need and preference will be given to children of arts and sciences alumni.

• The Banks Family Scholarship was established to honor Joseph, BS 1941 and BA 1946, and his wife, Thelma Banks of Ada, Ohio by family and friends. Joe was a coach/assistant professor and athletic trainer at ONU from 1971-1984 and a part-time admissions counselor from 1985-2002. The scholarship will be awarded to worthy students who are studying to be athletic trainers.

• The Edith Rhoten Banyas Scholarship was established by John W. Ban- yas, BSED 1939, family and friends in memory of his wife, Edith Rhoten Banyas, BA 1939. Preference is to be given to high school graduates with financial need from Highland and Ross Counties of Ohio.

• The Beachler Scholarship Fund was established by Mrs. Mabel Andrews Beachler, AA 1930, for a deserving, qualified student in the College of Arts and Sciences.

• The John W. and Marvel Bielestein Scholarship was established by a bequest from John W. Bielestein in memory of his wife, Marvel, BSED 1959. Mrs. Bielestein, for whom teaching was a second career, taught in the Bath Township School District. Preference for the scholarship to be given to a student majoring in elementary education.

• The Wilfred E. Binkley Scholarship was established by Robert J. Huff- man, BA 1959, JD 1960; Raymond L. Landis, BA 1964, JD 1967; and Gary L. Weaks, BA 1967, JD 1970; alumni and partners in the law firm of Huffman, Landis, Weaks and Lopez of West Milton, Ohio. The scholar- ship is in memory of Professor Binkley, long-time professor of political science at Ohio Northern University.

• The Biological Sciences Scholarship Fund was established by Russell W. Moore, Jr., BA 1971 and Sandra Lee Bouwman of Huntersville, NC. Scholarship recipients will be limited to Ohio Northern University students who are majoring in biology and are deemed worthy of financial assistance as judged by the financial aid office and the biology department chairperson.

• The Biological Sciences Scholarship Fund was established by Russell W. Moore, Jr., BA 1971 and Sandra Lee Bouwman of Huntersville, NC. Scholarship recipients will be limited to Ohio Northern University students who are majoring in biology and are deemed worthy of financial assistance as judged by the financial aid office and the Biology Department Chairperson.

• The Robert L. Bowden Scholarship was established in memory of Professor Robert L. Bowden by his widow, Mary Stambaugh Bowden, and family and friends of the late Dr. Bowden, who, for many years, was professor of biology and department chair from 1952-1979.

• The Florence Brooks Memorial Scholarship was established by Philip, BSCE 1965, and his wife, Barbara, BSED 1967. Brooks of Fremont, Ohio in memory of his mother Florence Brooks, BS 1957. Awards will go to students deemed worthy of financial assistance.

• The Cliffe Deming and Okla Deming Brooks Scholarship was provided by Drs. Ivan and Mary Elizabeth Combe of White Plains, New York and friends of Ohio Northern University, as appropriate and meaningful tributes to Mrs. Okla Brooks and Professor Cliffe Deming. Annual income from this endowed fund shall be divided into two equal awards and presented to one needy, talented, highly motivated student majoring in Fine Arts, Fine Arts History, or Music, and to one equally deserving needy student majoring in speech or drama.

• The Erika Jane and Andrea Elaine Brubaker Memorial Scholarship was established by Dr. Inara Mencis Brubaker, BS 1959, of Buffalo, Ohio, in memory of her daughters, Erika Jane and Andrea Elaine Brubaker. The award will go to worthy students in the College of Arts and Sciences pursuing a major in chemistry.

• The Joanne Carman Award was established by Joanne Carman, BSEd 1971, to provide assistance to a graduate of a Hardin County, Ohio high school who has completed his/her junior year in teacher education and who has the highest grade point average among the eligible education majors.

• The Chemistry Alumni Scholarship was established by the Chemistry Alumni under the leadership of Dr. Jerry L. Franz, 1965.

• The Reva L. Clarke Memorial Nursing Scholarship was established by family and friends in memory of Reva L. Clarke to assist students pursuing a Bachelor of Science in Nursing degree.

• The Clausing/Cotsamire Scholarship was established by Mrs. Persis Clausing, AA 1927, and her daughter and son-in-law, Mr. and Mrs. Harold Cotsamire. Mr. Cotsamire was controller of the University for 33 years, 1957-1990. It is presented to a student majoring in elementary education.

• The Wilbur R. Cornetet Scholarship was established by a bequest from his daughter, Lucile Cornetet, to benefit students pursuing studies in education, foreign languages, and English. Mr. Cornetet graduated from Ohio Northern University (Ohio Normal School) in 1901.

• The Helen Crafts Memorial Scholarship is awarded to worthy students with financial need.
• The Leslie and Marie Cribley Scholarship was established through the generosity of Mrs. Marie Cribley to assist academically worthy music students with financial need, with preference for piano, violin, and guitar. Preference shall be given to Ada, Ohio, high school students. Mrs. Cribley established this scholarship in honor of the memory of her husband, Leslie, BA 1930.

• The Clifford and Thelma Dickson Scholarship is awarded to worthy students with financial need.

• The Clyde Dornbusch/Charles "Todd" Oliver English Scholarship shall be awarded on a yearly basis to a senior who shows a vital understanding of, and increased appreciation for, the place of great literature in the English-speaking world.

• The Elbert F. and Else C. Eibling Scholarship was established through the will of Mr. and Mrs. Eibling to assist needy students. Mr. Eibling was a 1925 A.B. graduate of the University.

• The Fred Martin Ernsberger Scholarship was established by Mrs. Ruth E. Ernsberger in memory of her late husband, Fred M. Ernsberger, BA 1941. The award will be limited to ONU students including incoming freshmen deemed worthy of financial assistance, majoring in Chemistry with a minimum GPA of 3.2.

• The Clista M. and Hugo L. Fahncke Scholarship Fund was established by Mrs. Clista M. Fahncke to assist a qualified undergraduate student preparing for church work.

• The Josephine Royon Feth Scholarship was established through a bequest from her husband Mr. William J. Feth, BSEE 1940, to honor his wife, BSEd 1940, and to support a deserving student working toward a teaching career in secondary education (junior or senior high school); second choice would be any deserving student working towards a career in teaching.

• The Roland R. Foley Scholarship Fund was established in 1985 by the will of Roland R. Foley, BS 1912 and BSpH 1912, for students in the arts and sciences and pharmacy colleges.

• The Donald E. Geist and Geraldine Park Geist Scholarship was established in memory of Geraldine Park Geist, BA 1928, by her husband, Donald E. Geist, BA 1929. Preference is given to a student majoring in languages or music.

• The Mr. and Mrs. C. H. Ginn and Mr. and Mrs. Robert M. Peters Scholarship was established by Miss Vera DoLean Ginn, AA 1928, BSEd 1954, in memory of her mother and father, Martha Boyle Ginn and Cecil H. Ginn, and sister and brother-in-law, Delores B. and Robert M. Peters, for a student in financial need from Shelby County, Ohio, who is majoring in elementary education.

• The Rev. Dr. and Mrs. L. Mark George Scholarship was established through the generosity of the East Ohio Conference of the United Methodist Church and the Rev. Dr. Mark and his wife, Gaynalee George, on his retirement as administrative assistant to the Bishop of the East Ohio Conference. Rev. Dr. George also served as a member of the Board of Trustees of Ohio Northern University from 1990-1998. The income from the fund will provide financial aid for a worthy student preparing for a career in the ministry.

• The Frederick R. and Geneva Heifner Scholarship was established by Mr. and Mrs. Heifner for a student(s) majoring in biology or the environmental sciences in the Getty College of Arts and Sciences.

• The Mildred Lowman Henning Memorial Music Fund was provided by Mrs. Mildred Lowman Henning, XBA 1923 in music, Ada, Ohio, in recognition of Mrs. Henning’s interest and accomplishments in the field of music. The scholarship funds music majors with preference given to voice majors.

• The Heterick - Felker Memorial Scholarship was established by Robert Heterick, D.Humanitites 1956, and his wife, Francis Felker Heterick, Honorary MA 1951, friends of the University, who were generous in their support of the University. The award is given to academically worthy students with financial need in the College of Arts and Sciences. The award is also given in the name of Mrs. Heterick’s sister, Sophia Felker.

• The Dr. Thomas and Maxine Hoffman Scholarship was established by family and friends of Dr. Hoffman in honor of his 75th birthday on August 22, 2003. The scholarship is for a junior or senior student preparing for the ministry.

• The Glen Hughes and Gay Hughes Young Memorial Scholarship Fund was established by Ruth Hughes Dickey, BA 1930, family, and friends in memory of Dr. G. Glen Hughes, BA 1929, DD 1951, and ONU trustee, and his daughter, Mrs. Gay Hughes Young, BSEd 1955. Annual awards shall be made to an industrious student in the College of Arts and Sciences who has financial need, high ideals, and is of at least average academic standing.

• The Mr. and Mrs. Torrey A. Kaatz Scholarship is to be awarded to any deserving student in the College of Arts and Sciences. Mr. Kaatz was a member of the Board of Trustees 1971-1976.

• The Richard D. Kain Honorary Scholarships are given to technology education students who exhibit both substantial scholarship and financial need.

• The M. A. Purpus Kehoe Scholarship was established to provide funds for a student in Arts and Sciences.

• The Clona E. Kinzey Memorial Scholarship was established by a bequest from Mrs. Kinzey.

• The Helen M. Kopf Scholarship was established by Helen M. Kopf, XBA 1917, to be awarded each year to a student or students in the College of Arts and Sciences preparing for a career in teaching or full-time Christian service.

• The Dr. James H. Kritzler Memorial Premedical Scholarship was established through a gift from the Community Hospital Foundation of Houston, Texas. Dr. Kritzler, BA 1940, a Hardin County native, had a distinguished career in radiology in the Houston, Texas area. The award is made annually to a rising senior chemistry or biochemistry major who has good character and is likely to establish a career of significant service to medicine.

• The Lacey Family Scholarships were established by the estate of Zelma C. Lacey in memory of Mr. and Mrs. John W. Lacey, Warren D. and Zelma C. Lacey of Liberty Township, Ada, Ohio, for worthy students.

• The Clyde A. Lamb Memorial Scholarship is awarded to one worthy male and one worthy female student majoring in physical education.

• The Alice L. LaRue Endowed Scholarship was established through a bequest of her daughter, Stella Alice LaRue, BSEd 1952, of Ada, Ohio. The award is to go to students worthy of financial assistance, with preference for those earning their degree to become teachers.

• The Gayle Lauth Endowed Fund was established for a senior graduating in the Department of Human Performance and Sport Sciences, with teacher licensure. The recipient, male or female, should have the highest ranking GPA in the department.

• The Marian M. Laybourne Art Scholarship Award is given annually to a freshman art major in memory of Marian Laybourne and her appreciation of the talent of young artists.

• The Vance B. and Iva A. Leonard Scholarship was presented by Vance B. Leonard, and Fred G. and Lucienne O. Sprang. Preference is given to a Hardin County student in the College of Arts and Sciences.

• The Lima News Scholarship Fund was established by a gift from The Lima News, a division of Freedom Newspapers, Inc., for a qualified student majoring in English with a minor in journalism.

• The Lima Symphony Orchestra Award is given to a music major who is a first time matriculant at ONU.

• The Robert and Vivian Logdon Endowed Scholarship Fund was established by Paul Malcolm Logdon, Director of the Heterick Library and professor at Ohio Northern University to honor the memory of his parents, Robert and Vivian. Scholarship recipients will be limited to students enrolled in the nursing program including entering freshmen, who are deemed worthy of financial aid.

• The Helen Spar Ludwig Scholarship is bestowed upon a worthy health and physical education student who has financial need.

• The Mary Alice Lyon Scholarship was established through the will of Mary Alice Hickman Lyon, BSEd 1957. Mrs. Lyon was a retired school teacher and member of the United Methodist Church.
• The Peggy Joyce Lyon Scholarship was established through the will of Mary Alice Hickman Lyon, BSEd 1957. Mrs. Lyon was a retired school teacher and member of the United Methodist Church.

• The Ray Lyon Scholarship was established through the will of Mary Alice Hickman Lyon, BSEd 1957, for a male student in a science-related field. Mrs. Lyon was a retired school teacher and member of the United Methodist Church.

• The Dr. Anthony J. and Mrs. Doris E. Martin Scholarship was established through a trust by Anthony, BA 1931 and Doris Martin of Atlanta, Georgia. The scholarship is for sophomores or above who are entering the pre-med (medical school), pre-physician assistant, pre-optometry, pre-physical therapy, pre-occupational therapy, clinical laboratory science, or nursing areas of instruction in the Department of Biological and Allied Health Sciences, the Department of Chemistry and Biochemistry or majors in other departments following these prescribed curricula. Dr. Martin operated a medical practice in Atlanta, Georgia until his retirement. The Martins were avid, active supporters of Ohio Northern University up until their deaths in 1997 and 2005 respectively.

• The Frederick Masnaghetti Marlo Endowed Scholarship was established by Fred Marlo, BSEd 1949 of Reno, NV. The annual scholarship will be awarded with preference for deserving American Indian students and/or students deemed worthy of financial assistance who are pursuing a high school teaching career in the academic fields of English and/or journalism.

• The Dr. Anthony and Mrs. Doris E. Martin Scholarship was established through a trust by Anthony, BA 1931 and Doris Martin of Atlanta, GA. The scholarship is for sophomores or above who are entering the pre-med (medical school), pre-physician, pre-optometry, pre-physical therapy, pre-occupational therapy, clinical laboratory science, or nursing areas of instruction in the Dept. of Biological and Allied Health Sciences, the Dept. of Chemistry and Biochemistry or majors in other departments following these prescribed curricula.

• The Ray and Margaret McCleary Scholarship was established by Dr. Ray L. McCleary, BA 1929, and Mrs. Margaret McCleary, to aid a qualified student in the Getty College of Arts and Sciences.

• The Capital Leadership Award was established through a gift from the Hon. Cheryl L. (McCain) Mason, BA ’86 and Lt. Col. (Ret.) Brett S. Mason, BSEE ’86 to provide financial support in the form of student grants to ONU students enrolled in the Getty College of Arts and Sciences or the T.J. Smull College of Engineering who have secured an internship position in the Washington, D.C. area.

• The McElroy - Landon Scholarship Fund was established by Mrs. H. Leirma McElroy as a memorial to her husband, George W. McElroy, her father, Clifford F. Landon, and her grandfather, Luzerne E. Landon. Awards are made based upon university financial aid policy.

• The George W. and Ada A. McGilliard Scholarship was established by Dr. Stanley H. and Mildred I. McGilliard for students preparing for ministerial service.

• The Dr. and Mrs. John V. Melick Scholarship was established by John V., Honorary D.D. 1951 and his wife Mable F. Melick of Sylvia, Ohio. The scholarship is to be awarded to a student in pre-ministry or church work.

• The Merle H. and Muriel Neuman Mertz Scholarship was established by a bequest from Mrs. Muriel Mertz to assist worthy and deserving Ohio Northern University students who are United States citizens and who have history majors in the University’s College of Arts and Sciences.

• The Henry L. and Geraldine Metzger Scholarship was established by Dr. Henry L. Metzger, BSEd 1941, DBA ’94, and his wife, Geraldine, of Sharon Center, Ohio. The late Dr. Metzger, a retired insurance executive, was the president of the Hillier Family Foundation. The ONU Nature Center in Tuscarawas County is named for Dr. and Mrs. Metzger.

• The Samuel L. and Martha R. Meyer Student Aid Fund, was established by Dr. and Mrs. Samuel Lewis Meyer as an appropriate expression of their continued support for the educational concept available through church-related, private higher education. The award is presented to a worthy student who has demonstrated financial need and a preferential interest in oratory and debate.

• The Mitchell Award for Botanical Research was established by Lois Mitchell Seaton to assist a student engaged in botanical research.

• The Norman - Davis Student Aid Fund was established through a bequest from Mrs. Blanche A. Norman, BSEd 1925, in memory of her husband, William A. Norman, her parents, Charles and Euphie Davis, and her sister, Mae E. Davis. Awardees are selected on the basis of university financial aid policy.

• The Osmon Award, in memory of Alton, Asa, and Frank Osmon, was provided by their niece, Mildred Osmon Smith, BA 1924, Piano 1925, and her husband, Paul P. Smith, BSEE 1924. The award is given to music majors in compliance with university financial aid policy.

• The Florence Overmire Scholarship was established by Florence F. Overmire of Arcadia to assist a qualified student in the Getty College of Arts and Sciences.

• The Lois Cook DuBois Pavlik Scholarship was established in 1999 by Linda Hoffman in memory of her late mother, a 1935 graduate of Ohio Northern University. The award shall be given to students pursuing a career in music education. Preference shall be given to students from Allen County in the State of Ohio.

• The Shelley C. Petrillo Musical Theatre Scholarship was presented by Mr. and Mrs. Orlando Petrillo in memory of their daughter, Shelley. It is awarded to a junior majoring in musical theatre upon recommendation by the faculty of the department of communication arts.

• The Shelley C. Petrillo Theatre Scholarship is presented by Mr. and Mrs. Orlando Petrillo in memory of their daughter, Shelley.

• The Shelley C. Petrillo Scholarship is presented to a senior art student by Mr. and Mrs. Orlando Petrillo in memory of their daughter, Shelley.

• The Shelley C. Petrillo Junior Art Award was presented by Mr. and Mrs. Orlando Petrillo in memory of their daughter, Shelley.

• The Willis F. Porter Scholarship Fund is provided by a bequest from the estate of Mildred E. Porter in memory of her husband, Willis F. Porter, BSEd 1935, for a student majoring in education who has high academic ability and financial need.

• The Mary Hughes Reames Scholarship was provided through the will of Mary Hughes Reames, an alumna and friend of ONU. Awards are made to deserving students.

• The Walter Pingeys Rogers Award provides scholarships to outstanding students.

• The Linda S. Scheuerman Scholarship Fund is awarded to a senior chemistry major selected by the department chairman. This scholarship is awarded in honor of Dr. Byron Hawbecker.

• The Mary Jane and E. Meredith Schwartz Scholarship in Biology is awarded to a worthy student demonstrating need.

• The Winifred K. Sebald Scholarship was established through the estate of Mrs. Winifred Jobson Sebald, AA 1936, to assist economically needy students seeking a degree in Education.

• The James Banning Smith and Helen Miriam Crider Smith Memorial Scholarship Fund was established by Mr. and Mrs. Thomas Smith, in memory of his parents, to assist a freshman pursuing a degree in education.

• The Mildred Osman Smith, BA 1924, Piano 1925, and Paul P. Smith, BSEE 1924, D.Engr. 1975, Fund was organized for chemistry majors.

• The Thurman H. and Margaret R. Smith Scholarship was established by the estate of Mr. Smith and shall be awarded to a student majoring in education from the Lima, Ohio area.

• The Dorothy Enid Kinnard Snedden Memorial Scholarship Fund was established by Dr. Harold E. Snedden, BA 1937, and family in loving memory of their wife and mother. The scholarship is awarded annually to a senior who is majoring in English and/or journalism and is in good academic standing.

• The Snyder Scholarship was established in memory of Martin Luther Snyder, BA 1894, and Ola Fles Snyder, BS 1895, by Mr. and Mrs. Barton Snyder and Mr. Ralph Snyder.
• The Beall Snyder Student Aid Fund was provided by Ada native, Mrs. Augustus Beall, BA 1901, (Orchie Snyder), in memory of her parents, Sam and Margaret Stemple Snyder, for a music student with financial need.

• The Dorothy and Lowell Snyder Music Scholarships were established by Mr. Snyder to honor the memory of his wife.

• The Dorothy Ames Snyder Piano Scholar of the Year Award is awarded annually to the piano student chosen by the Music Department Faculty as having made the most progress during the year.

• The C. Austin and Mary Bess (Hauman) Sprang Scholarship was established in honor of C. Austin Sprang, BSEd 1936, and in memory of his wife, Mary Bess (Hauman) Sprang, BA 1933. It is awarded annually, with preference given to a student in the teacher education curriculum of the College of Arts and Sciences.

• The F. G. and Amy Sprang Scholarship was established by their children and spouses: Fred G., BA 1943, and Lucienne O. Sprang; C. Austin, BSEd 1936, and Mary Bess Hauman, BA 1933, Sprang; Vance B., BA 1931, and Ira Rilla Sprang Leonard. F. G. Sprang attended Ohio Normal School in 1902. Scholarship is to be awarded each year with preference given to a student in the College of Arts and Sciences from Hardin County, Ohio.

• The Fred G. and Lucienne O. Sprang Scholarship was established by Fred G., BA 1943, and Lucienne O. Sprang to be awarded annually with preference given to students in the College of Arts and Sciences from Hardin County, Ohio.

• The Sprint/United Telephone Scholarship is to be used to support students in the department of education, College of Arts and Sciences.

• The A. and B. Stambaugh Scholarship was established through a bequest from Mrs. Beatrice (Snyder) Stambaugh. Mr. Stambaugh received an AB degree in 1905 and Mrs. Stambaugh received an honorary arts and sciences degree in 1911 from ONU.

• The Easter Straker Scholarship Fund was established by the community and her friends. It is intended to be an annual award given to a communication arts student, preferably one pursuing a career in broadcasting.

• The Joseph S. Uhl, BSEd 1933, Scholarship was established in 1973 by his wife, Rosemary Mohler Uhl, and family for a physical education major who has financial need, personal character, scholastic ability, and athletic ability.

• The Vukovich Scholarship for Excellence in Mathematics and Science was established by Dr. Thomas Vukovich, ’65 and Dr. Diane Vukovich in support of excellence for the teaching of mathematics and/or science. Both Thomas and Diane have served as educators and leaders in higher education. This scholarship aims to build upon an expectation for continued academic excellence at Ohio Northern University in addition to exemplary leadership in service to others. The award is for Ohio Northern students including incoming freshmen who are deemed academically worthy of financial assistance and seek a career as educators in the fields of mathematics and/or science.

• The Martha Gesling Weber Award was established by Dr. Martha Gesling Weber, BA 1935, and her husband, Joseph. The award will go to one or more chemistry major(s) who have been accepted for admission to an M.D. degree-granting medical school.

• The Victor and LaDonna (Church) Wellman Scholarship Fund was established to assist one student in the College of Arts and Sciences and one student in the College of Engineering.

• The A. G.Welshimer Student Financial Aid Fund was established by Pauline Welshimer in memory of her father, Class of 1908, longtime educator and superintendent of schools in Champaign and Logan Counties of Ohio. The annual income is to be given to a worthy student, with preference given to those students interested in the field of education.

• The Beverly Ann White Memorial Scholarship was established by Walter L. White, BA 1941, JD 1948, Alum Cit. 1994, Honorary Doctor of Law, 2000 and his wife, Helen W. White, as a memorial to their daughter, Beverly. The scholarship is to be awarded annually to a student with financial needs and deserving a quality education from the College of Arts & Sciences.

• The Dr. S. Lee Whiteman Scholarship was established by the United Methodist Laymen of the Ohio Conference in memory of the late trustee and alumnus for pre-ministerial students.

• The Dale and Norma Wilhelm Scholarship was established by a gift from Dr. and Mrs. Dale Wilhelm and family members. The award is to provide financial assistance to a first-generation college student in the College of Arts & Sciences.

• The Edwin L. and Rosie Williams Trumpet Endowed Scholarship was established by family and friends to honor the memory of Dr. Edwin L. Williams, professor and chair of the Department of Music at Ohio Northern University and his wife, Rosie, music lecturer and resident artist. The scholarship is for a qualified senior music major who is a trumpet student.

• The Valerie Wilson Piano Award is presented at Honors Day.

• Willis H. and Mignon Winkler Memorial Scholarship was established through the estate of Willis H. Winkler, BA 1927.

• The Dr. Laurence N. Woodworth Scholarship was established by his family and friends in memory of Laurence N. Woodworth for history and political science students with demonstrated financial need.

• The Yinger Memorial Scholarship was presented by Dr. Mary Yinger, D.O., as a memorial to her husband, Dr. Elmer Yinger, D.O. It is awarded to a student in the department of art.

• The Barbara L. Yoost Nursing Scholarship was established by Rev. Dr. Charles and Mrs. Barbara Yoost to aid students studying nursing who have financial need. Rev. Dr. Yoost is a trustee of the University and Barbara is on the faculty of Kent State University College of Nursing.

• The J. Otis Young Student Aid Fund was provided by his family and friends in memory of Dr. Young, former chair of the board of trustees of ONU.

• The Mary J. Young Memorial Scholarship was established by a bequest from Mary T. Hugentugler, a friend of Miss Young. Miss Young started her career as a librarian in the Cleveland Public Schools. She retired from the Los Angeles County Library System.

### Business Administration Scholarships

• The Richard W. Allen Memorial Scholarship Fund was established by the United Telephone Company, Mansfield, Ohio. The award is based on university scholarship guidelines.

• The William D. Atteberry Scholarship, established by Dr. William Atteberry of Cincinnati, is for a student in the College of Business Administration.

• The Ethyl and Ernest S. Bartram Scholarship Fund was established by a gift from the estate of Mrs. Ethyl Bartram.

• The Eugene, Herman, Nettie and Leota Beeler Scholarship was established through a bequest by Eugene A. Beeler, BA 1949. Scholarship recipients will be limited to Ohio Northern University students, including entering freshmen, who are enrolled in the College of Business and are deemed worthy of financial assistance.

• The Business College Scholarship was established to provide funds for a student in the College of Business Administration.

• The Phillip D. and Cheryl Caris Family Scholarship was established by Phil, BSBA 1982, and Cheryl Caris of Findlay, Ohio. The award is for students in the James F. Dicke College of Business Administration with financial need.

• The Dr. Charles F. Conklin Memorial Scholarship was established by the estate of Dr. Charles F. Conklin, professor of economics at Ohio Northern University from 1966-1985, to provide assistance to an economics student.

• The Earl V. Dye Scholarship was established by Elizabeth W. Dye, his wife, in memory of her husband, a graduate of 1904. Scholarships are awarded to qualified students in economics and business law.
• The Kenneth R. and Lea A. Elshoff and The Ohio League of Financial Institutions Scholarship Fund was established to honor the outstanding service of Dr. Elshoff to his business profession, as well as his devotion to the community, including service to Ohio Northern University as a trustee. Mrs. Elshoff is also being honored for her extraordinary commitment to community service. Both have been active in many community charitable organizations.

• The Leona and Andrew C. Griffing Scholarship was established by A.C. Griffing, BA 1912, in memory of his wife, for students with above average ability who demonstrate financial need.

• The Hamilton Student Aid Fund was established by Julia Harmon Hamilton, in memory of her husband, Royce R. Hamilton, BS 1904. The income from this fund shall be awarded each year to a worthy student with financial need. Preference shall be given to a student in the College of Business Administration.

• The Hampson - Skinner Award is made available to a junior accounting major.

• The Pamela S. Hershberger-Ems & Young Endowed Scholarship Fund was established by Pamela S. Hershberger, BSBA 1987, of Maumee, Ohio. Pam’s motto is to pay it forward and she hopes that the establishment of this scholarship fund will allow the next generation of accountants to receive that same foundation for a successful career in accounting as she has at Ernst & Young. Recipients must maintain a 3.0 GPA and be majoring in accounting.

• The Hillier Trust College of Business Administration Invested Scholarship was made possible by the Hillier Family Foundation. Scholarships from the fund are to be awarded annually to outstanding ONU undergraduate students who are graduates of Evart (Mich.) High School or of high schools in Ohio’s Summit or Medina counties. The foundation was established by the children of Robert E. Hillier.

• The George C. Hindall Scholarship was established through the generosity of Mrs. George “Billie” Hindall and sons, Geo, Steven, and William Bradley, to assist academically worthy business students with financial need. A preference is given to students from Hardin County, Ohio, in consultation with ONU’s athletic director.

• The Taffy Howard, BSBA 1988, and Brenda Johnson, X1989. Award is presented to a business student annually in their memory by Dr. William D. Atteberry.

• The Taffy Howard - Brenda Johnson Scholarship is awarded to deserving students in the College of Business Administration by family, friends and alumni in memory of Taffy Howard, BSBA 1988, and Brenda Johnson, X1989.

• The Brenda Johnson Memorial Scholarship was endowed by the Doyle Johnson family in honor of their daughter and sister, to be used by the College of Business Administration, preferably for accounting and/or marketing majors.

• The Marion K. and Alma B. McKay Fund is presented to an economics student who has financial need.

• The Janice Graeser Mitchell Memorial Scholarship was established in Mrs. Mitchell’s memory, XBSEd 1950, by her husband, James R. Mitchell, BSEE 1949, to benefit advanced students in the College of Business Administration.

• The Henry (Harry) C. and Frances L. Richards Scholarship fund was established by Henry C. Richards, Jr. and Susan J. Richards of Toledo in honor of Mr. Richards’ parents, Henry C. Richards and Frances L. Richards. The scholarship is to be awarded to students enrolled in the College of Business Administration with preference given to residents of Lorain County, Ohio.

• The C. William Verity Junior Award is presented to a College of Business Administration student with excellent academic achievement.

• The Dr. Ronald G. Weber Scholarship was established by Mr. and Mrs. Henry L. Metzger to honor Dr. Weber, consultant in the ONU Development Office, 1984-2003. The scholarship is granted to an outstanding student in economics upon recommendation of the faculty of the College of Business Administration.

Engineering Scholarships

• The Norman D. Ackley Electrical Engineering Scholarship Fund was established by Mr. Ackley through a bequest in his will to assist worthy electrical engineering students at the University.

• The Frank J. Aimutis Scholarship was established in memory of Mr. Aimutis (BSEE 1917) by his wife, Neva Thomas Aimutis (AA 1920) to assist students majoring in engineering or law.

• The Joseph W. Alspaugh and Stella M. Alspaugh Memorial Fund was established by a gift from the estate of Stella M. Alspaugh for needy and deserving students in engineering.

• The Alumni Civil Engineering Scholarship was established by alumni of the College of Engineering. The award is to go to a worthy student in the College of Engineering majoring in Civil Engineering.

• The American Trim Scholarship was established by American Trim, formerly the Superior Metals Products Company of Lima, Ohio. The award is for a qualified student in the College of Engineering.

• The Russell J. and Maybelle L. Ansparch Scholarship was established by a trust distribution from Maybelle L. Ansparch to benefit junior or senior engineering students.

• The Dean Lawrence H. Archer Scholarship is given to an academically worthy student who has financial need.

• The Jacob H. Beach Scholarship has been established by Mrs. Carl (Anna A.) Weber for a worthy student.

• The Beeney Student Aid Fund was established by Herbert K. Beeney, BSCE 1925, in memory of his wife, Adella Margaret Beeney, for a worthy student with financial need.

• The Victor G. and Anna Mae Beghini Scholarship was established by Victor and Anna Mae Beghini of Houston, Texas to assist worthy students in the College of Engineering. The recipient must be a sophomore, junior, or senior majoring in mechanical or electrical engineering maintaining a minimum GPA of 2.75. The recipient must also write a letter each year to the donor explaining their Ohio Northern experience and plans for their professional life after graduation.

• The Max J. and Viola C. Bielenberg Memorial Scholarship was established by Mrs. Marlene Bielenberg Barr in honor of her parents. It is awarded to civil engineering students.

• The Braun Financial Aid Fund was established for Karl Braun, BSCE 1919, for an engineering student with financial need.

• The Ralph W. Briggs Scholarship has been established for engineering students from the South.

• The Leif Clayton Brown Scholarship Fund was established in memory of Leif Clayton Brown, ME 1916, by Mrs. Audine Steam, his sister. It is awarded to a qualified and deserving student.

• The Bruce and Jane Burton Scholarship was established through the generosity of Dean and Mrs. Bruce Burton to assist academically worthy engineering students with financial need. A preference is given to mechanical engineering majors.

• The C. “Larry” and Joyce Busch Engineering Resource Fund was established by Charles Lawrence, BSEE 1963, and Joyce D., BA 1967, Busch to have a direct positive impact on engineering students attending Ohio Northern University. The fund is for the sole purpose of purchasing course materials, including textbooks and/or any other material required in the pursuit of a non-elective engineering curriculum course.

• The C. “Larry” and Joyce Busch Engineering Course Resource Fund was established by Charles Lawrence, BSEE 1963, and Joyce D., BA 1967, Busch to have a direct positive impact on engineering students attending Ohio Northern University. The fund is for the sole purpose of purchasing course materials, including textbooks and/or any other material, required in the pursuit of a non-elective engineering curriculum course.

• The Irvor S. and Ethel E. Campbell Merit Scholarship was established anonymously in memory of Mr. Campbell, BSCE 1916, D.Eng. 1972, and Mrs. Campbell, AA 1917, Scholarship is to be given annually to four undergraduate students, one in each class. Dr. Campbell was a professor in the College of Engineering, 1921-1937.
• The Ivor S. and Ethel E. Campbell Student Aid Fund was established through the maturation of a part of a trust set up by Dr. Campbell, BSCE 1916, D.Eng. 1972, and Mrs. Campbell, AA 1917. Award is to be made to a qualified undergraduate student with financial need in the College of Engineering. Dr. Campbell was a professor in the College of Engineering, 1921-1937.

• The Case Scholarship in Engineering was established by C. Robert Case, BSCE 1932, and his wife, Barbara, to be awarded to a qualified and needy student who has completed more than one year toward his degree in engineering. Mr. Case was an engineer with the Goodyear Tire and Rubber Company in Akron.

• The David F. and Lucille M. Chambers Scholarship was established by the estate of Lucille M. Chambers. Her husband, David F. Chambers, was a 1922 graduate of the College of Engineering.

• The Jerry R. Churchill Engineering Scholarship was established in 1987 by Mr. Churchill, BSCE 1959, from Lima, Ohio. Mr. Churchill was president of Churchill Construction until his retirement in 1995. The award is to assist students in the College of Engineering.

• The Bruce J. Cleavenger Scholarship was established by the estate of Mrs. Ellen C. Cleavenger to aid engineering students who are partially or wholly self-supporting themselves while attending Ohio Northern University.

• The Harlow H. Crooks Engineering Fund was established by Harlow Crooks, BSEE 1923, and his wife, Melvene.

• The DIFCO, Inc. Scholarship was established through the generosity of Mr. Wayne Westlake, president, and Mr. John Murray, executive vice president of DIFCO, Inc. of Findlay, Ohio. The scholarship is for worthy mechanical engineering students with financial need.

• The Donald E. Dome Scholarship was established by Mrs. Dome and friends of Donald E. Dome, BSEE 1949.

• The Duff Student Aid Fund was established by Raymond E. Duff, BSEE 1922, as a memorial to his wife, Coradell Duff, and to his mother, Anna M. Duff. The award is made to a worthy student with financial need.

• The James K. Dunn Scholarship Fund was established in memory of James K. Dunn, BSCE 1921, by a bequest from the estate of Mrs. Dunn for an engineering student in conformity with university guidelines.

• The G. Walter Eighmy Scholarship was established to provide assistance for third and fourth year civil engineering students with financial need.

• The Engineering Deans' Scholarship was established to honor deans of the Engineering College.

• The Engineering Scholarship was established as a general scholarship fund for engineering students.

• The William J. Feth Scholarship was established through a bequest from Mr. William J. Feth, BSEE 1940, to support a deserving student specializing in electronics or the electrical field in the College of Engineering; second choice would be a deserving student in the College of Engineering.

• The Fisher Student Aid Fund was established for a worthy student with financial need by Ernest H. Fisher, BSME 1915, and his wife, Eila A. Fisher, JD 1921.

• The Joseph and Lucille Foster Scholarship was established in the name of Mr. and Mrs. Joseph Foster to provide financial aid for engineering students.

• The Maurice H. Freas Engineering Scholarship was established by a bequest from Mr. Maurice Freas, BSCE 1927, for the purpose of providing engineering scholarships to young men and women of outstanding ability and character, who need financial assistance.

• The Fred Fry Engineering Scholarship was established by Fred Fry, BSChE 1933.

• The Leona and Andrew C. Griffith Scholarship was established for engineering students with financial need and above average ability by A.C. Griffith, BS 1912, in memory of his wife.

• The Wayne A. Hamilton, PE, Civil Engineering Scholarship Fund was established with a gift from Wayne A. Hamilton, BSCE 1958, from Orono, Maine. This scholarship shall be used to provide scholarship assistance for sophomore, junior and/or senior students who are majoring in civil engineering.

• The Wayne A. Hamilton, PE, Civil Engineering Scholarship was established with a gift from Wayne A. Hamilton, BSCE 1958, from Orono, ME. This scholarship shall be used to provide scholarship assistance for sophomore, junior and/or senior students majoring in civil engineering.

• The William J. Hazeltine Fund was established in his memory by his wife, Thruz D. Hazeltine, for engineering students.

• The Lee R. Henning Financial Aid Fund was provided as an appropriate memorial by Mr. Lee R. Henning, BSCE 1922, and his wife, Mildred Lowman Henning. It is given to a civil engineering student who is worthy and qualified.

• The James Herendeen Engineering Scholarship was established by James H. Herendeen, BSCE 1929, and his wife, Mary. Each year the income from this endowed fund is to be given to a deserving student in the College of Engineering.

• The Ken Hoag Scholarship was established by Mr. Ken Hoag of San Jose, CA. The award is to go to a "well-rounded" student studying electrical engineering.

• The Henry C. and Marjorie L. Hollinger Scholarship was established by Mrs. Majorie Hollinger and son, Bruce, for a deserving student(s) in the engineering college from the Lima, Ohio area.

• The Professor Henry and Mary Hordlt Scholarship was established by former students, friends and alumni in honor of Professor Hordlt and in memory of his wife, Mary, for qualified engineering students. Dr. Hordlt was professor of mechanical engineering from 1958-72.

• The Johnston - Jansen Scholarship is provided for engineering students by Mrs. Pansy V. Jansen in memory of her father, Charles Wesley Johnston, who attended ONU, and her husband, T. Carl Jansen.

• The James L. Klingenberg Scholarship was established by former students, friends, and colleagues to honor Professor Klingenberg, BSEE 1949, A. CIT. 1982, D. ENGR. 1995, Professor at ONU, 1949-1994.

• The Austin E. Knowlton Memorial Endowed Scholarship was established by the Austin E. Knowlton Foundation in honor of Austin E. Knowlton, whose construction company built several University buildings. Scholarship recipients will be limited to Ohio Northern students including one incoming freshman, who are deemed worthy of financial assistance, are enrolled in the College of Engineering with preference to residents of Logan County, Ohio.

• The Robert H. Lee Scholarship in Engineering was given by Mr. Lee in memory of his mother and is awarded to a freshman engineering student from Seneca County.

• The Lima Society of Professional Engineers Scholarship is awarded in accordance with university financial aid policy.

• The Ralph E. Long Scholarship Fund was established through the will of Ralph E. Long, BSEE 1920.

• The Robert J. Lyman Memorial Scholarship, awarded to a qualified civil engineering student, was established in memory of Robert J. Lyman, BSCE 1941, by his friends at the Prestressed Concrete Institute.

• The LeRoy H. Lytle Award is made available to a worthy engineering student.

• The Capital Leadership Award was established through a gift from the Hon. Cheryl L. (McCain) Mason, BA '86 and Lt. Col. (Ret.) Brett S. Mason, BSEE 86 to provide financial support in the form of student grants to ONU students enrolled in the Getty College of Arts and Sciences or the T.J. Smull College of Engineering who have secured an internship position in the Washington, D.C. area.

• The Howard D. McKinley Scholarship Fund was established in 1985 by Mrs. Eloise H. McKinley in memory of her husband, Howard, BSChE 1930, for deserving engineering students.
• The Robert B. and Frances Eileen Mertz Scholarship was established by a bequest from Frances E. Mertz, who received a teaching degree from Ohio Northern in 1931. Her husband, Robert B. Mertz graduated in 1930 with a BSEE degree. Income from the fund is to assist academically worthy engineering students with financial need. A preference is given for electrical engineering majors.

• The Mikel Messick Scholarship was established by Mrs. Linda Messick in honor of her husband. It is awarded to engineering students with financial need from Allen, Auglaize and Hardin counties of Ohio.

• The MetoKote Corporation Scholarship was established to provide scholarship assistance to students in the College of Engineering.

• The Morgan Foundation Scholarship, for a qualified civil engineering student from Butler, Montgomery, Preble or Warren Counties, was established by B.D. Morgan & Co. of Middletown.

• The Morrison Student Aid Fund, awarded to engineering students with financial need, was established through the will of Mrs. Agatha A. Morrison, CE 1910.

• The William F.D. Neiheiser Scholarship was established by the Reliance Mechanical Corporation of Cleveland, William F.D. Neiheiser, BSME 1942, Chairman. Mr. Neiheiser was a member of the University Board of Trustees from 1977-87 and a former member of the College of Engineering Advisory Board. The lake at fraternity circle is named for Mr. Neiheiser.

• The Warder and Mary B. Page Engineering Scholarship Fund was established as a gift annuity by alumni Warder Page, BSCE 1922, for a deserving student in the College of Engineering.

• The Dr. Donald S. Pearson Scholarship Fund was established in his honor as Professor of Electrical Engineering at the University. Scholarship is awarded to a qualified, deserving student in the T.J. Smull College of Engineering.

• The Harold E. Remsburg Scholarship is provided to an engineering student who is pursuing a career in public service work. The scholarship was provided by Mr. and Mrs. Harold Remsburg. Mr. Remsburg received the BSCE degree in 1949.

• The Singleton Remsburg Memorial was established by Mr. and Mrs. Harold Remsburg in memory of their son, Singleton, BSCE 1977, to fund an annual “Creativity Award.”

• The Captain William D. Robinson Scholarship was established by Alice Ruth Robinson as a memorial to her husband, Captain William D. “Cap” Robinson, BSCE 1916, for an engineering student in accordance with university financial aid policy.

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• The Captain William D. Robinson Scholarship was established by Alice Ruth Robinson as a memorial to her husband, Captain William D. “Cap” Robinson, BSCE 1916, for an engineering student in accordance with university financial aid policy.

• The T. J. Smith Scholarship was established by T.J. Smith in memory of his son, Tung, BSCE 1987, to fund an annual “Creativity Award.”

• The Singleton Remsburg Memorial was established by Mr. and Mrs. Harold Remsburg in memory of their son, Singleton, BSCE 1977, to fund an annual “Creativity Award.”

• The Sholl Student Competition Fund has been established by a bequest from the estate of June W. Sholl. The endowment fund is in honor of William E. (xBSCE 1933) and June W. Sholl to assist students with design competition costs and to fund support of student academic activities.

• The William E. and June W. Sholl Scholarship Fund was established by a bequest from Mrs. Sholl to assist worthy students in the Smull College of Engineering.

• The T.J. Smull Memorial Engineering Scholarship was established by Mr. and Mrs. Morrell H. Blesh. The award will be given annually to a qualified engineering student, with preference to applicants with a physical handicap. Dr. Smull was dean of the Engineering College from 1905-1918.

• The Floyd D. Spar Scholarship. Established in memory of Floyd D. Spar, BSCE 1936, from his estate and family. The scholarship is awarded annually with preference given to a student from Ada High School enrolled in the College of Engineering.

• The Stimmel Financial Aid Fund, established by Clayton H. Stimmel, BSCE 1960, and his wife, Harriet, is awarded to a civil engineering student with exceptional motivation, moral integrity and financial need.

• The Sundstrand Corporation Scholarship was established by Sundstrand Corporation to be awarded annually to qualified, deserving students majoring in electrical engineering.

• The Taylor Aid Fund is given to a worthy engineering student with financial need in memory of Willard Thompson Taylor, ME 1930, by his sister and brother-in-law, Frances and Park D. Rogers.

• The Alton D. Taylor Student Aid Fund was established by Mrs. Alton D. Taylor in memory of her husband, Professor Alton D. Taylor, who served on the civil engineering faculty from 1954 until his death in October 1959. The award is made available to a worthy student with financial need.

• The Thevenet Scholarship is awarded to a qualified student with financial need by Edward H. Thevenet, BSCE 1916, and his wife, Grace.

• The Joseph E. and Dorothy Turney Student Aid Fund was established by a bequest from Joseph E. Turney, BSCE 1949, to make annual awards to needy and deserving students in the College of Engineering.

• The Charles I. Van Dusen Memorial Scholarship was established by Nelva E. Van Dusen in memory of her husband, Charles, and in honor of her grandson, Elliott M. Metzger, a student at Ohio Northern. Income from the fund will be awarded to a computer/electrical engineering student(s), who have at least a 3.00 GPA or above with a sincere commitment to the field of computer/electrical engineering, an outstanding work ethic and a high standard of personal integrity and character.

• The Clarence and Dorothy Walker Engineering Student Aid Fund was established through a bequest from Clarence, BSCE 1921, and Dorothy Walker of Zephyrhills, FL. Scholarship recipients will be limited to Ohio Northern University students who are deemed worthy of financial assistance and are enrolled in the College of Engineering.

• The Miller H. Ward Memorial Scholarship is to be awarded annually to a needy student or students majoring in the study of engineering science.

• The Victor and LaDona (Church) Wellman Scholarship Fund was established to assist one student in the College of Arts and Sciences and one student in the College of Engineering.

• The Clarence and Dorothy Walker Engineering Student Aid Fund was established through a bequest from Clarence, BSCE 1921, and Dorothy Walker of Zephyrhills, FL. Scholarship recipients will be limited to Ohio Northern University students who are deemed worthy of financial assistance and are enrolled in the College of Engineering.

• The T.J. Smull Memorial Engineering Scholarship was established by Mrs. Sholl to assist worthy students in the Smull College of Engineering.

• The Robert B. and Frances Eileen Mertz Scholarship was established by a bequest from Frances E. Mertz, who received a teaching degree from Ohio Northern in 1931. Her husband, Robert B. Mertz graduated in 1930 with a BSEE degree. Income from the fund is to assist academically worthy engineering students with financial need. A preference is given for electrical engineering majors.

• The William E. and June W. Sholl Scholarship Fund was established by a bequest from Mrs. Sholl to assist worthy students in the Smull College of Engineering.
Pharmacy Scholarships

• The Alpha Zeta Omega, Bill and Betty Klein Scholarship was established by the Alpha Zeta Omega, Theta Chapter in 2005. The scholarship is to be awarded to students deemed worthy of financial assistance in the College of Pharmacy.

• The Albert T. Awad Award for Immunology was established by Dr. Albert Awad for a fourth year pharmacy student who will pursue at least a master’s degree after graduation and who has excelled in immunology class in his/her third year of pharmacy.

• The Rollin E. and Margaret L. Ballentine Pharmacy Scholarship was established through the estate of Margaret L. Ballentine in memory of her husband, Rollin, BSPH 1952, and her father, Bertrand R. Higgins, PH G 1911. The income from the fund will be awarded to students enrolled in the College of Pharmacy.

• The Cardinal Health Endowed Scholarship Fund was established by Cardinal Health in 2011. The scholarship will be awarded to academically eligible Ohio Northern University pharmacy students who have shown interest in practicing in a community pharmacy/independent pharmacy operation setting.

• The Classes of 1968/69/70 Scholarship was established by the Pharmacy College Classes of 1968, 1969, and 1970 to provide funds for a student in the College of Pharmacy.

• The CVS Scholarship was established to provide funds for a student in the College of Pharmacy.

• The Dr. Leasure Kline Darbaker Scholarship Award is presented to pharmacy students with financial need.

• The Forrest P. and Robert A. Daum Pharmacy Scholarship was established in 2006 from the estate of Paul A. Daum of Akron, Ohio, to honor the memory of his father, Forrest P., Ph G 1923, and his brother, Robert A., BSPH 1961. The award will be granted through the normal practices and procedures by the University Financial Aid Office.

• The Duran Family Endowed Fund for Pharmacy Skills Enrichment was established by Donald E. Duran, Jr., BSPH 1985, to help current and future Ohio Northern University pharmacy students in their educational endeavors. The fund will be used by the Raabe College of Pharmacy by providing increased classroom and experimental learning opportunities to pharmacy students in the long-term care pharmacy practice settings and increase opportunities for experimental learning and overall assistance to pharmacy students residing in Northeastern Ohio and Western Pennsylvania.

• The Cloyce M. (PhG 1929) and Aretha R. Durliat Scholarship was established by Mr. and Mrs. Cloyce M. Durliat.

• The Eckerd Drug Company Scholarship is awarded to a third, fourth, or fifth-year pharmacy student planning a community pharmacy career.

• The Thomas J. Evans (PhG 1894) Memorial is awarded to qualified students from Licking County.

• The Waldo B. Finney Scholarship was established by a bequest from Margaret R. Finney to honor her father, Waldo, a 1918 pharmacy graduate.

• The Fischelis Scholarship Fund is given to qualified students in concert with university financial aid policy by gifts from the estate of Dr. Robert P. Fischelis and appreciative alumni and friends. Dr. Fischelis was Dean of the College of Pharmacy, 1963-86.

• The Roland R. Foley Scholarship Fund was established in 1985 by the will of Roland R. Foley, BS 1912 and BSPH 1912, for students in the arts and sciences and pharmacy colleges.

• The Gaum Family Endowed Scholarship Fund was established by Mr. Troy Gaum, BSPH 1992, President of Gaum’s Family of Businesses, including Gaum’s Pharmacy. The scholarship will be awarded annually to a deserving student with financial need attending the Raabe College of Pharmacy that resides in the Lucasville or Scioto County area.

• The Garrett Scholarship Fund was established in 1998 by Mr. Gary Garrett, BSPH 1969. The award is to go to a deserving student preferably from western Pennsylvania, enrolled in the College of Pharmacy. The student must also have attained P3 status with at least a 3.00 GPA. The scholarship may be continued through graduation.

• The Good Neighbor Pharmacy Scholarship was established by AmeriSourceBergen Drug Corporation. Scholarship recipients must be a P3 or P4, have interest in practicing in the community pharmacy retail setting, submit a reference letter from a local community or independent pharmacist, a member of the student NCPA organization and preference will be given to applicants who have worked or are currently employed at an independently owned Good Neighbor Pharmacy.

• The Thomas A. and Phyllis J. Gossel Scholarship Fund is awarded to students enrolled in the College of Pharmacy, based on financial need and the recommendation of the dean of the college.

• The Richard Lynn Green Memorial Award is provided through an endowment established by Mr. and Mrs. Richard Clark Green, family and friends.

• The Meredith and Geraldine Guider Scholarship is awarded to a third, fourth or fifth-year pharmacy student.

• The Hakes Memorial Scholarship is awarded to a qualified and worthy student with financial need by Vern H. Hakes, PhG 1933, and his wife Evie. Established in memory of their late son, Robert H. Hakes, BSPH 1955.

• The Emory M. Hall Endowed Scholarship was established by Emory M. Hall, BSPH 1956. The scholarship recipients will be limited to Ohio Northern University students who are 5th or 6th year students in the College of Pharmacy, who are deemed worthy of financial assistance and are citizens of the United States.

• The Harry Lee Hamsher Scholarship was established through the general pharmacy memorial endowment fund by faculty of the College of Pharmacy, alumni, and friends of Mr. Hamsher, BSPH 1918, who was Professor of Pharmacology from 1920-1939.

• The Edwin C. and Kathryn C. Hart Endowed Scholarship Fund was established by Mr., BSPH 1942, and Mrs. Hart, and shall be awarded on academic ability, without regard to financial need, to a student whose elementary and/or secondary education was primarily obtained as a resident of Carroll or Stark counties of Ohio, and is a full-time student in the College of Pharmacy.

• The Anne E. Hartford and James E. Hartford Scholarship, established by the estate of Anne E. Hartford, provides tuition money for pharmacy students. Mr. Hartford’s father, uncle, and two cousins graduated from the ONU College of Pharmacy.

• The George and Beatrice Hawkey Endowed Fund, in memory of Dean Rudolph Raabe, was established by the Hawkey Family Foundation. The scholarship will be awarded to students, including incoming freshmen, who are deemed worthy of financial assistance, graduated from a school in Putnam County, Ohio and are enrolled in the College of Pharmacy.

• The Dr. Metta Lou Henderson Fund for Recognition of Pharmacy Student Leaders was established through a gift by Dr. Metta Lou Henderson, Honorary DPharm 2008, a faculty member from 1978 to 1998 at Ohio Northern University. The fund will be used to assist pharmacy students in defraying the cost of their education or the cost of attending National Pharmacy conferences. Recipients should exhibit strong leadership characteristics by serving as role models and mentors for other students. A leader is an individual who guides others or takes the initiative and does not necessarily serve as an officer of an organization. The designation allocation will be determined at the discretion of the Dean of the Raabe College of Pharmacy.

• The Gayle Hue-Mussner Endowed Scholarship Fund was established as a memorial by family and friends of Gayle Hue-Mussner, BSPH 1980, who died of cancer in 2004. The recipient must be a female who is pursuing a degree in pharmacy and has lived within a 50 mile radius of Pittsburgh, PA, during their senior year of high school.

• The Courtney Ann Jones Scholarship was established by her father, Dr. Ronald J. Jones, retired professor of clinical pharmacy at Ohio Northern University. The scholarship will be awarded annually to a student with financial need seeking a career in pharmacy or science to honor the memory of Courtney, who passed away suddenly in December, 2003.
• The Kmart Endowed Scholarship is awarded annually to a student in their 3rd, 4th, or 5th year and currently employed in community pharmacy.

• The Kroger Foundation Scholarship is to be awarded to a third, fourth or fifth-year pharmacy student planning a retail practice of pharmacy.

• The Dr. Charles Oren Lee Award was provided through an endowment established by Dr. C. O. Lee.

• The Joseph E. Marmon Memorial Scholarship was established by Dr. Marmon's widow, Margaret, family, friends, and alumni in memory of Joseph E. Marmon, BS Ph 1938, D.Sc. 1970. Awarded to deserving pharmacy students. Dr. Marmon was a trustee of the University from 1961-81.

• The McElroy-McCleery Student Aid Fund was established by Mrs. Ethel McElroy McCleery, BSEd 1917, in memory of her husband, Charles D. McCleery, PhG 1917, for students with exceptional ability who also have financial need.

• The Charles McCleery and Ethel M. McCleery Scholarship Fund was established from the estate of Ethel M. McCleery with preference given to graduates of Fairfield County high schools.

• The Medco Health Solutions Pharmacy Scholarship was established by Medco Health Solutions in 2009. The award will be presented to an academically eligible pharmacy student with financial need.

• The Meijer, Inc. Scholarship is awarded to an upper division pharmacy student planning a retail practice of pharmacy.

• The Walter H. Meyer Scholarship is awarded to students without regard to financial need by Mrs. Glenna Schafer Meyer, AA 1933, in memory of her husband, Walter H. Meyer, PhC 1933.

• The Roy B. Odenkirk Scholarship was established in memory of Mr. Odenkirk, PhG 1925, a well-known pharmacist, drugstore owner and businessman in Sugarcreek, Ohio.

• The Pharmacy Scholarship was established to provide funds for a student in the College of Pharmacy.

• The Phar-Mor and Victor LaMarco Scholarship is presented to third, fourth or fifth-year pharmacy students, who have financial need and plan to enter the retail practice of pharmacy.

• The Dr. Clarence H. Pierstorff Scholarship was established by Dr. Clarence H. Pierstorff for a worthy student in the College of Pharmacy.

• The Dr. and Mrs. Ervin W. Pierstorff Scholarship was established by a gift from the Pierstorfs for a worthy student in the College of Pharmacy.

• The Harold Resnick Scholarship is awarded to a qualified pharmacy student.

• The R. Larry Richey Memorial Scholarship was established by the estate of Mr. Richey, BSPh 1959. It is awarded to deserving students in the College of Pharmacy.

• The Rite Aid Scholarship is to be awarded to a deserving student to complete the final year of pharmacy school.

• The Dr. Julius Rogoff Foundation Award is presented to an outstanding student.

• The Carol C. Roy Memorial Scholarship was established by the Class of 1975 in memory of their classmate, Carol C. Roy. The award is given to a third, fourth, or fifth-year student with both financial need and good academic standing.

• The Janet and Albert Sebok Scholarship award is given annually to a pharmacy student in their last three years of study.

• The L.C. Sleesman Scholarship was established through the general pharmacy memorial endowment fund by faculty of the College of Pharmacy, alumni, and friends of Mr. Sleesman, PhG 1905, who was Professor of Chemistry and Organic Chemistry from 1905-1930.

• The Bernard Smarsley Scholarship was established by the Smarsley family in memory of Bernard Smarsley, BSPh 1953, for a qualified and deserving student.

• The Dr. A.C. Smith Memorial Award is presented to a fourth-year pharmacy student with an excellent academic record by the family and friends of Dr. Smith to commemorate his many years of dedicated service to the Raabe College of Pharmacy.

• The Robert M. Storch Pharmacy Scholarship was established by friends and family of Robert M. Storch, BS Ph 1968, at his untimely death in 2009. The award will go to a student attending the College of Pharmacy with financial need.

• The Charles G. Schwartz, Sr., PhG 1897, Scholarship was established from personal and family gifts for pharmacy students from the Pittsburgh area.

• The Turner Family Endowed Scholarship in support of Pharmacy Student Organizations and Community Service was established by friends and family of Mary Ann (Gardner) Turner, BS Ph 1983, as a tribute to her memory after her death in August, 2009. The income from the fund will be used to support pharmacy student organizations and community service.

• The Walgreen Endowed Scholarship is awarded annually to a student planning community pharmacy practice.

• The Walkup Endowed Fund for Excellence in the Practice of Pharmacy Compounding was created by Michelle (Smith) Walkup, BSPh 1992, and her husband, Kenny R. Walkup, Jr., BSPh 1992, in 2009. The fund will be used at the discretion of The Raabe College of Pharmacy to assist pharmacy students in developing their compounding skills to serve the public and the profession.

• The Dana and Gladys B. Welsh Scholarship Award was established by a bequest from the will of Gladys Blair Welsh.

• The Virgil J. “Tom” Wiechart Memorial Fund was established by the Drug Emporium Foundation, David L. Kriegel, Trustee, in memory of Mr. Wiechart, BSPh 1950, A.Cit. 1978. Mr. Wiechart was President of Wiechart Pharmacies, Lima, Ohio.

• The Volney L. Wright Scholarship was established by a bequest from Mr. Wright, PhC 1932, for a qualified student in the College of Pharmacy. Preference to be given to a student with financial need from one of the several counties in Ohio, which are Wood, Sandusky, Erie, Seneca, Huron, Auglaize, or Logan. Mr. Wright was, for many years, a pharmacist in Bowling Green.

Law Scholarships

• The Frank J. Aimutis Scholarship was established in memory of Mr. Aimutis, BSEE 1917, by his wife, Neva Thomas Aimutis, AA 1920, to assist students majoring in engineering or law.

• The Judge Anthony A. Alaimo Scholarship Fund was established to honor Judge Anthony A. Alaimo, Class of 1940, by friends W. C. Killgallon and J. W. McSwiney. Judge Alaimo was a Senior Federal Judge for the Southern District Court of Georgia. The scholarship will be awarded to a student with a demonstrated work ethic and a strong academic background or high academic potential. Holder of the scholarship will be required to maintain a 3.25 G.P.A.

• The H.E. Ashcraft Memorial Grants are awarded to law students with financial need.

• The Albert A. Bailis Scholarship was established by alumni, faculty and friends to honor Professor Albert A. Bailis, professor of law from 1957 to 1991. The award is made in accordance with university policy with preference given to an Ohio resident.

• The Bashor - Yinger Financial Aid Fund was established by Dr. Mary B. Yinger, D.O., as a memorial to her husband, Dr. Elmer L. Yinger, D.O. The award is made to a qualified and worthy student with financial need.

• The John E. Baukehncht Scholarship Fund was established by John E. Bauknecht, JD 1922, of East Palestine, Ohio, for students with both high academic ability and financial need.

• The Dr. John E. Beard III Memorial Scholarship was established in 2003 by friends, colleagues and family members as a memorial to Jack. The scholarship is to assist deserving students in the College of Law. John E. “Jack” Beard III, BA 1969, JD 1972, was a member of the board of trustees at Ohio Northern University and a prominent Pittsburgh, PA., attorney when he died at the age of 85 in 2003.

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• The Peter B. Betras Law Scholarship was established in memory of Dr. Betras, JD 1928, by his friends, Mr. Anthony G. Rossi and Mr. Anthony G. Rossi II, JD 1991, attorneys in Warren, Ohio. The award is to go to a qualified student in the Pettit College of Law. Dr. Betras was a well-known Youngstown attorney.

• The William H. Blackford Award was presented by Mr. and Mrs. W. Vincent Rakestraw in honor of Mrs. Rakestraw's father, William H. Blackford, JD 1936.

• The Judge Biase A. Bonapane Scholarship is given to a worthy student with demonstrated financial need.

• The Dr. George D. and Evelyn B. Brabson Scholarship was established by Dr. and Mrs. Brabson for a law student with outstanding academic scholarship.

• The Benjamin Brafman Scholarship is awarded each year to an eligible second year Jewish law student who is a member of the Ohio Northern University Cardozo Jewish Law Student Association. This scholarship is made possible by a gift from Mr. Benjamin Brafman, a 1974 graduate of the Pettit College of Law.

• The William J. Brown Memorial Scholarship was established by friends and colleagues to honor the memory of Mr. Brown, JD 1967, LLB 1980, and to support a student generously by providing distinctive opportunities for learning the law, and to cultivate a culture of sophistication and high aspirations in the College of Law through the collective qualities of William J. Brown Scholars. Bill Brown was the youngest man elected to the position of Ohio Attorney General and the longest to serve in office, from 1971-1983. He was a senior partner in the firm of Kegler, Brown, Hill & Ritter, taught at Franklin and Ohio Northern Universities and was active in numerous charitable, civic, professional and political organizations.

• The William James and Millicent Burgess Scholarship was established by Rhett William, JD 1979, and Carol Sue Burgess of Leo, IN, to establish a memorial to the love and devotion between his parents, William James and Millicent Marie Burgess. Scholarship awards will be made for a full academic year and may be renewed annually on the basis of satisfactory progress toward graduation from Ohio Northern University’s Claude W. Pettit College of Law. The recipient of this scholarship must be a current member of any branch or unit of the United States military forces, or a son or daughter, provided such member or veteran has successfully completed the United States Army’s Airborne School and earned his/her United States Army Parachutist Badge—commonly referred to as “Jump Wings”. Should no student qualify, then all or part of the fiscal distribution from the fund, may be used for scholarship awards to any second or third year law students.

• The Erwin L. and Effie Clemens Scholarship Fund was established in 2000 through a bequest from the estate of Erwin L. Clemens, of Defiance, Ohio, to support scholarships to second and third-year law students with superior academic performance and substantial financial need.

• The George Ray Craig Scholarship was established by Mrs. Janet E. Henderson to honor the memory of her father, George Ray Craig, BS 1888, for law students selected in accordance with law college financial aid policy.

• The Harvey and Marilyn Creighton Law Scholarship was established through a bequest by Mrs. Marilyn E. Creighton of Canton, Ohio, as a memorial for her husband, Dr. Harvey H. Creighton, LLB 1928, Hon. LLD 1976. Dr. Creighton was a partner in the Canton law firm of Creighton and Sickafouse for 58 years. The award will go to a worthy student demonstrating financial need, pursuing a degree in law.

• The Ella A. Fisher Student Aid Fund was established by Ernest H. Fisher, BSME 1915, and his wife, Ella A. Fisher, JD 1921, for a worthy student with financial need.

• The Murray Flom Memorial Fund was established by the parents and friends of Murray Flom, a student in the College of Law who died in 1974. Annual income from the fund shall go to a qualified second or third year student with financial need from the College of Law. Preference shall be given to a Jewish student.

• The William Clark Foster Scholarship was established by the estate of William Clark Foster, JD 1941, for worthy students of the Claude W. Pettit College of Law, entering or continuing, who have excellent academic credentials represented by approximately a "B" average.

• The John H. Genovese Law Scholarship was established by John H. Genovese, JD 1979, of Coral Gables, FL. Income from the fund will provide scholarships for worthy Ohio Northern University law students.

• The Daniel and Eleanor B. Guy Scholarship was established by Daniel, JD 1952, professor of law, and his wife, Eleanor Guy. Dr. Guy retired in 1998. He joined the faculty in 1959 and was dean of the College of Law from 1978 to 1983. The scholarship is to be awarded annually to a second or third year Ohio Northern University law student in good standing academically and in need of financial assistance.

• The Eugene N. Hanson Scholarship Fund was established by the parents of a graduate of the Pettit College of Law to honor Dr. Eugene Hanson, LL. D. 1986, Professor of Law from 1947-84, and Dean of the College of Law from 1958-73. The Annex to the Law Library is named in honor of Dean Hanson.

• The David C. and Edna L. Haynes Memorial Scholarship Fund was established by David C. Haynes through a will bequest. Mr. Haynes attended ONU for two years and earned his LLB in 1926. The income from the fund shall be used for tuition, room and board, and books for students attending the College of Law without regard to race, creed, ethnic background, sex or religious preference.

• The Margaret Schwartz Hodges Memorial Scholarship Fund is provided to deserving students through the will of Margaret Schwartz Hodges, a friend of the Pettit College of Law from Findlay, Ohio.

• The Jerome L. and Margery Holub Scholarship was established by Jerome L. Holub, JD 1951, of Akron, for a qualified student in the Pettit College of Law.

• The John A. L. Hughes Memorial was established in 1970 in memory of John Hughes for a worthy law student with financial need.

• The Carl Frederick, Clara E. Berry Klein and Robert W. Summers, M.D. Scholarship. Established by Mrs. Mariann Klein Summers of Canton in memory of her parents and husband. Mr. Klein, LLB 1925, practiced law many years in Canton and was at one time mayor of the city. Dr. Summers practiced medicine in Canton for many years.

• The Robert and Iola Koch Student Aid Fund for the College of Law was established by C. Robert Koch, JD 1941, A. Cit. 1986.

• The Lacey Law Scholarship was established by the estate of Zehma C. Lacey, in memory of William H. Guyton, Sr., and William H. Guyton, Jr., for a worthy student.

• The Law Alumni Scholarship is a general scholarship for law students, established by alumni and friends.

• The Law Class of 1964 Scholarship was established by the Law College Class of 1964 to provide funds for a student in the College of Law.

• The Law College Scholarship was established to provide funds for a student in the College of Law.

• The Law Deans’ Scholarship was established by alumni and friends over the years to honor deans of the law school.

• The August J. and Ruth P. Leagre Memorial Fund was established by Mr. and Mrs. Richard M. Leagre of Indianapolis, Indiana, in memory of his parents. Richard Leagre received the BA degree in 1959.

• The Levi W. and Nancy N. Lile Endowed Scholarship was established in 2006 by Laird A. Lile, JD 1984 and family to honor his parents, Levi, JD 1972 and Nancy Lile of Bellevfontaine, Ohio. Scholarship recipients will be limited to Ohio Northern University law students, including entering 1st year law students, who are deemed worthy of financial assistance as judged by appropriate College of Law officials. Special preference will be given to students who are Ohio residents, married with children, embarking upon a second career in the law.

• The John C. Markey Charitable Trust Scholarship was established by the Markey Charitable Trust of Bryan for a qualified student in the Pettit College of Law.

• The Marsh Scholarship Fund was established by John Marsh, Jr., JD 1934, and his wife, Mary C. Marsh, for students with demonstrated ability and financial need.
• The Dr. and Mrs. Julius Matz Scholarship Fund awards a scholarship to a College of Law student without regard to financial need.

• The Harold J. and Irene G. Meredith Scholarship Fund was established by Harold J., JD 1925, and Irene G., AA 1925, Meredith of Lima, Ohio. The income is used to provide assistance to highly qualified students in the College of Law who require financial assistance and whose moral standards reflect those of the University. Dr. Meredith was a trustee of the University from 1957-1984, and a former President of the Board of Trustees.

• The Evan W. Morris Law Scholarship was established by Evan M. Morris, JD 1965, in memory of his father, Evan W. Morris, a well-known Alliance, Ohio attorney.

• The Robin R. Obetz Scholarship was established through the generosity of Dr. Robin Obetz to assist academically worthy students with financial need.

• The Claude W. Pettit Memorial Fund was established by his friends in memory of the late Dean of the College of Law, Claude W. Pettit.

• The Rutter - Taggart Scholarship is awarded to a student with both high scholastic ability and financial need.

• The Carroll E. Sammetinger Law Scholarship was established by Audrey Sammetinger, in memory of her husband, Carroll, JD 1949. The award will go to a worthy student in the College of Law with financial need.

• The John S. Stuckey Scholarship Fund is awarded to a worthy third-year student in memory of John S. Stuckey, JD 1953, by his family and friends.

• The Mary S. Wetherill Scholarship Fund was established by her estate for students in the College of Law.

• The Walter L. and Helen W. White Law Scholarship was established by Walter L. White, BA 1941, JD 1948, Alum Cit. 1994, Honorary Doctor of Law 2000, as a memorial to his wife, Helen. The scholarship is to be awarded annually to a student with financial need and deserving a quality education from the Claude W. Pettit College of Law.

• The Frank B. Willis Memorial Student Aid Fund provides assistance to an Ohio resident in good academic standing with financial need. The award is made in recognition of Frank B. Willis, law faculty member, U.S. Congressman, Ohio Governor and United States Senator, and was established through the will of his only child, Miss Helen Willis.

• The Leander P. Zwick III Scholarship was established by Dr. Leander P. “Pepper” Zwick III, JD 1975, of Canton, Ohio, for qualified students in the College of Law.

Loan Funds

The following loan funds have been established for loans to students enrolled in all colleges of the University:

- **general university**
  - University General Loan Fund.

  • The Steiner F. and Ollie M. Bauman and Roy H. and Ruth G. Lambert Loan Fund was established through a bequest from Mrs. Lambert, BSEd 1936 as a memorial to her parents, The Bauman’s, as well as, for she and her husband, Roy H. Lambert, JD 1937. The fund shall be made available as loans, which are to be repaid, and the fund shall be a revolving, so as to provide the maximum benefit for worthy students.

  • The Donald and Erma Holdren Revolving Student Emergency Loan Fund was established through a bequest of Donald D. Holdren, BSCE 1937. The fund shall be made available as loans, which are to be repaid, and the fund shall be revolving, so as to provide the maximum benefit for worthy students.

  • The Kerscher Loan Fund was established by Robert, BSBA 1970, and his wife, Barbara Kerscher of Hudson, Ohio. The funds will be used to create low interest loans for ONU students. Bob is president and CEO of Lexi-Comp, a leader in providing clinical content at the point of care. He also has served on the Board of Trustees at Ohio Northern University since 2002.

  • The Charles E. Schell Foundation provides four $25,000 grants which are to be used for interest-free educational loans to students from Ohio and neighboring states. Loans will be awarded to students in good standing who have demonstrated need. Juniors and seniors will be given preference.

  • The Schmidlapp Foundation Loan Fund was established for undergraduates from Ohio.

  • The United Methodist Student Loan Fund. A limited number of worthy students who are members of the United Methodist Church may secure loans from the Student Loan fund administered by the Board of Education of the Church.

**Arts and sciences**

- College of Arts and Sciences Loan Fund.

**Business administration**

- College of Business Administration Loan Fund.

- OSCP A Loan Fund.

**Engineering**

- College of Engineering Loan Fund.

  • The Carl and Jane Clay Engineering Loan Fund was established by Carl, BSME 1960, D ENGR 1992, and Jane Clay of Montgomery, Texas to assist worthy mechanical engineering students earn their degrees. Loan recipients will be limited to students enrolled in the College of Engineering at Ohio Northern University who are deemed worthy of financial assistance, a United States citizen and preference for mechanical engineering students. Loans are to be repaid within 5 years and 3 months.

**Pharmacy**

- College of Pharmacy Loan Fund. Established by gifts to the University from various sources, including the family of W. C. Timblin, PhG 1923, Port Clinton, Ohio, the friends of Arthur D. Broa, and the friends of Otto W. Haneberg.

  • Richard and Ronald Bonfiglio and George Schertzer Student Loan Fund, established and maintained by Richard and Ronald Bonfiglio.

  • The Piersdorf Scholarship Loan Fund, established by Ervin and Clarence Piersdorf as a memorial to the Piersdorf family.

**Law**

- The Law College Emergency Loan Fund.

- Benefactor’s Loan Fund.

- The Earl D. Haefner Loan Fund was established in the memory of her husband by Leona K. Smith to benefit needy law students.
University Faculty
2010-2011

Faculty are listed with position and rank for the 2010-11 academic year. The year refers to the time of initial service to the university.

Ahmed M. Abdel-Mohti, B.S.C.E. (Helwan University), M.S.C.E. (Lawrence Technology University), Ph.D. (University of Nevada), 2009. Assistant Professor of Civil Engineering

Alisa L. Agozzino, B.A. (Ohio Northern), M.A., Ph.D. (Bowling Green), 2007. Assistant Professor of Communication Arts

Catherine Albrecht, B.A., M.A., Ph.D. (Indiana University), 2009. Professor of History; Dean, College of Arts and Sciences

Robert M. Alexander, B.A. (Ohio Northern), M.A., Ph.D. (Tennessee), 2002. Associate Professor of Political Science

Jeffery Allison, B.S. Pharm., Pharm. D. (Ohio Northern), 1994. Professor of Pharmacy Practice

Khalid Al-Olimat, B.S. (Far Eastern U.), M.S. (Bradley), Ph.D. (Toledo), 1999. Associate Professor of Electrical and Computer Engineering; Chair, Department of Electrical & Computer Engineering and Computer Science

Amelia M. Anderson, B.A. (Hamline University), M.S., Ph.D. (Cornell University), 2010. Assistant Professor of Chemistry

Rodney P. Anderson, B.S. (Sioux Falls College), Ph.D. (Univ. of Iowa), 1987. Professor of Biological Sciences

Mircea Anghelescu, M.D. (University of Medicine and Pharmacy “Victor Babes”), 2010. Visiting Assistant Professor of Anatomy and Physiology

John R. Armstrong, B.A., M.F.A. (Indiana University), 2009. Assistant Professor of Communication Arts

Nancy A. Armstrong, A.B. (Vassar), J.D. (Boston College), M.S. (Drexel), 2001. Director of the Taggart Law Library; Professor of Law

Amy L. Aulthouse, B.S. (Shippensburg), Ph.D. (South Dakota), 1997. Professor of Biological Sciences

Geoffrey C. Babitt, B.A. (Connecticut College), M.F.A., Ph.D. (University of Utah), 2010. Visiting Assistant Professor of English

Kendall L. Baker, B.A. (Maryland), M.A., Ph.D. (Georgetown), 1999. President of the University; Professor of Political Science

Peter Banfe, B.A. (California-Santa Barbara), M.B.A. (San Francisco St.), M.S. (London School of Economics), Ph.D. (George Washington), 1997. Associate Professor of International Business

Kathleen T. Baril, B.A. (Grinnell College), M.A. (Columbia University), M.A. (University of Iowa), 2010. Collections and Electronic Resources Librarian with rank of Instructor, Heterick Library


Druann Bauer, B.A. (Northeast Louisiana), M.A. (Southwestern Louisiana), Ph.D. (Louisiana-Lafayette), 2006. Associate Professor of English

Eric T. Baumgartner, B.S.A.E. (Notre Dame), M.S.A.E. (Cincinnati), Ph.D. (Notre Dame), 2006. Professor of Mechanical Engineering; Dean, Smull College of Engineering

Ronald E. Beaschler, B.S.B.A. (Ohio Northern), M.Ed. (Bowling Green), 1988. Assistant Professor of Sport Management; Chair, Department of Human Performance and Sport Sciences

Laurie Bell, B.S.Ed. (Ohio State), B.D. (Toledo), M.S. (James Madison), Ph.D. (Toledo), 1992. Associate Professor of Dance and Resident Artist

Justin C. Bergman, B.A. (Franklin), M.A. (Manchester), 2005. Instructor in Physical Education

Nathaniel D. Bird, B.S. (Ohio Northern), M.S., Ph.D. (University of Minnesota), 2009. Assistant Professor of Computer Science and Computer Engineering

Alexander A. Bove, B.A., M.A., Ph.D. (Boston University), 2009. Visiting Assistant Professor of English

Christopher P. Bowers, B.A. (Kenyon), Ph.D. (Ohio State), 2003. Associate Professor of Chemistry

Kristo N. Boyazdziev, M.S., Ph.D. (U. of Sofia), 1990. Professor of Mathematics

Joanne C. Brant, A.B. (Cornell), J.D. (Case Western Reserve), 1991. Professor of Law

David R. Bright, B.S.P.S., Pharm.D. (University of Toledo), 2009. Assistant Professor of Pharmacy Practice

Kimberly Broedel-Zaugg, B.S. Pharm. (Ohio Northern), M.B.A. (Ashland U.), Ph.D. (Ohio State), 1994. Professor of Pharmacy Practice

Kimberly Broekemeier, B.A. (St. Olaf), Ph.D. (Minnesota), 1998. Associate Professor of Biochemistry

Rebecca J. Brooks, B.A. (Ohio), M.A., Ph.D. (Kent State), 2007. Visiting Instructor in Sociology

Gregory W. Bucks, B.S. (The Pennsylvania State University), M.S., Ph.D. (Purdue University), 2010. Visiting Assistant Professor of Electrical and Computer Engineering

Charles L. Busch, B.S.E.E. (Ohio Northern), P.E. (Ohio), 1963. Director of Administrative Computing Services with rank of Assistant Professor

Indra Canagaratna, B.Sc. (U. of Ceylon), M.S. (Loughborough U. of Technology), 1987. Systems Librarian with rank of Professor

Melita Caragiu, M.S. (Babes-Bolyai, Romania), Ph.D. (Penn State), 2000. Professor of Physics

Mihai Caragiu, B.S., M.S. (U. of Bucharest), Ph.D. (Penn State), 2000. Associate Professor of Mathematics

Robert M. Carothers, B.A., M.A., Ph.D. (Kent State), 2005. Associate Professor of Sociology

Rebecca L. Casey, B.M. (Ohio Northern), M.M. D.M.A., (Cincinnati Conservatory of Music), 1994. Associate Professor of Music

Tevye C. Celius, B.S. (Puget Sound), Ph.D. (Cornell), 2005. Associate Professor of Chemistry

Jeffrey J. Christoff, B.S. Pharm. (Duquesne), Ph. D. (Ohio State), 1998. Professor of Medicinal Chemistry

John P. Christoff, B.A. (St. Alphonsus), M.A. (Notre Dame), J.D. (Ohio Northern), 1981. Professor of Law
Jill R. Christopher, B.S.B.A. (Ohio Northern), M.Acc. (Case Western Reserve), B.B.A. (Cleveland State), 1988. Associate Professor of Accounting

C. Antoinette Clarke, B.S. (Rochester Institute of Technology), J.D. (Toledo), 2001. Professor of Law

Forrest J. Clingerman, A.B. (Augustana College), M.Div. (Boston University), Ph.D. (Iowa), 2005. Assistant Professor of Religion

Alfred E. Cohoe, B.A. (Albion), M.A. (Bowling Green), 1962. Professor of Psychology and Sociology

Ken Cooper, B.S. (Bowling Green), M.B.A. (Miami), Ph.D. (U. of Minnesota), 2010. Visiting Professor of Finance

Alonso J. Cordoba, B.S. (Jorge Tadeo Lozano U.), 2008. Visiting Instructor in Biological Sciences

Kathryn A. Cowles, B.A., M.A., Ph.D. (University of Utah), 2009. Assistant Professor of English

David C. Crago, A.B. (Duke), J.D. (U. of Michigan), 1991. Professor of Law; Dean, Pettit College of Law; Interim Vice President for Academic Affairs

Russ Crawford, B.A., B.S. (Chadron State), M.A., Ph.D. (Nebraska), 2005. Assistant Professor of History

Cecily Crider, B.A., J.D. (Ohio Northern), 1998. Director and Instructor in Legal Writing

Patrick Croskery, B.A. (Virginia), Ph.D. (Chicago), 1999. Associate Professor of Philosophy; Director of Honors Program

Sandra Crosser, B.S.Ed. (Ohio State), M.A. (Kent), Ph.D. (Bowling Green), 1989. Professor of Education

Mark D. Cruea, B.S.B.A. (Ohio State University), M.Ed., M.A., Ph.D. cand. (Bowling Green State University), 2009. Visiting Instructor in Communication Arts

Margaret E. Cullen, B.A. (SUNY at Buffalo), M.A. (San Francisco State), Ph.D. (Tennessee), 1992. Associate Professor of English

Denise D’Arca, B.M. (Culver-Stockton), M.A. (Northeast Missouri), Ph.D. (Missouri), 1988. Professor of Music

Michael D. Daniels, B.A. (Trinity University), M.S. (University of Texas), J.D. (University of Kansas), 2010. Reference Librarian with rank of Assistant Professor, Law Library

Cara L. Davies, B.A. (Heidelberg), Ph.D. (Medical College of Ohio), 2003. Assistant Professor of Biological Sciences

Wesley J. Dawsey, B.C.E., M.S. (Auburn University); Ph.D. cand. (University of Illinois), 2009. Instructor in Civil Engineering

Dennis J. De Luca, B.A. (Upsala), Ph.D. (Cleveland State), 2003. Associate Professor of Biological Sciences

Natalie A. DiPietro, Pharm.D. (Ohio Northern), M.P.H. (Indiana), 2007. Assistant Professor of Pharmacy Practice

Mark H. Dixon, B.A. (Indiana), M.A. (Tennessee), Ph.D. (Purdue), 1999, 2003. Associate Professor of Philosophy (Sabbatical, Fall Quarter 2010-11)

Douglas G. Dowland, B.A. (Michigan State University), M.A., Ph.D. (University of Iowa), 2010. Visiting Assistant Professor of English

Roseanna L. Dufault, B.A. (Colorado Women’s Col.), M.A. (Middlebury), Ph.D. (U. of Colorado), 1989. Professor of French; Chair, Department of Modern Languages

Michele Durand, B.A. (Bluffton), M.Ed. (Bowling Green), 2001. Assistant Professor of Physical Education

Keith F. Durkin, B.A. (Marywood), M.S., Ph.D. (Virginia Polytechnic Institute), 1999. Professor of Sociology; Chair, Department of Psychology and Sociology

Jennifer Easterday, B.S. (Rochester), J.D. (Ohio Northern), 2002. Assistant Director of Legal Clinic/Staff Attorney with rank of Instructor in Law in the law Clinic


Alice M. Essinger, B.Phil. (Miami), M.L.S. (Kent State), 2005. Catalog Librarian with rank of Instructor in Heterick Library


Randall L. Ewing, B.S.B.A., M.B.A. (Bowling Green), 1979. Associate Professor of Marketing

Howard N. Fenton, B.S., J.D. (Texas), 1988. Professor of Law

James W. Fenton, Jr., B.S.B.A., M.B.A. (Toledo), Ph.D. (Iowa), 2005. Professor of Management; Dean, Dicke College of Business Administration

David J. Fetrow, B.A. (Albion), M.L.S. (Emporia State), 2004. Reference Librarian with rank of Associate Professor in the Law Library

Kristen N. Finley, Pharm. D. (West Virginia), 2007. Assistant Professor of Pharmacy Practice; Director of Outreach Programming

Thomas P. Finn, B.A. (Marquette), M.A. (Notre Dame), Ph.D. (Wisconsin), 1999. Professor of French and Spanish

Kami L. Fox, B.S.N., M.S. (Wright State University), 2010. Assistant Professor of Nursing

Deirdre A. Francis, B.A. (Yale University), J.D. (Emory University), 2010. Assistant Professor of Law

Patricia J. Freeman, B.S. (Bluffton), M.A. (Michigan State), Ed.D. (Sarasota), 1990. Associate Professor of Education

Bruce C. French, B.A., M.A. (American), J.D. (Antioch), 1983. Professor of Law

Bruce P. Frohnen, B.A. (California State), M.A. (University of California), J.D. (Emory), M.A., Ph.D. (Cornell), 2008. Associate Professor of Law

William R. Fuller, B.A. (Trinity College), M.S., M.A., Ph.D. (Indiana), 2002. Associate Professor of Mathematics

G. Richard Gainey, B.S. (Jones College), M.M.C. (U. of South Carolina), 1988. Associate Professor of Communication Arts and Director of Broadcasting

Debra K. Gallagher, B.Ed., M.Ed. (University of Toledo), Ed.D. (Bowling Green State University), 2009. Assistant Professor of Education

Diana K. Garlough, B.S., M.A. (Ohio State), Ph.D. (Bowling Green), 2001. Assistant Professor of Education

H. James Geistman, Jr., B.A. (Saginaw Valley State University), M.A. (Central Michigan University), M.S. (Wayne State University), Ph.D. (University of Nebraska), 2009. Assistant Professor of Criminal Justice

Scott D. Gerber, B.A. (William and Mary), J.D., Ph.D. (Virginia), 2001. Professor of Law
John C. Gillham, B.A. (San Diego State University), M.S. D.Ed. (Pepperdine University), 2010. Assistant Professor of Education

Michele Govekar, B.S. (Loyola), M.B.A. (St. Bonaventure), Ph. D. (Minnesota), 1997. Professor of Management

Paul Govekar, B.A.A. (Loyola, Chicago), M.B.A. (DePaul), D.B.A. (Nova Southeastern), 2009. Associate Professor of Management

Jeffrey A. Gray, B.S. (Pennsylvania State), Ph.D. (M.I.T.), 1993. Professor of Chemistry; Chair, Department of Chemistry and Biochemistry

Firas Hassan. Bachelor of Engineering (Beirut Arab University), Masters of Engineering (American University of Beirut), Ph.D. (University of Akron), 2009. Assistant Professor of Electrical and Computer Engineering

Elena V. Helmer, J.D. (Kazakh State), LL.M. (Yale), 2006. Visiting Assistant Professor of Law

Kevin D. Hill, B.S. (U. of Kentucky), J.D. (Northern Kentucky U.), LL.M. (Temple), 1985. Professor of Law

Brian Hofman, B.A.A. (Iowa State), M.Ed. (Bowling Green), Ph.D. (Toledo), 1998. Associate Professor of Sport Management

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Rhonda Grubs, B.F.A (Columbus College of Art and Design), M.F.A (Bowling Green), 2003. Lecturer in Art

Shanna Jo Hager, Pharm.D. (Drake University), 2009. Assistant Clinical Professor of Pharmacy

Nicole Harger, Pharm. D. (Ohio Northern), 2008. Clinical Professor of Pharmacy

Colleen C. Harrell, B.S., Pharm. D. (Toledo), 2005. Clinical Professor of Pharmacy

Donald C. Hart, B.S. (Ohio Northern), 2005. Lecturer in Pharmacy and Psychology

David M. Hartzell, Pharm. D. (Ohio Northern), 2005. Clinical Professor of Pharmacy

Rebecca Hauserman, B.S.N. (Ashland), M.S.N. (University of Phoenix), 2008. Lecturer in Nursing

Byron Hawbecker, B.A. (Manchester), M.S. (Arizona), Ph.D. (Kent State), 2005. Lecturer in Chemistry

Kevin Hawley, B.A. (Syracuse), J.D. (Duke), 2003. Adjunct Professor of Law

Scott R. Henkels, B.A. (Hiram), M.F.A. (Missouri-Kansas City), 2005. Lecturer in Communication Arts

Anna Heuer, A.B. (Manchester Community College), B.S. (Florida Institute of Technology), Pharm.D. (University of Florida), 2009. Assistant Clinical Professor of Pharmacy

Teresa K. Hoffman, Pharm.D. (Ohio Northern), 2007. Clinical Professor of Pharmacy

Robert Hovis, B.S. (Youngstown), M.S. (Case Western Reserve University), Ph.D. (Ohio State) 1975. Lecturer in Mathematics.

Brenda Hoyt, B.F.A. (Wright State), 1996. Lecturer in Communication Arts and Lecturer in Human Performance and Sport Sciences

Jacob H. Huebert, B.A. (Grove City), J.D. (Chicago), 2008. Adjunct Professor of Law

Darrell T. Hulisz, B.S.Pharm. (U. of Toledo), Pharm.D. (Medical U. of South Carolina), 1991. Clinical Professor of Pharmacy

Michael Humphrey, B.S. Pharm. (Ohio Northern), M.D. (Ohio State), Lecturer in Pharmacy

Melanie L. Hunsicker, B.S., Pharm.D. (Ohio Northern), 2007. Clinical Professor of Pharmacy

Todd Ignarski, B.S. (Ohio Northern), M.D. (Cincinnati), 2004. ATEP Medical Director

A. Sue Iseman, A.B. (Wilmington), M.A. (Ohio State), 2000. Lecturer in English

Bruce Johansen, B.S.E.S. (Cleveland), M.S. (Pittsburgh), Ph.D. (Worcester Polytechnic Institute), 1967. Lecturer in Physics and Engineering

Heling Johns, B.S. (South China Normal), B.S.B.A. (Ohio Northern), 2008. Lecturer in Chinese

Scott Johnson, B.S., M.S. (Brigham Young), 2001. Lecturer in Physics

Darlene Johnston, B.A. (Hanover), M.A. (Indiana U.-Purdue U.), 2006. Lecturer in English

Michael A. Jordan, B.A./B.S. (Ohio Northern University), 2009. Lecturer in Music

Patricia Kaple, B.S., M.S. (Bowling Green), 2006. Lecturer in Chemistry

Matthew Kauflin, B.S. Pharm. (Ohio Northern), Pharm.D. (Toledo), 2001. Clinical Professor of Pharmacy

Cynthia Keller, B.S.N. (Ohio Northern), 2008. Lecturer in Nursing

Jason M. Kimbrel, Pharm. D. (Ohio Northern), 2005. Clinical Professor of Pharmacy

Georg Klaas, B.A. (St. John’s), M.M. (Indiana), 2008. Lecturer in Music

Charles V. Knueve, B.S. (Ohio State), Pharm.D. (Ohio Northern), 2007. Clinical Professor of Pharmacy

Laury R. Kristufek, B.A., Pharm.D. (University of Toledo), 2010. Clinical Professor of Pharmacy

Michele L. Kroeger, B.S.N. (Mt. Carmel College of Nursing), 2010. Lecturer in Nursing

Vernon F. LaSala, B.S.E.E. (NJ Institute of Technology), M.Div. (United Theological Seminary), 1997. Lecturer in Religion

Dale Laukhuf, B.M.Ed. (Bowling Green), 1972. Lecturer in Music

Michael C. Leifheit, Pharm. D. (Ohio Northern), 2005. Clinical Professor of Pharmacy

Justin E. Lehman, B.A. (Ohio Northern), M.Ed. (University of Cincinnati), 2006. Lecturer in Human Performance and Sport Sciences

Andrew Ludanyi, B.A. (Elmhurst), M.A., Ph.D. (Louisiana State), 2008. Lecturer in History, Politics, and Justice

David E. Lusk, B.S. (Ohio Northern), 1991. Lecturer in Chemistry

Catriona Macphie, M.A. (Glasgow University), 1996. Lecturer in Communication Arts

John Magee, B.A., M.A. (Oregon), Ph.D. (Ball State), 1976. Lecturer in English

Autumn J. Manley, Bachelor’s (Ohio Northern University), J.D. (California Western School of Law), 2010. Lecturer in Political Science

Timothy L. Opp, B.S. (University of South Carolina), B.A. (Findlay College), M.A. (University of Findlay), 2001. Lecturer in Physics

Kirsten E. Osbun Manley, B.M. (Bowling Green), 1988. Resident Artist and Lecturer in Music

Jason Maus, B.A. (Heidelberg), M.A. (Bowling Green), 2005. Lecturer in Human Performance and Sport Sciences
Charles F. McCluskey, B.S. Pharm. (Ohio Northern), Pharm.D. (Ohio State), 2003. Clinical Professor of Pharmacy

Adam McCord, B.M. (University of North Carolina), M.M. (Indiana University), 2010. Lecturer in Music

Debra Miller, B.S.N. (Ohio Northern), M.S.N. (University of Phoenix), 2008. Lecturer in Nursing

John R. Miller, B.S. (Wisconsin), 2005. Clinical Professor of Pharmacy


Randall S. Myers, B.S. Pharm. (Ohio Northern), 2007. Clinical Professor of Pharmacy

Tami Niemeyer, B.A. (Miami), 2003. Lecturer in Physical Education

Dean B. Paul, B.S. (Mount Union), 2003. Lecturer in Physical Education

Tracey Pierce, B.S. Pharm. (Toledo), 2000. Clinical Professor of Pharmacy

Rachel A. Pinkney, B.M. (Oberlin Conservatory), M.M. (Minnesota), 2002. Lecturer in Music

Majorie Pitts, B.A. (Massachusetts), M.A. (Idaho), 2000. Lecturer in English

Stephen Plogsted, B.S. Pharm., Pharm. D. (Cincinnati), 2001. Clinical Professor of Pharmacy

Paul A. Quinn, B.S. (Bowling Green State University), M.S. (Franklin University), 2010. Lecturer in Communication Arts

Daniel Reid, B.S. (Ohio Northern), 2008. Lecturer in Finance

John K. Rhodes, B.S. (Ohio University), 2009. Lecturer in Human Performance and Sport Sciences

Michael W. Richards, B.A. (Bluffton College), M.S. (University of Dayton), 2010. Lecturer in Communication Arts


Janet Roll, B.A. (Otterbein), M.S., Ph.D. (Bowling Green), 2003. Lecturer in Mathematics

Kristine Ann Rosendale, B.S., M.B.A. (Bowling Green State University), M.A.Ed. (Baldwin-Wallace College), 2009. Lecturer in Mathematics

Troy T. Rothenbuhler, B.S. (Ohio State University), 2009. Lecturer In Human Performance and Sport Sciences

Reginald Routson, B.L.S., M.A. (Bowling Green), J.D. (Toledo), 1985. Adjunct Professor of Law

Michael Rush, Pharm.D. (Ohio Northern), 2006. Clinical Professor of Pharmacy

Brian J. Sabol, B.S. (Ohio State), Pharm.D. (Kentucky), 2007. Clinical Professor of Pharmacy

Lori A. Sahloff, B.S., (Toledo), M.S. (Kettering), 2005. Lecturer in Technology and Mathematics

Lena D. Sambrano, B.F.A. (Ohio University), 2010. Lecturer in Communication Arts

Glenn A. Scheutzow, B.A. (Baldwin-Wallace College), 2005. Lecturer In Human Performance and Sport Sciences

Nancy Schroeder, B.S.N. (Ohio Northern), 2006. Lecturer in Nursing

Amber L. Seggerson, B.S.N. (Ohio Northern University), 2010. Lecturer in Nursing

Laura Segna, B.A. (Miami), M.A. (Louisiana State), 1999. Lecturer in Sociology

Leah Sellers, B.A. (Ohio), J.D. (Michigan), 2007. Adjunct Professor of Law

Christina Sheridan, B.S. (Bucharest), M.S. (West Virginia), 2004. Lecturer in Physics and Astronomy

Burlin L. Sherrick, B.S.M.T. (Medical University of South Carolina), 2002. Interim Director, Clinical Laboratory Science; Lecturer in Biology

Florin Simioanca, B.M. (G. Dima Music Academy), M.M. (Bowling Green State University), 2010. Lecturer in Music

Cathy Smalley, B.A. (Ohio Northern), 1999, 2002. Lecturer in Communication Arts

Jeffrey P. Smith, B.A. (Miami), 2007. Lecturer in English

Assaf Sommer, B.M. (Rubin Academy of Music and Dance), M.M. (Manhattan School of Music), 2010. Lecturer in Music

James W. Spicer, Pharm.D. (Ohio Northern University), 2009. Assistant Clinical Professor of Pharmacy

Edward Strickland, B.A. (Ashland), 2008. Lecturer in Communication Arts


Heather Surface, B.B.A., M.S. (Ohio), 2006. Lecturer in English

Linda Sycks, B.M.E. (Capital), 1998. Lecturer in Music

Ronald L. Tatham, B.B.A. (University of Texas), M.B.A. (Texas Technological University), Ph.D. (University of Alabama), 2010. Lecturer in Business
Larry Thaxton, B.A. (Miami), J.D. (Ohio State), 2008. Adjunct Professor of Law

Jackie Van Tilburgh, B.A. (Ohio State University), M.A. (Wright State University), 2010. Lecturer in English

Mark W. Tollefsen, B.A. (Washington University), M.M. (University of Cincinnati), 2010. Lecturer in Music

Mary Ann Tucker, Pharm.D. (Ohio Northern University), 2010. Assistant Clinical Professor of Pharmacy

Ronald C. Bibler, B.S. (Ohio Northern), 2007. Adjunct Professor of Clinical Laboratory Science

Todd Banks, B.S. Pharm., Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Steven D. Baker, B.S. (University of Illinois), M.S. (Ohio University), J.D. (Ohio Northern), 1989. Adjunct Professor of Law

Joan Weiler, B.M. (Ohio State), M.M. (Temple), 2008. Lecturer in Music

Dacy Wilcox, B.A., M.A. (Ohio State), 2008. Lecturer in Communication Arts


Charles Willner, B.S. (Evangel College), 2006. Lecturer in Mathematics and Physics

Sherron Winegardner, B.S.N. (Bluffton), M.S.N. (Medical College of Ohio), M.H.A. (University of Phoenix), 2008. Lecturer in Nursing

ADJUNCT FACULTY

Mukul A. Agrawal, B.S. (University of Bombay), Ph.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

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Melissa E. Angell, Pharm.D. (Mercer University), 2010. Adjunct Professor of Pharmacy

Steven D. Baker, B.S. Pharm., Pharm.D. (Texas), 2004. Adjunct Professor of Pharmacy

Todd Banks, B.S., B.S.Pharm. (Cincinnati), 2004. Adjunct Professor of Pharmacy

Ronald C. Bibler, B.S. (Ohio Northern), 2007. Adjunct Professor of Clinical Laboratory Science

Martha Blackford, B.A. (Taylor), Pharm.D. (Ohio Northern), 2008. Adjunct Professor of Pharmacy

Jennifer Blanchard, B.A., Pharm.D. (Kentucky), 2004. Adjunct Professor of Pharmacy

Rebecca S. Boxer, B.A. (Barnard College), M.D. (University of Pennsylvania), 2008. Adjunct Professor of Pharmacy

Matthew R. Bradley, Pharm.D. (Ohio Northern University), 2010. Adjunct Professor of Pharmacy

Victoria Brink, Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Nicole S. Brooks, Pharm.D. (Southwestern Oklahoma State), 2008. Adjunct Professor of Pharmacy

Rebecca Brothers, B.A. (Thomas Moore College), B.S. Pharm., Pharm.D. (Cincinnati), 2006. Adjunct Professor of Pharmacy

Matthew J. Brown, Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

William Burke, B.A. (Capital), D.O. (Ohio), 1998. Adjunct Professor of Pharmacy

Richard G. Carmichael, B.A. (Cornell), M.S. (Texas Tech), 2002. Adjunct Professor of Clinical Laboratory Science

Richard C.T. Casabar, B.S. (Hawaii), M.S. (North Carolina State), 2007. Adjunct Professor of Clinical Laboratory Science

Jo-Ann L. Caudill, Pharm.B.S. (North Carolina), 2010. Adjunct Professor of Pharmacy

Laura A. Chumney, B.S. (Walsh University), 2010. Adjunct Professor of Clinical Laboratory Sciences

Camille Cindia, B.S. (Youngstown State University), 2006. Adjunct Professor of Clinical Laboratory Sciences

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Kathryn A. Denne, Pharm.D. (Ohio Northern University), 2010. Adjunct Professor of Pharmacy

Robert Dowd, B.S. Pharm. (Iowa), Pharm.D. (Kentucky), 2002. Adjunct Professor of Pharmacy

Susan C. Drees, B.S. (Xavier University), Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Shawn Eaton, Pharm.D. (Ohio Northern), 2006. Adjunct Professor of Pharmacy

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Stephanie A. Ellenberger, B.A. (Arizona State University), 2006. Adjunct Professor of Clinical Laboratory Sciences

Benjamin Enders, M.B.A. (Baker College), 2008. Adjunct Professor of Clinical Laboratory Science

Mary E. Flickinger, F.S. (University of Cincinnati), 2010. Adjunct Professor of Clinical Laboratory Sciences

Carl Fossaceca, B.S. Pharm. (Ohio State), Pharm.D. (Florida), 2004. Adjunct Professor of Pharmacy

Jenny Francis, B.A., B.S.C.L.S. (Miami), 2003. Adjunct Professor of Clinical Laboratory Science

Elizabeth Freda, B.A., B.S. (Miami University), Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Christopher Geib, B.A. (Ohio Northern), M.B.A. (University of Phoenix), 2006. Adjunct Professor of Clinical Laboratory Science

Martin R. Giannamore, B.S. Pharm., Pharm.D. (Purdue), 2002. Adjunct Professor of Pharmacy

Donna M. Gobeli, B.S.M.T. (Akron University), 2006. Adjunct Professor of Clinical Laboratory Sciences

Tina M. Hamilton, B.A.S. (Xavier University), Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy
John C. Hammons, Pharm.D. (Kentucky), 2004. Adjunct Professor of Pharmacy

Tamara M. Hammons, Pharm.D. (Kentucky), 2001. Adjunct Professor of Pharmacy

Judy Harrer, B.S. (Murray State), B.S. Pharm. (Kentucky), M.S., Ph.D. (Cincinnati), 1999. Adjunct Professor of Pharmacy

Monica Hess, Pharm.D. (Kentucky), 2006. Adjunct Professor of Pharmacy

Jason D. Hiett, Pharm.D. (Ohio Northern), 1999. Adjunct Professor of Pharmacy

Michael R. Humphrey, B.S. Pharm. (Ohio Northern University), M.D. (Ohio State University), 2008. Adjunct Professor of Pharmacy

Saber M. Hussain, B.S., Ph.D. (Osmania U.), M.S. (Kakatiya U.), 2005. Adjunct Professor of Clinical Laboratory Science

Margaret Huwer, B.S. (Ohio Northern), Pharm.D. (Ohio State), 1996. Adjunct Professor of Pharmacy

Katherine M. Imhoff-Witt, Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Lynn James, B.A. (Capital), 2006. Adjunct Professor of Clinical Laboratory Science

Michael D. Kane, B.S. (Illinois State), Ph.D. (Purdue), 2009. Adjunct Professor of Pharmacy

George E. Kikano, B.S., M.D. (American University of Beirut), 2000. Adjunct Professor of Pharmacy

Dan Knight, B.S. (Wilmington College), Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Delbert Konnor, B.S., M.S. (Wayne State), 2006. Adjunct Professor of Pharmacy

Lawrence J. Kuk, B.S. Pharm. (Ohio Northern), D.O. (Ohio University College of Osteopathic Medicine), 2005. Adjunct Professor of Biological and Allied Health Sciences

Marlin Linger, B.A. (Kent State), M.B.A. (North Dakota), B.S., M.S. (Ohio State), 2006. Adjunct Professor of Clinical Laboratory Science

Shannon M. Malaney, B.S., (Kent State), B.S. Pharm., Pharm.D. (Cincinnati), 2004. Adjunct Professor of Pharmacy

Suzanne M. Marques, B.S.Ph. (Ohio Northern University), Pharm.D. (University of Cincinnati), 2002. Adjunct Professor of Pharmacy

Cynthia J. McKnight, B.S. (Mount Union College), 2006. Adjunct Professor of Clinical Laboratory Sciences

Amaka G. Moka, B.S. (University of Kentucky), Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

Norman O. Moser, Pharm.D. (Purdue University), D.O. (Kirkville College of Osteopathic Medicine), 2009. Adjunct Professor of Pharmacy

Joseph T. Moss, Jr., B.S. (Toledo), M.B.A. (Cleveland State), Pharm.D. (Arkansas), 2007. Adjunct Professor of Pharmacy

Ayodele O. Olabsi, B.S., M.S., Ph.D. (Wichita State), 2007. Adjunct Professor of Clinical Laboratory Science

Natalie O’Toole, Pharm.D. (University of Cincinnati), 2010. Adjunct Professor of Pharmacy

David D. Powell, B.S. (Grove City College), D.O. (Ohio University), 2009. Adjunct Professor of Pharmacy

Mary Putnam, B.A. (Miami), 2006. Adjunct Professor of Clinical Laboratory Science

Gerardo Ramos, B.S. (Texas), M.S. (Mississippi State), M.S., Ph.D. (Texas), 2008. Adjunct Professor of Clinical Laboratory Science

Paulette Rapp, B.S. (Wright State), 2006. Adjunct Professor of Clinical Laboratory Science

James E. Rebollet, B.S., M.S. (Dayton), 2005. Adjunct Professor of Clinical Laboratory Science

Rebecca Roman, Pharm.D. (Ohio Northern), 2004. Adjunct Professor of Pharmacy

Gary Rutherford, B.S. Pharm. (Ohio Northern), 2000. Adjunct Professor of Pharmacy

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Gabrielle M. Schmitt, Pharm.D. (Purdue University), 2010. Adjunct Professor of Pharmacy

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Kristen H. Schwetschenau, B.S. (Purdue), Pharm.D. (Cincinnati), 2004. Adjunct Professor of Pharmacy

R. Jane Steiner, B.S. (Findlay), 2007. Adjunct Professor of Clinical Laboratory Science

Beth Stevens, B.S. (Bowling Green), 2006. Adjunct Professor of Clinical Laboratory Science

Megan C. Stojic, Pharm.D. (Ferris State University), 2010. Adjunct Professor of Pharmacy

Paul Thorpe, B.S. (Brigham Young), M.D. (Utah School of Medicine), 2006. Adjunct Professor of Clinical Laboratory Science

Ann Van Horn, B.S. (Ohio Northern), 2006. Adjunct Professor of Clinical Laboratory Science

Mark Westrick, B.S. (Wayne State), M.S. (Vermont), 2008. Adjunct Professor of Clinical Laboratory Science

Katherine F. Whitson, B.S. (Akron University), 2010. Adjunct Professor of Clinical Laboratory Sciences

Michelle Wiss, B.S. (Dayton), 2008. Adjunct Professor of Clinical Laboratory Science

Jennifer G. Wright, B.S. Pharm., Pharm.D. (University of Kentucky), 1999. Adjunct Professor of Pharmacy

EMERITI

DeBow Freed, B.S. (U.S. Military Academy), M.S. (Kansas), Ph.D. (New Mexico), D.Lett. (Ohio Northern), 1979-99. President Emeritus

Albert T. Awad, B.S. Pharm., M.S. (Cairo U.), B.S. Pharm. (Ohio Northern), Ph.D. (Ohio State), 1966-1996. Professor of Pharmacognosy, Emeritus

Albert A. Baillis, A.B., J.D. (Western Reserve), LL.M. (New York), 1957-91. Professor of Law, Emeritus


David J. Benson, B.A. (Michigan State), J.D. (Syracuse), 1973-98. Professor of Law, Emeritus

Amar N. Bhattacharya, B.V.Sc., D.V.M. (Bengal Vet., India), M.S., Ph.D. (Ohio State), 1970-2000. Professor of Pharmacology, Emeritus


Joseph F. Campoli, B.S.E.E. (Ohio Northern), M.S.E.E. (Missouri School of Mining and Metallurgy), Ph.D. (Georgia Institute of Technology), 1991-2001. Professor of Electrical and Computer Engineering, Emeritus


Ronald L. Evans, B.S. Ed. (Ohio Northern), M.A. (Bowling Green), 1966-1999. Associate Professor of Mathematics, Emeritus

William L. Evans, B.A., J.D. (Ohio Northern), 1975-2002. Professor of Law, Emeritus

Thomas P. Faulkner, B.S., Ph.D. (Purdue), 1978-2006. Professor of Pharmacology, Emeritus

Francis A. Gangemi, B.S. (Notre Dame), M.S., Ph.D. (Catholic), 1967-95. Professor of Physics, Emeritus

Thomas A. Gossel, B.S. Pharm. (Ohio Northern), M.S., Ph.D. (Purdue), 1972-2002. Professor of Pharmacology, Emeritus


F. Lee Grismore, B.S.E.E. (Ohio Northern), M.S.E.E. (Missouri School of Mines and Metallurgy), Ph.D. (Georgia Institute of Technology), 1991-2001. Professor of Electrical and Computer Engineering, Emeritus


Howard L. Haight, B.S., M.S. (Nebraska), Ph.D. (Iowa), 1968-95. Professor of Chemistry, Emeritus

Richard L. Haight, A.B. (Boston), J.D. (Suffolk), LL.M. (Boston), 1984-2005. Professor of Law, Emeritus

Byron L. Hawbecker, B.A. (Manchester), M.S. (Arizona), Ph.D. (Kent State), 1963-2003. Professor of Chemistry, Emeritus and Dean of the Getty College of Arts and Sciences, Emeritus

Metta Lou Henderson, B.S., M.S., Ph.D. (Arizona), 1978-98. Professor of Pharmacy Practice, Emerita


Carl W. Hoagstrom, B.S. (Kearney), M.S. (Purdue), Ph.D. (Arizona), 1975-2005. Professor of Biological Sciences, Emeritus

Bruce E. Johansen, B.E.S. (Cleveland), M.S. (Pittsburgh), Ph.D. (Worcester Polytechnic Institute), 1967-1999. Professor of Electrical Engineering, Emeritus


Richard D. Kain, B.S. (Ohio Northern), M.A. (Ohio State) 1953-84. Professor of Industrial Technology, Emeritus

Dwight D. Khoury, B.A., M.A. (Wayne State), 1977-94. Associate Professor of Foreign Languages, Emeritus

David W. Kurtz, B.S. (Houghton), Ph.D. (Syracuse), 1973-2005. Professor of Chemistry, Emeritus


Andrew Ludanyi, B.A. (Elmhurst), M.A., Ph.D. (Louisiana State), 1958-2008. Professor of Political Science Emeritus


Leo R. Maier, B.S.M.E. (Purdue), M.E. (Penn State), Ph.D. (Iowa State), 1975-2001. Professor of Mechanical Engineering, Emeritus

Morton L. Mallin, B.S. (Philadelphia College of Pharmacy and Science), M.S. (Hahnemann), Ph.D. (Cornell), 1964-1993. Professor of Microbiology, Emeritus

G. Rex Messick, B.S.E.E. (Ohio Northern), M.S. (Pittsburgh), 1958-97. Associate Professor of Physics, Emeritus

Donald E. Milks, B.C.E. (Clarkson), M.S., Ph.D. (Arizona), 1965-2001. Professor of Civil Engineering, Emeritus


Dolores W. Moore, A.B. (Marshall), M.B.A. (Ohio U.), CMA, 1974-91. Associate Professor of Accounting, Emerita

Eric V. Nelson, B.S., M.S. (Wisconsin), Ph.D. (Manitoba), 1967-2000. Professor of Biological Sciences, Emeritus

Charles M. Oliver, B.S. (Western Kentucky), A.M. (Missouri), Ph.D. (Bowling Green), 1965-92. Professor of English, Emeritus


Ronald E. Roll, B.S., M.S. (Ohio State), 1964-96. Associate Professor of Physics, Emeritus


Lewis K. Smith, B.S. Pharm., Ph.D. (Texas), 1977-2006. Professor of Biochemistry, Emeritus

Donald W. Stansloski, B.S. Pharm. (Ferris State), M.S., Ph.D. (Nebraska), 1972-95. Professor of Pharmacy Practice, Emeritus

Thomas G. Stewart, B.S., B.S. Pharmacy, Ph.D. (Florida), 1970-92. Professor of Medicinal Chemistry, Emeritus


George D. Vaubel, A.B., LL.B. (Ohio Northern), LL.M. (Michigan), 1958-99. Professor of Law, Emeritus

Louis D. Vottero, B.S. Pharm. (Duquesne), M.S. (Ohio State), 1966-92. Professor of Pharmacy, Emeritus


David Weimer, B.S., M.S. (Ohio State), 1964-1990. Professor of Physics, Emeritus


Dale L. Wilhelm, B.S. (Illinois), M.S., Ph.D. (Tennessee), 1966-91. Professor of Chemistry, Emeritus and Vice President for Academic Affairs, Emeritus

Roger D. Young, B.S.B.A. (Miami), M.B.A. (Xavier), C.P.A., 1964-98. Professor of Accounting, Emeritus

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Rod Thompson, B.A., M.A., President, Alumni Association

Marsha McMunn, President, Student Senate

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Thomas Compton, B.S., M.B.A., 2015. President, Precision Strip, Minister, OH (retired)


William E. Croy, Jr., B.A., M.Div., 2014. Senior Minister, Maple Grove United Methodist Church, Columbus, Ohio (retired)

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Donald J. Campbell, B.S.M.E., M.S.M.E., D.E. 2015. Special Assistant to NASA Deputy Administrator, NASA Glenn Research Center, Cleveland, Ohio (retired)

Jennifer A. Frommer, B.S.C.E., 2016. Vice President, HDR Engineering, Inc., Columbus Ohio


James L. Kennedy, B.A., 2013. CEO, Next Future, LLC, Dublin, Ohio


Carla F. Kim, B.S., Ph.D., 2015. Principal Investigator, Children’s Hospital, Boston, Massachusetts


Benjamin Logan, B.A., J.D., 2013. District Court Judge, Grand Rapids, Michigan


Oscar J. Mifsud, B.A., 2012. Owner, Mifsud Group, LLC, Berea, Ohio


Anthony R. Moore, B.A., J.D., 2016. Attorney, Jones Day, Cleveland, Ohio

Candada Moore, B.A., J.D., 2015. Vice President, Huntington Bank, Columbus, Ohio


Martin S. Paul, B.A., 2015. President and CEO, Paul's Lumber Do-It Center, Garrettsville, Ohio

Brenda Reichelderfer, B.S.E.E., 2014. Senior V.P. & Managing Director, TriVista Business Group, San Juan Capistrano, California


Thomas L. Smith, B.A., 2014. Senior Vice President, Waste Management, Scottsdale, Arizona (retired)


Carl Clay, B.S.M.E., D.E., Director of Transportation and Logistics, Marathon Oil Company, Montgomery, Texas (retired)

Frank Cosiano, B.S.Pharm., M.D., D.Ph., Physician, Findlay, Ohio (retired)


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