

OHIO NORTHERN UNIVERSITY

ACADEMIC  
CATALOG

2020-2022



# Catalog 2020-22

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

*Ohio Northern University does not discriminate on the basis of race, color, sex, gender identity, transgender status, religion, national origin, age, disability, sexual orientation, marital status, military or veteran status, genetic information or any other category protected by federal, state, or local law.*

## **Title IX Coordinator**

Liannie Parahoo  
ONU Legal Clinic  
121 W. High St. Ste 700, Lima, OH 45801  
419-227-0061

## **The University's 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 home page:**

<http://www.onu.edu/>

*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.*

# Communications with the University

## **General University (419) 772-2000**

**President** Daniel A. DiBiasio 772-2031  
**Interim Provost, Vice President for Academic Affairs** Julie Hurtig 772-2034  
**Vice President for Financial Affairs** Jason Broge 772-2022  
**Vice President for Enrollment** William Eilola 772-2260  
**Vice President and General Counsel** Andrew Hughey 772-1022  
**Vice President for Student Affairs** Adriane Thompson-Bradshaw 772-2433  
**Vice President for University Advancement** Shannon Spencer 772-2036  
**Dean, College of Arts & Sciences** Holly Baumgartner 772-2130  
**Dean, College of Business Administration** John Navin 772-2070  
**Dean, College of Engineering** John-David S. Yoder 772-2385  
**Dean, College of Law** Charles H. Rose III 772-2205  
**Dean, College of Pharmacy** Steven J. Martin 772-2277  
**Dean of Students** Adriane Thompson-Bradshaw 772-2433  
**Budget Analyst** Connie McClain 772-3552  
**Chief Information Officer** Jeff Rieman 772-3100  
**Controller** Mark Russell 772-2011  
**Director of Academic Assessment** Eunhee Kim 772-3014  
**Director of Admissions** Deborah Miller 772-2464  
**Director of Admissions (Law)** Hailey Russell 772-2211  
**Director of Alumni Relations** Barbara Meek 772-2729  
**Director of Athletics** Thomas E. Simmons 772-2450  
**Director of Career Services** Andrea Domachowski 772-2760  
**Director of Center for the Advancement of Faculty Excellence (CAFE)**  
Forrest Clingerman 772-3090  
**Director of Community Relations** Chris Burns-DiBiasio 772-2780  
**Director of Counseling Center** Anthony Rivera 772-2190  
**Director of Engineering Corporate and Alumni Relations**  
Laurie Laird 772-2421  
**Director of Financial Aid Services** Melanie Weaver 772-2271  
**Director of Heterick Library** Kathleen Baril 772-2188  
**Director of Honors Program** Forrest Clingerman 772-3090  
**Director of Human Resources** Tonya Paul 772-2013  
**Director of Institutional Research** Josh Deans 772-2529  
**Director of International Admissions** Shawn Siferd 772-3518  
**Director of McIntosh Center** David L. Dellifield 772-2400  
**Interim Director of Multicultural Development**  
Albertina Walker 772-3145  
**Director of Residence Life** Justin F. Courtney 772-2401  
**Director of Summer Session** Juliet Hurtig 772-2032  
Melanie Hough 772-2024  
**Director of Taggart Law Library** Nancy A. Armstrong 772-2692  
**Executive Director of Communications and Marketing**  
Amy Prigge 772-3961  
**Registrar** Melanie Hough 772-2024  
**University Chaplain** David MacDonald 772-2200

## THE OHIO NORTHERN PROMISE

The Ohio Northern Promise is a set of initiatives to make an ONU education more affordable, to reduce student loan debt, to sustain academic quality, and to prepare students for career success. Simply put, it is about ensuring that higher education, historically a key enabler of social mobility, remains accessible and affordable for bright young students and their families.

### **Key components of The Ohio Northern Promise**

1. A four-year graduation guarantee (available across most undergraduate programs)
2. Hands-on high-impact learning, a core component of every academic major
3. Sustained job placement and graduate and professional school admissions rates for graduates

**Learn more:** <http://www.onu.edu/about>



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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, [www.hlcommission.org](http://www.hlcommission.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  
Association for Practical and Professional Ethics  
Association of American Colleges and Universities  
Association of College and University Housing Officers 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  
National Association of Fellowship Advisors  
The National Association of Schools and Colleges of the United Methodist Church  
National Collegiate Athletic Association  
National Collegiate Honors Council  
Ohio Athletic Conference  
Ohio Foundation of Independent Colleges

### GETTY COLLEGE OF ARTS & 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  
Committee on Accreditation for the Exercise Sciences  
Council for the Accreditation of Educator Preparation  
National Accrediting Agency for Clinical Laboratory Science  
National Association of Schools of Music  
Ohio Board of Nursing  
Ohio Department of Education

#### Membership in

American Association for Higher Education and Accreditation  
American Association of Colleges of Nursing  
American Association of Colleges for Teacher Education  
American College Dance Festival Association  
American College Theatre Festival  
American Physical Society  
American Political Science Association  
American Psychological Association  
American Sociological Association  
Associated Collegiate Press  
Associated Schools of Construction

Association for Practical and Professional Ethics  
Association for Psychological Science  
Association for Theatre in Higher Education  
Association for Women in Mathematics  
Association of Departments of English  
Association of Independent Liberal Arts Colleges for Teacher Education  
Association of Technology, Management, and Applied Engineering  
College English Association of Ohio  
College Media Advisors  
Council of Colleges of Arts and Sciences  
Council for the Accreditation of Educator Preparation  
Fibonacci Association  
International Technology and Engineering Educators Association  
Mathematical Association of America  
Midwestern Psychological Association  
Modern Language Association of America  
Musical Theatre Educators Alliance  
National Association of Schools of Music  
National Communication Association  
National Council of Teachers of Mathematics  
National Dance Education Organization  
Ohio Academy of Science  
Ohio Association of Colleges for Teacher Education  
Ohio Association of Private Colleges for Teacher Education  
Ohio Biological Survey  
Ohio Council of Criminal Justice Education  
Ohio Dance  
Ohio Historical Society  
Ohio Newspaper Association  
Ohio Philosophical Association  
Ohio Scientific, Education, and Research Association  
Ohio Technology and Engineering Educators Association  
Sleep Research Society  
Society for Industrial and Applied Mathematics  
Society for Neuroscience  
Society for Collegiate Journalists  
Society of Manufacturing Engineers  
South Eastern Theatre Conference  
United States Institute of Theatre Technology

### T. J. SMULL COLLEGE OF ENGINEERING

#### Accredited by

Engineering programs in civil, computer, electrical and mechanical engineering as well as engineering education are accredited by the Engineering Accreditation Commission of ABET and the computer science program is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

#### 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

State of Ohio 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

### **Membership in**

The Association of American Law Schools

## **DICKE COLLEGE OF BUSINESS ADMINISTRATION**

### **Accredited by**

AACSB International - The Association to Advance Collegiate Schools of Business  
Public Relations Society of America

## **HETERICK MEMORIAL LIBRARY**

### **Membership in**

LOEX  
OCLC  
OhioLINK  
OhioNET

## **CENTER FOR TEACHER EDUCATION**

### **Accredited by**

Council for the Accreditation of Educator Preparation (CAEP)

### **Approved by**

The Chancellor of the Ohio Department of Higher Education

### **Membership in**

American Association of Colleges for Teacher Education  
Association of Independent Liberal Arts Colleges for Teacher Education  
Ohio Association of Colleges for Teacher Education  
Ohio Association of Private Colleges of Teacher Education

## **Academic Year 2020-21**

### **Undergraduate Colleges — Two Semesters, J-Term, and Summer Sessions**

#### **Fall Semester**

Aug. 10 - Nov 20

#### **January Term**

Jan. 4 - Jan. 16

#### **Spring Semester**

Jan. 19 - May 16

#### **Summer Session**

May 24 - Aug. 4

### **College of Law — Two Semesters and January Term**

#### **Fall Semester**

Aug. 24 - Dec. 11

#### **January Term**

Jan. 5 - Jan. 26

#### **Spring Semester**

Jan. 27 - May 14

#### **Summer Semester**

May 24 - July 23

## **Academic Year 2021-22**

### **Undergraduate Colleges — Two Semesters, J-Term, and Summer Sessions**

#### **Fall Semester**

Aug. 23 - Dec. 17

#### **January Term**

Jan. 3 - Jan. 15

#### **Spring Semester**

Jan. 18 - May 15

#### **Summer Session**

May 23 - Aug. 3

### **College of Law — Two Semesters and January Term**

#### **Fall Semester**

Aug. 24 - Dec. 11

#### **January Term**

Jan. 5 - Jan. 26

#### **Spring Semester**

Jan. 27 - May 13

#### **Summer Semester**

May 24 - July 22

## **Admissions Programs**

Rolling Admissions for Colleges of Arts & Sciences,  
Business Administration and Engineering  
Priority Deadline Admissions for College of Pharmacy  
Advanced Placement  
Transfer Students  
Special, Audit, and Transient Students

## **Student Population (Fall 2019)**

Men	1490
Women	1468
Total	2958

## **Degrees**

Bachelor of Arts  
Bachelor of Fine Arts  
Bachelor of Music  
Bachelor of Science  
Bachelor of Science in Medical 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  
Master of Science in Accounting  
Doctor of Pharmacy  
Master of Legal Letters  
Juris Doctor

## **MAJORS**

### **Getty College of Arts & Sciences**

Art Education\*  
Athletic Training  
Biochemistry  
Biology\*  
Chemistry\*  
Communication Studies  
Construction Management  
Creative Writing  
Criminal Justice  
Data Analytics  
Education-Early Childhood\*  
Education-Middle Childhood\*  
Environmental and Field Biology  
Exercise Physiology  
Clinical & Rehabilitation Sciences  
Strength & Conditioning/ Human Performance  
Forensic Biology  
Graphic Design  
History  
International Theatre Production  
Language Arts Education\*  
Literature  
Manufacturing Technology  
Applied Robotics  
Manufacturing Management  
Mathematics  
Advanced Mathematical Studies  
Applied Mathematics  
Teacher Licensure\*  
Medical Laboratory Science  
Molecular Biology  
Music  
Applied Studies  
Music History and Literature  
Music Theory and Composition  
Sound Recording Technology  
Music Education\*  
Musical Theatre  
Nursing  
Philosophy  
Philosophy, Politics and Economics  
Physics\*  
Applied Physics  
Astronomy  
Physics  
Political Science  
Psychology  
Behavioral Neuroscience  
Clinical and Counseling Psychology  
General Psychology  
Public Health  
Religion  
Social Studies  
Sociology  
General Sociology  
Social Services Administration  
Spanish\*  
Statistics  
Actuarial Science  
Applied Statistics  
Strength and Conditioning  
Studio Arts  
Technology Education\*  
Theatre  
Writing and Multimedia Studies  
Youth Ministry  
\*Education licensure programs offered.



## Dicke College of Business Administration

Accounting  
Finance  
Management  
Marketing  
Pharmaceutical & Healthcare Business  
Public Relations  
Sport Management

## T. J. Smull College of Engineering

Civil Engineering  
Computer Engineering  
Computer Science  
Electrical Engineering  
Engineering Education  
Mechanical Engineering

## Raabe College of Pharmacy

Pharmacy

## Preprofessional Curricula

Pre-dentistry	Pre-physical Therapy
Pre-law	Pre-physician Assistant
Pre-medicine	Pre-seminary
Pre-occupational Therapy	Pre-veterinary Medicine
Pre-optometry	

## SPECIAL PROGRAMS

3+3 Law Program in Select Majors  
Computer Science Co-op Program (Professional Practice)  
Engineering Co-op Program (Professional Practice)  
Honors Program  
Post Baccalaureate Certificate in Medical Laboratory Science  
Study Abroad  
Teacher Field Experience Programs  
Teacher Licensure (Early Childhood, Middle Childhood, Adolescent - Young Adult, Multi-Age, and Career Tech)  
Technology Co-op Program

# University Calendar 2020-22 Undergraduate Colleges

## Fall Semester 2020

*Revised, Early Start Early Finish*

### August

- 5 New student orientation
- 5 Residence halls open, new students, 8 a.m.
- 7 Residence halls open, returning students.
- 10 Classes Begin
- 10 Late registration of new, re-entry and continuing students
- 18 Last Day to add a class or section
- 28 Last Day to drop a class
- 29 Beginning of "W" period for withdrawals

### September

- 7 Labor Day (classes will meet)

### October

- 12 - 13 Fall Break is canceled (classes will meet)
- 12 Registration for J term and Spring semester begins
- 30 Last Day to Withdraw from a class

### November

- 13 Classes end
- 16 - 20 Final Examinations
- 21 Residence halls close at 4 p.m. for Winter Break

## J-Term 2021

### January

- 4 Classes begin
- 9,16 Saturday Classes
- 16 Classes end

## Spring Semester 2021

### January

- Last day for payment of Spring Semester fees
- 17 Residence halls open, 8 a.m.
- 18 Martin Luther King Jr. Day (no classes)
- 19 Classes begin
- 19 Late registration of new, re-entry and continuing students
- 27 Last day to add a class or section

### February

- 9 Beginning of "W" period for withdrawals

### March

- 5 Residence halls close at 7 p.m. for Spring Break
- 8 - 12 Spring Break
- 14 Residence halls open at 8 a.m.
- 22 - Ap. 2 Registration for fall semester

### April

- 2 Good Friday (no classes)
- 16 Last day to withdraw
- 16 Last day to remove "I" (incomplete) marks
- 20 Honors Day

### May

- 10 - 14 Final Exams
- 15 All campus housing closes at 12 p.m. for the summer
- 16 Commencement

## Summer Session 2021

**First Session** May 24 to June 25

**Second Session** June 28 to July 30

**Summer Orientation** (Advising and Scheduling)

June 11,12,18,19

## Fall Semester 2021

### August

- 23 Classes Begin

### September

- 6 Labor Day (no classes)

### October

- 11 - 12 Fall Break

### November

- 22 - 26 Thanksgiving Break

### December

- 13 - 17 Final Examinations

## J-Term 2022

### January

- 3 Classes begin
- 8,15 Saturday Classes
- 15 Classes end

## Spring Semester 2022

### January

- 17 Martin Luther King Jr. Day (no classes)
- 18 Classes begin

### March

- 5 Residence halls close at 7 p.m. for Spring Break
- 7 - 11 Spring Break

### April

- 5 Honors Day
- 15 Good Friday (no classes)

### May

- 9 - 13 Final Exams
- 15 Commencement

## Summer Session 2021

**First Session** May 23 to June 24

**Second Session** June 27 to July 29

The **Academic Calendar** is available on the Academic Affairs web page  
[https://my.onu.edu/academic\\_affairs/semester\\_calendar\\_and\\_schedule](https://my.onu.edu/academic_affairs/semester_calendar_and_schedule)

# General Information

## Mission, Vision and Core Values

### History and Heritage

Ohio Northern University has a 94 percent job and graduate school placement rate with 99 percent of students participating in the placement survey. Its long-standing success is partly because of excellent professors, partly because of ambitious students, and partly because the University always has been rooted in the future. At ONU, students move toward a career long before they graduate – and ONU's alumni successes prove it. With top-ranked programs and opportunities outside the classroom, any path a student chooses at ONU will be grounded in concrete applications for the future. ONU's beautiful residential campus is made up of more than sixty modern residences and academic buildings and provides a vibrant campus experience.

It all began with a single person and a single idea. In 1871, Henry Solomon Lehr, with support from the community, founded the Northwestern Ohio Normal School as a teacher-training institution. Two other name changes would follow: first, to Ohio Normal University and second, in 1903, to Ohio Northern University. The evolution from a normal school to a true university reflects an impressive period of growth in both size and scope, one that distinctively combined traditional arts and sciences departments and education with the professional fields of engineering, pharmacy, law, and business. In 1899, the University affiliated with the United Methodist Church and more intentionally embraced the Judeo-Christian values of becoming church-related. From these beginnings, Ohio Northern University has developed a focus on teaching, learning, scholarship, and professional practice, and a campus environment that is student-centered, service-oriented, and values-based.

### Mission

Influenced by a unique history and an enduring affiliation with the United Methodist Church, Ohio Northern University's mission is to provide a high-quality learning environment that prepares students for success in their careers; service to their communities, the nation, and the world; and a lifetime of personal growth inspired by the higher values of truth, beauty, and goodness. The University's distinctive academic program includes mutually supporting liberal and professional education components that integrate practice with theory, complemented by excellent co-curricular offerings that enrich the Northern experience. To fulfill this mission, faculty and staff engage with students so they can learn to think critically, creatively, and entrepreneurially; communicate effectively; gain practical experience, solve problems collaboratively; and act as ethical and responsible members of a global community.

### Vision 2021

Ohio Northern University's vision is to be among the best private, comprehensive universities in the nation, known for programs of excellence and distinction, and recognized for effectively integrating arts and sciences disciplines, professional studies, high-impact learning, and civic engagement.

To achieve higher levels of excellence and distinction and greater national recognition, the University will build on its current strengths and pursue the following key elements of a shared strategic vision:

- We will identify and implement opportunities for both new and existing academic program growth, with programs in the allied health professions among the first to be considered.
- We will adopt technology resources that enhance student learning and improve administrative functioning.
- We will align our financial aid policies, curriculum, and support services to become a peer leader in graduating students in four years.
- We will build strategic partnerships and expand opportunities to serve our local communities, the region, and beyond.
- We will develop a new campus master plan to meet academic and co-curricular needs, focusing first on a new engineering building and enhanced student services.
- We will incorporate sustainable practices to be better stewards of our environmental, energy, and financial resources.

- We will improve the financial state and fiscal strength of the University.
- We will develop a more compelling brand promise for the University that will advance and enhance our national reputation.

By successfully implementing these key strategies, Ohio Northern University will be poised to celebrate its sesquicentennial year in 2021 and be prepared for continued 21st-century success.

### Core Values

**Collaboration:** We encourage the development of unique collaborations that further distinguish the university.

**Community:** We are a community that strives to be "purposeful, open, just, disciplined, caring, and celebrative" (Boyer, 1990), and that is strengthened by engaging all members of the community in the life of the University.

**Diversity:** We value the core belief expressed in the University's motto, "Ex diversitate vires" (out of diversity strength), and provide experiences and programs that prepare graduates for success in a diverse nation and world.

**Excellence:** We aspire to achieve the highest standards of performance in our professional fields and our roles at the University.

**Faith:** We celebrate the University's historic relationship and active affiliation with the United Methodist Church and welcome persons of all faiths by providing a supportive environment for their moral and spiritual growth.

**Integrity:** We expect individuals to conduct themselves with honesty, trustworthiness, and respect for others.

**Service:** We encourage service to others and civic engagement, both as a commitment to community involvement and as a responsibility of democratic citizenship.

## Organization of the University

Organized into five colleges (Arts & Sciences, Business Administration, Engineering, Pharmacy, and Law), Ohio Northern University emphasizes a liberal arts education and offers the appropriate undergraduate and first professional degrees.

The **Getty College of Arts & Sciences** is organized into five schools and a Center. Each school and the Center has a director who is directly responsible to the dean of the college. The divisions include the School of Visual and Performing Arts which includes Arts, Music, and Theatre; the School for the Humanities and Global Cultures which includes English, History, Modern Languages, Philosophy, and Religion; the School of Social Sciences and Human Interaction which includes Communication Studies, Criminal Justice, Geography, Political Science, Sociology and Writing and Multimedia; the School of Health and Behavioral Sciences which includes Exercise Physiology, Medical Laboratory Science, Nursing, Psychology, and Strength and Conditioning; the School for Science, Technology, and Mathematics which includes Astronomy, Biochemistry, Biological Sciences, Chemistry, Construction Management, Environmental and Field Biology, Manufacturing Technology, Mathematics, Physics, and Statistics; and the Center for Teacher Education which includes Early and Middle Childhood and 16 teacher licensure programs.

Graduates in all areas of the Getty College of Arts & Sciences satisfy in full the requirements for the appropriate bachelor's degree: Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Bachelor of Science in Medical Laboratory Science, or Bachelor of Science in Nursing.

Students in the colleges of Business Administration, Engineering and Pharmacy must satisfy certain course requirements in the College of Arts & Sciences and may elect further courses offered by Arts & Sciences. Students qualifying for teacher licensure in early childhood, middle childhood or adolescent/young adult education must satisfy the appropriate College of Arts & Sciences requirements.

The **T. J. Smull College of Engineering** is organized into the departments of Civil and Environmental Engineering, Electrical & Computer Engineering and Computer Science (ECCS), and Mechanical Engineering.

A five-year optional co-op program is available to all engineering and computer science 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 Bachelor of Science in Civil, Computer, Electrical, or Mechanical Engineering; Bachelor of Science (Engineering Education or 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.) curriculum, a six-year program.

The **James F. Dicke College of Business Administration** offers the Bachelor of Science in Business Administration with majors in accounting, finance, management, marketing, pharmaceutical and healthcare business, public relations, and sport management. The college also awards the Master of Science in Accounting (MSA).

The **Pettit College of Law** awards the Juris Doctor after successful completion of a three-year course of study. An earned baccalaureate degree from an accredited institution is required for graduation from the College of Law.

## 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 "Philomatheans" 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. Lehr remained 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.

Belt was succeeded in 1905 by Dr. Albert Edwin Smith, whose strong and willful 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. Loeschner, 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 that saw improvements 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 10th president. During his tenure, the University saw growth

in student enrollment, additional academic programs, and the addition and renovation of numerous facilities. Baker retired at the end of June 2011. The 11th president, Daniel A. DiBiasio, assumed office on Aug. 1, 2011.

## The Campus and Facilities

Ohio Northern University is a safe, friendly, beautiful residential campus, situated on nearly 342 acres in the small town of Ada (pop. 5,000) in northwest Ohio. ONU is located within 90 minutes of several major cities: Dayton, Columbus, Toledo and Ft. Wayne, Indiana.

**Lehr Memorial Building** (1915) contains the offices of Human Resources, Alumni Relations, the Controller and the Registrar on the first floor. The offices of the President, Provost and Vice President for Academic Affairs, Vice President for Financial Affairs and Institutional Research are on the second floor. On the third floor are the offices of Vice President for University Advancement and Communications and Marketing.

**Hill Memorial Building** (1914) contains classrooms and offices for faculty in History, Political Science, and Geography.

**Dukes Memorial Building** (1901-02), Freeman Annex (1995) and Cornet Addition (2003) contain offices and classrooms for faculty in English, Modern Languages, and Education. The office of the dean of the College of Arts & Sciences also is in Dukes Memorial.

**James F. Dicke Hall** (2003) is the state-of-the-art home of 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. The Dicke Forum accommodates formal meetings and events with the latest in communications technology.

The **DeBow and Catherine Freed 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 faculty in Communication and Media Studies, and Theatre Arts and houses classrooms, faculty offices, a desktop publishing computer laboratory, television and radio production facilities, including WONB, a digital stream radio station, and the new Sound Recording Technology studio.

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

**Taft Memorial Building** (1929) houses the E-Sport venue, dance studio/rehearsal hall, acting studio, and classrooms for performing arts.

The **Tilton Hall of Law** (1973) contains classrooms, seminar rooms, the moot court rooms, faculty offices, and administrative offices. Recent renovations include the installation of 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 Taggart Law Library is also located in this building. The library contains more than 450,000 volumes, and provides more than 280 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). In 2011, the law college dedicated its newly renovated Alumni Moot Court, which contains the latest in courtroom technology and provides students an opportunity to hone their advocacy skills in a real-world environment. The courtroom is used for both classes and moot court competitions with seating for 30 students. In

2012, the library renovated and dedicated the David C. Crago Rare Book and Special Collections Room. This attractive new room has numerous display cases and a museum-quality temperature and humidity-controlled environment to preserve the collection.

**Heterick Memorial Library** (1968), actively supports the learning, teaching and research activities of the University. The library teaches students to find information for class assignments and research projects, to critically evaluate and determine relevance of information sources, and to use information sources ethically.

The collection includes books, e-books, print and electronic periodicals, 226 databases as well as streaming audio and video resources to support the curriculum of the University. Local collections are supplemented by OhioLINK, a statewide resource-sharing network, and by efficient interlibrary loan services.

Facilities include areas for individual and collaborative study with study carrels, group study rooms, conference rooms and computer labs equipped with printing capabilities. Wi-fi access is provided throughout the building, and numerous power and wired network connections are available.

**McIntosh Center** (1959) provides a center for student activities, both social and extracurricular, for the University community and for public organizations. The Information Desk provides a central location for students and guests to the campus to obtain general assistance. The main dining room, WOW Cafe and Polar Espresso provide meals and snacks for students and the general public. The building includes a centralized mail room, informal lounge, conference rooms, a general activities room and formal ballroom. The University bookstore and offices of the Vice President for student Affairs are located on the first floor of McIntosh Center. The second floor houses the Student Success Center.

**Weber Hall** (1956) contains the admissions and international admissions offices and the Office of Financial Aid. A new wing and renovations (2007) provide space for the expanding admissions and financial aid staff plus international admissions.

The Science Complex consists of six buildings. In the center is the **Meyer Hall of Science** (1970), where classrooms, laboratories and offices for the faculty and students in Biochemistry, Biological Sciences, and Chemistry are located. To the west of the Meyer Hall of Science is the **Biggs Building** (1971), which houses on the second floor classes, labs, and offices for Health Communication, Psychology, Sociology, and Criminal Justice. The first floor and the buildings labs are home for Manufacturing Technology and Construction Management. The **Science Annex** (1997) provides facilities for instruction and offices for Physics, Astronomy, and the new Getty College Institute for Civic and Public Policy in this two-story addition. To the east of the Meyer Hall of Science is the **Robertson-Evans Pharmacy Building/ONU Healthwise Pharmacy** (1966), where classrooms, laboratories, and offices for the Department of Pharmacy Practice are located. The office of the dean is located on the first floor. Pierstorff Addition (1995) includes a pharmacy museum, physical assessment lab and a student organization meeting room. Opened in 2006, the **Hakes-Pierstorff Family Pharmacy Education Center** offers state-of-the-art classroom, laboratory and office spaces for the Department of Pharmaceutical and Biomedical Sciences faculty. Completing the science complex is the **Mathile Center for the Natural Sciences**. Opened in 2009, the Mathile Center connects 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 offices, labs, and classrooms for Nursing, Mathematics, Medical Laboratory Science, and Statistics. The **Astronomy Research Center** opened in 2010 and is located just west of Wander baseball field. It 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 also were completed in 1996. The Sports Center accommodates intercollegiate athletics, physical education and

recreation 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, labs, and classrooms for Exercise Physiology and Strength and Conditioning 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 in 1991. The track is encircled by mound-style seating with additional bleacher seating for 1,000. The infield of the track complex received artificial turf in fall 2013. ONU also constructed a 2.5-mile outdoor jogging/walking path around the perimeter of campus in 1991. The path is 8 feet wide and can be used for biking.

**Lehr-Kennedy House** (1902), once the retirement home of Ohio Northern's first president, contains the office 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 350 plus multi-use areas and a small prayer room for campus ministry, outreach and multi-faith worship, and the **Burgett Wing** (2002) which houses the Department of Philosophy and Religion.

**Wilson Art Center and Elzay Gallery** (1976) contains classrooms, studios and offices for faculty and students in 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 **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 and lacrosse fans to enjoy the Polar Bears. Dial-Roberson Stadium and **Kerscher Stadium** (2013), home of the men's and women's soccer teams, both received artificial turf in fall 2013.

**The Inn at Ohio Northern University** (2008) is a full-service, 73-bed hotel offering deluxe guestrooms plus one- and two-room suites, a dining room and pub. 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.

**The James Lehr Kennedy Engineering Building** (2019) houses the classrooms, laboratories and offices for the departments of Civil Engineering, Electrical & Computer Engineering and Computer Science, and Mechanical Engineering. This facility includes student project spaces, collaboration areas, a maker space, and a machine shop.

#### **Off-campus Biological Sciences Facilities**

Two facilities are utilized for experiential learning and biological surveys. The 300-acre **Tidd-Oakes Wetland Restoration Project** bordering the Scioto River and Scioto Marsh is twelve miles from the campus. The glaciated, former farm land has an on-site field station and is used for laboratory courses and research in biology. The **ONU Metzger 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, classroom, laboratory and residence center. The hills, valleys, woods, fields, stream and pond provide an excellent opportunity for teaching, study and research in the non-glaciated region of Ohio.



# 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 of 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. Enrollment in a modern language is encouraged. Applications for admission should be accompanied by an official high school transcript submitted by the high school, an essay (required by College of Pharmacy only) and one recommendation letter (for College of Pharmacy only).

Due to ACT and SAT testing cancellations, Ohio Northern University will allow first-year students the option to apply for fall of 2021 without submitting test scores. Students are encouraged to submit ACT or SAT scores if they believe it will enhance their application and accurately reflect their academic achievement. If students choose to apply without scores, their application will be reviewed, without penalty, for both admission and initial merit scholarships.

ACT or SAT scores are required for applicants for the following: Nursing program, Early and Middle Childhood Education programs, Honors Program, Dicke and Mathile Scholarships. Learn more about our test-optional policy at <https://www.onu.edu/admissions-aid/apply-onu>

Application for admission to Ohio Northern University may be made after the end of the junior year or early in the senior year of high school. First-time freshmen applying to the College of Pharmacy are encouraged to submit all application materials by Dec. 1. Early applications are encouraged particularly as some programs have capacities that can be reached. For maximum scholarship consideration, applications should be submitted by Dec. 1. The ACT or SAT should be taken no later than the December testing date of the senior year. Applicants will be reviewed once the file is complete.

**\*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 faculty of that subject area.

**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.

Students will earn 15 credit hours for completion of the IB diploma. In addition, students will receive credit for individual scores ranging from 5 to 7 on the higher level examinations, for a total no greater than 30 credits of AP, IB, CLEP, PEP or institutional examination.

**Transfer Applicants** Transfer students in good standing academically and socially from accredited colleges and universities may be admitted with advanced 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 an Associate of Arts or equivalent degree from an accredited institution and who have an accumulative grade point average of at least 2.00, normally should be able to complete work toward graduation from the Getty College of Arts & Sciences with the Bachelor of Arts in two academic years, if courses in the first two years of work conform to the usual pattern in their chosen major field. The student will assume a normal course load of 15 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 may 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 subject area 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.

Students wishing to transfer work in from colleges and universities outside of the United States must submit an official transcript, translated into English, if necessary. If the credentials are not in English and must be translated, the student will pay for the cost of the evaluation. Ohio Northern University accepts evaluations by any of the following foreign credential services: Members of NACES (National Association of Credential Evaluation Services) found at <https://www.naces.org/members.html>. (not including FORMER members), or AACRAO IES (International Education Services) whose website is [ies.aacrao.org](http://ies.aacrao.org).

**Military Course Work** Military course work, as documented on the DD214, JST transcript, and the Community College of the Air Force, may be transferred based on the American Council on Education (ACE) recommendations. Ohio Northern University will accept up to 12 semester hours of military credit as transfer work toward degree requirements. Following review by applicable Deans and Department Chairs, credits may be awarded as equivalent to ONU courses or as general hours. The same military credit cannot be used to satisfy more than one course equivalent or degree requirement.

Nursing students' military transfer work will be awarded based on the nursing department's military transfer policy and only as approved by the nursing department.

**Re-Entry Students** 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.

## Credit Articulation for Transfer or Returning Students

A student who returns/transfers to ONU may automatically apply to his or her degree requirements a course that the student has completed at ONU if the course or a close equivalent exists in the current university catalog and no more than six years have elapsed since the student completed the course (and the grade of the course meets the degree requirements).

A student who transfers to ONU may automatically apply to his or her degree requirements a course that the student has completed at another college or university if the course exists in the current ONU articulation catalog and no more than six years have elapsed since the student completed the course with a grade of C or higher.

Any course completed more than six years before its application to a degree program at ONU is subject to review and approval by the dean of the college that offers the course or its equivalent at ONU.

To complete a major, minor, or option for a degree from Ohio Northern University, a student must complete 25 percent of the course requirement for the major, minor, or option at Ohio Northern University. Therefore, only 75 percent of the hours required for a degree can be transferred in and applied to a student's hours toward graduation.

## 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 the test optional

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); essay discussing pharmacy as a career and steps taken to learn about pharmacy (required by College of Pharmacy only); a listing of out-of-class activities including any extracurricular experiences, community and church involvement, travel, employment, and other interests/hobbies; and one recommendation letter (for College of Pharmacy 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). 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.

An on-campus visit is recommended. Once the applicant's file is complete, the Admissions Committee will review the student's promise for academic success in the program selected at the university. However, some programs can reach capacity early; check regarding time-lines.

Merit (academic) scholarships are available to home schooled students based on outstanding grades/performance and the appropriate Optional ACT or SAT scores. Refer to the ONU Scholarship materials for details. Special talent awards are also described in this material. Financial assistance, in general, applies to home schooled students in the same fashion as others once admission requirements are met satisfactorily and admission is granted. Admitted students are encouraged to work with the Financial Aid Office to complete the forms and requirements for various programs.

**Admission to the Pettit College of Law** Prospective law students should request separate law college admissions materials. Applicants for the College of Law must take the Law School Admissions Test (LSAT) and be accepted into a 3+3 agreement or be a 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 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 admission program are encouraged to consult the pre-law adviser 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, 525 S. Main St. 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 Student Disability Services office. 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 six-year graduation rate of 70% for first-year students entering in 2012. To be consistent with IPEDS reporting, this rate is based on students who started in the colleges of Arts & Sciences, Business, and Engineering, but does not include those who started in the college of Pharmacy.

## International Students

Ohio Northern University welcomes applications from qualified international students. Applications for undergraduate programs are accepted on a rolling basis. Students requiring a visa to enter the USA should apply at least three months in advance of the term they intend to enroll. For those interested in the Doctorate of Pharmacy program, freshmen must apply by December 1 while transfer students should apply by April 1. In order to be considered for admission to Ohio Northern University, students should submit the International Student Application (on-line), official transcripts of all high school and university course work, and proof of English proficiency (see below). Those students requiring a visa to enter the USA must also show proof of financial support for the first year of college expenses, as well as proof of resources for future years of study.

### English Language Requirements:

<b>Full Academic Admission:</b>	<b>Minimum Score</b>
TOEFL - iBT	79
IELTS - International English Language Testing System	6.0 (no sub-score below 5.5)
ELS Center Completion	Level 112
SAT Reading & Writing	610
GTEC	1201
ACT English	23
PTE -Pearson Test of English	55
Duolingo English Test	105

### International Scholar Transition Program

<b>Admission:</b>	<b>Score Range</b>
TOEFL - iBT	50-78
IELTS - International English Language Testing System	5.5 (no sub-score below 5.0)
ELS Center Completion	Level 109-111
ACT English	22 or less
SAT Reading & Writing	200-600
GTEC	1026-1200
PTE - Pearson Test of English	44-54
Duolingo English Test	80-100

If the student has taken AP English or IB English courses, the English Language Proficiency requirement may be waived. The University grants credit for Global Assessment Certificate (GAC) courses to those 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 directly from the GAC center.

International students for whom English is not their native language must complete the College Composition course sequence (ENGL 1511 and 1521). Requirements may vary by college.

**For further information, contact the Office of International Admissions at [int-adm@onu.edu](mailto:int-adm@onu.edu).**

# Expenses

Please note that the rates listed are for the 2020-2021 academic year. These are set by our Board of Trustees prior to the start of the new academic year. Updated rates will be posted to the Ohio Northern University website at [www.onu.edu/tuition-and-fees](http://www.onu.edu/tuition-and-fees).

## Students enrolled for the 2020-21 academic year

	Arts & Sciences and Business Administration	Engineering	Pharmacy
<b>Tuition Per Semester</b>			
•Full-time student (12-19 hrs.)	\$16,735	\$19,160	\$19,785
•Part-time student (less than 12 hrs.) per hour	\$1,395	\$1,600	\$1,650
•Academic overload fee (per hour)	\$1,050	\$1,200	\$1,240
<b>General Student Fee Per Semester</b>			
•Student fee	\$485	\$485	\$485
•Part-Time Student	\$214	\$214	\$214
Fee helps cover the costs of several very important student services, including technology, student government and programming, student health services, and student counseling services			
<b>Room</b>			
•Residence hall per semester, double or triple occupancy	\$2,870	\$2,870	\$2,870
•Residence hall per semester, (air-conditioned)	\$3,120	\$3,120	\$3,120
•Air-conditioned Suite	\$3,590	\$3,590	\$3,590
•Campus Apartment per semester, double, triple, or quad occupancy	\$4,750	\$4,750	\$4,750
<b>Board</b>			
•Carte Blanche meal plan per semester with \$250 dining dollars	\$3,405	\$3,405	\$3,405
•19 meal plan per semester with \$250 dining dollars	\$3,080	\$3,080	\$3,080
•12 meal plan per semester with \$250 dining dollars	\$2,895	\$2,895	\$2,895
•Greek Affinity Village plan, per semester, 8 meals per week \$250 dining dollars	\$2,195	\$2,195	\$2,195
<b>Total Per Semester, Full-time student</b>	<b>\$23,420</b>	<b>\$25,845</b>	<b>\$26,470</b>
Based on full tuition, university student fee, double occupancy room with AC & 19 meal plan			
<b>Total Per Academic Year, Full-time student</b>	<b>\$46,840</b>	<b>\$51,690</b>	<b>\$52,940</b>
Based on full tuition, university student fee, double occupancy room with AC & 19 meal plan			

## Bachelor of Science in Medical Laboratory Science (BSMLS)

### West Central Ohio Medical Laboratory Science Program

Tuition: \$3,245 per semester, lasts 3 semesters (includes professional liability insurance, administrative costs)

General Student Fee Per Semester: \$485

### MSA Program

Tuition: \$975/credit hour

General Student Fee per semester: \$485

# Payment

## Semester Due Dates for Tuition and Fee Payments

Fall – August 10, 2020 • Spring – January 19, 2021

The university makes available to parents and students both a monthly and bi-monthly payment plan options. These plans can be used to make tuition and fee payments throughout the term, rather than paying the full amount due in a lump sum. Please contact the Controller's Office for additional information on these plans.

### Regular Billing Schedule:

Ohio Northern University billing statements are sent electronically. New students must log in to their TouchNet Ebill account prior to the start of their first term. Students can also set up authorized users, such as parents or guardians, with access to their Ebill account.

For students selecting courses during the advance registration period, bills will be sent through the TouchNet Ebill System approximately

one month before the start of each term. Students and authorized users will receive an e-mail when a bill is available for viewing. Students and authorized users can also view account balances and make payments online 24 hours a day 7 days a week using the TouchNet Ebill System.

Full payment of all charges is due the first day of each semester.

Failure to pay balances by the posted due dates may result in the cancellation of the student's 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 upon registration.

### Student Financial Responsibility Agreement:

All students will be required to sign a Student Financial Responsibility Agreement upon registration for courses at Ohio Northern University (ONU). This agreement informs students of the financial responsibilities associated with enrolling for classes at ONU. It also covers financial aid obligations, communication policies, privacy rights and responsibilities, 1098-T receipt, and more. This agreement, along with our website and other correspondence, helps the University clearly define our payment expectations, billing and collection practices, and other related policies.

### Credit Card Payments:

Visa, MasterCard, Discover, and American Express payments for tuition and fees may be made online through the TouchNet Ebill System. A convenience fee of 2.85% will apply to all credit card payments. Credit card payments for tuition and fees cannot be taken in the Controller's Office.

## 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, and literary magazine 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.

## Other Charges

### Academic Overload Fees:

Undergraduate and Pharmacy students can take a maximum of 19 hours per semester without an overload charge.

For each semester hour over the maximum, 75% of the semester hour charges assessed to part-time students will be billed. Exemption: Activities courses taken as electives.

### Administrative/Activity Fee: \$50.00 per semester hour.

Applicable to tuition exchange students, international exchange students, and others who receive remission of tuition. Also applies to those students participating in study abroad experiences and enrolled in OVRC subject coursework.

**Advance Deposit:** \$200.00. Upon receiving an offer of admission to Ohio Northern, an advance deposit is required by May 1 from all students.

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

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.

**Airport Shuttle Fee:** \$65 for shared shuttle during finals week and the Saturday and Sunday prior to the start of each term.

**Auditing Fee:** per semester hour (when auditing is permitted);

**Background Check (for Education Majors):** \$55.00 per year

**College of Engineering Fee:** \$350.00 per semester

### Course Credit by Institutional Examination:

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.

A \$25 administration fee per course is charged before the examination is administered and is later applied to credit fee if credit is earned. The administration fee must be paid in the Controller's Office before credit is entered on student's permanent record in Registrar's Office.

If credit is earned, the student is then charged a credit hours fee, which is 50% of the tuition charge for the course. The \$25 administration fee is applied towards this charge.

All full-time, degree-seeking students will be permitted to take one course (up to 5 hrs.) by examination at no additional charge beyond the \$25 administration fee. Part-time students are charged 50% of the credit hour charges for the course regardless.

### International Student Fee: \$275.00

This fee helps cover costs of many essential services and activities to

support international students while attending ONU.

**Late Payment Fee:** \$50.00 per semester, plus interest at 1 1/2% per month. If tuition and fees are not paid in full when due, a \$50.00 late fee is assessed along with interest at a rate of 1 1/2% per month on the unpaid balance due. Interest will continue to accrue at a rate of 1 1/2% per month (18% annual) on any unpaid balance until the balance is paid in full.

**Late Registration Fee:** \$110 per semester. The late registration fee is assessed if course registration is not completed at the established time each semester.

**Lost/Stolen/damaged ID Card Fee:** \$25.00 per card

### Music Instruction and Activity Fees

- Applied Music Lessons Fees for all Music Majors:  
Flat semester fee: \$125.00 for all lessons on all instruments  
(additional fees for voice lessons are below)
- Applied Music Lessons Fees for Non-Music Majors:  
Flat semester fee: \$450.00 for each instrument  
MUSL 0011 B-W  
(additional fees for all voice lessons are below)
- Marching Band Charges:  
Marching Band Uniform Maintenance Fee: \$160.00  
Instrument Deposit (refundable to student account): \$50.00
- Recital Charges:  
MUSL 3301 Half Recital: \$300.00  
MUSL 3311 Junior Recital: \$450.00  
MUSL 4311 Senior Recital: \$450.00  
MUSC 4601 Senior-Capstone: \$450.00
- Voice Lesson Fees (for all voice students):  
Additional fees of \$150.00 *per semester* will be applied to these courses for Musical Theater Majors to cover accompanist fees:  
MUSL 1111A  
MUSL 1121A  
MUSL 2111A  
MUSL 2121A  
MUSL 3111A  
MUSL 3121A  
MUSL 4111A  
MUSL 4121A
- Additional fees of \$150.00 *per semester* will be applied to these courses for Vocal Music Majors to cover accompanist fees:  
MUSL 1211A  
MUSL 1221A  
MUSL 2211A  
MUSL 2221A  
MUSL 3211A  
MUSL 3221A  
MUSL 4211A  
MUSL 4221A
- Additional fees of \$150.00 *per semester* will be applied to this course for Music Majors to cover accompanist fees:  
MUSL 0021A

### Motor Vehicles Fees:

#### On-Campus Parking Permit

- Full Year \$65.00
- Per Semester \$40.00

#### Schedule of Fines

- Driving or parking on grass \$30.00
- Driving on sidewalks \$30.00
- Falsification of information \$30.00
- Improper parking \$15.00
- Parking in fire lanes \$35.00
- Parking in handicapped space (not appealable) \$50.00
- Parking in restricted area \$30.00
- Parking longer than posted time \$15.00
- Parking without parking permit — first offense \$65.00
- Reckless operation of a motor vehicle \$35.00
- Stop sign \$15.00
- 30-day Parking Ticket Non-Payment Late Fee (per ticket) \$5.00

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.

**Payment Plan Fee:** \$30.00

**Printing Fees:** Students are given a \$30.00 print allowance each year they are enrolled at ONU. Students who go over their printing allowance are charged for their additional printing at the end of each semester. The cost to print is \$.10 per color page or \$.04 per black-and-white page (standard 8.5-by-11 size). Students can check print balances online at <http://onuprinters.onu.edu:9191/user>.

**Residence Halls Fees:**

- Early arrival fee \$50.00 set up fee plus \$30.00 per day
- Housing over break (residence halls only) \$15.00 per day
- Improper check-out \$100.00
- Lock out fee (per incident) \$10.00
- Re-pin/new keys \$100.00
- Room lock replacement \$300.00
- Staying on campus late fee \$30.00 per day

**Returned Check Fee:** \$25.00 per returned check

**Transcript Fee:**

- Transcripts may be ordered via Self-Service Banner from National Student Clearinghouse (NSC), a non-profit organization serving the higher education community.
- Transcript fee is \$4 plus NSC service fee(s). NSC delivery fee varies by delivery method chosen.
- Transcripts ordered from NSC are processed same or next day if electronic delivery is chosen, and within two to five business days if paper delivery is chosen.
- Special handling will be granted upon request, at the Registrar's Office, with prepayment of the appropriate fee.

**Tuition Remission Fee:**

Full-time (12 credit hours or greater)	\$1,000.00
6-11 Credit hours	\$415.00
1-5 Credit hours	\$210.00

## Summer Session 2020

**College Tuition, per credit hour**

- Colleges of Arts & Sciences and Business Administration: \$800
- College of Engineering: \$900
- College of Pharmacy: \$900

**Summer Apartment Rental 2020:** \$470 per month (double)

## 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. A replacement fee of \$25.00 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.

## Withdrawal Refund Policy and Return of Title IV Funds

If a student withdraws from the university, or is suspended for disciplinary reasons, a refund of tuition and Title IV funds will be made on the basis shown below. The withdrawal date is the date the student officially submits the withdrawal form, or the date the University determines the student ceased attendance or failed to meet published academic policies, whichever comes first. Students who drop from full-time to less than full-time during the first 60% of the semester may have adjustments made to their tuition and financial aid as well.

The adjustments in charges and/or financial aid may result in an outstanding balance on the student's account, which will be due at the time of withdrawal.

## Refund of University Charges

**Note:** The following refund information applies to Summer, Fall, and Spring terms only. During January term, no refund of any type will be issued after the first day of the term.

**Tuition** – Students withdrawing on or before the first day of classes each semester are granted a 100% refund of tuition. Tuition charges are prorated from that point forward. During the first week of classes, tuition will be prorated 5%. After the first week of the semester has passed, tuition refunds are calculated through the Controller's Office using 10% increments through the 60% point of each semester. There is no proration of charges after the 60% point of each semester. For more information and to connect with a financial aid counselor please refer to the Financial Aid page of our website at [www.onu.edu/financial-aid](http://www.onu.edu/financial-aid).

**Fees** – Students will be responsible for the full amount of any General Student Fee and College of Engineering Program Fee charges. Course fee charges are refunded at 100% through the last day to add a class or section for each term, with no proration given after that point. Please review the college calendar for your program to view the last day to add a class or section for each term.

**Room and Meal Plan** – Students choosing to move out of campus housing on or before the first day of classes each semester are granted a 100% refund of housing and meal plan charges. Housing and meal plan charges are prorated from that point forward based on the date the student moves out of campus housing. During the first week of classes, housing and meal plan charges will be prorated 5%. After the first week of the semester, housing and meal plan refunds are calculated through the Residence Life Office using 10% increments through the 60% point of each semester. There is no proration of charges after the 60% point of each semester. Early arrival charges, late check-out fees, damage billing, and other housing fees are not subject to this proration policy and are non-refundable fees.

## Financial Aid Adjustments

**Ohio Northern Aid** – All Ohio Northern scholarships, grants and awards will be adjusted using the same proration as used for our tuition adjustments. Students withdrawing on or before the first day of classes each semester will have 100% of all ONU aid removed from their account. ONU aid is prorated from that point forward. During the first week of classes, ONU aid will be prorated 5%. After the first week of the semester has passed, ONU aid is calculated through the Financial Aid Office using 10% increments through the 60% point of each semester. There is no proration of aid after the 60% point of each semester. For more information and to connect with a financial aid counselor please refer to the Financial Aid page of our website at [www.onu.edu/financial-aid](http://www.onu.edu/financial-aid).

**Title IV Aid** – Title IV Aid includes Federal Pell Grant, Federal Supplemental Education Opportunity Grant (FSEOG), TEACH Grant, Direct Subsidized and Unsubsidized Stafford Loan, and Direct PLUS Loan funds. Title IV Aid will be prorated on a daily basis from the first day of classes as per federal regulation (34 CRF 668.22). Direct Subsidized/ Unsubsidized Stafford Loan, Perkins Loan, and Health Profession Loan borrowers will be expected to provide the exit interview information as



requested through their loan servicer. Direct Subsidized/Unsubsidized Stafford Loan servicers are assigned to each borrower by the Department of Education. All Perkins Loans and Health Profession Loans borrowed while enrolled at ONU are serviced through ECSI. More information can be found on their site at <https://borrower/ecsi.net>.

**Outside Aid** – The adjustment of outside financial aid received, such as outside scholarships, will depend 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 ONU's Ohio Northern Aid refund schedule.

**Work Study Earnings** – 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.

## 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 Department of Public Safety to the Traffic Appeals Committee. Appeals for other charges must be filed with the Vice President of Student Affairs.

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

## Course Fees 2020-21

ABUS 4452 International Business & Culture	\$2,900.00
ART 2651 Non-Western Art	\$1,300 + \$700 deposit
BIOL 1021 The Genetics of Human Diversity	\$125.00
BIOL 1031 Life & Earth Sciences	\$70.00
BIOL 1131 Principles & Concepts of Human Biology	\$40.00
BIOL 1211 Introductory Biology	\$100.00
BIOL 1301 Bio 1 - Cells, Molecules & Evolution - Majors	\$60.00
BIOL 1401 Bio 2 - Biodiversity, Organismal Biology & Ecology	\$60.00
BIOL 2021 Environmental Issues (Course Fee)	\$50.00
BIOL 2021 Environmental Issues (Nature Center Fee)	\$105.00
BIOL 2031 Evolution	\$30.00
BIOL 2041 Systematic Plant Survey (Course Fee)	\$40.00
BIOL 2041 Systematic Plant Survey (Nature Center Fee)	\$105.00
BIOL 2101 Genetics	\$175.00
BIOL 2131 Natural History (Course Fee)	\$65.00
BIOL 2131 Natural History (Nature Center Fee)	\$35.00
BIOL 2181 Molecular Biology Lab	\$200.00
BIOL 2191 Forensic Biology 1	\$200.00
BIOL 2231 Invertebrate Zoology (Course Fee)	\$60.00
BIOL 2231 Invertebrate Zoology (Nature Center Fee)	\$105.00
BIOL 2291 Forensic Biology 2	\$250.00
BIOL 2331 Anatomy & Physiology 1	\$125.00
BIOL 2341 Anatomy & Physiology 2	\$80.00
BIOL 2351 Forensic Application in A&H	\$80.00
BIOL 2511 Ecology (Course Fee)	\$60.00
BIOL 2511 Ecology (Nature Center Fee)	\$105.00
BIOL 2591 Crime Scene Investigation	\$250.00
BIOL 2601 Tropical Biodiversity Conservation	\$4,000.00 + \$500.00 deposit
BIOL 2631 Biogeography (Course Fee)	\$50.00
BIOL 2631 Biogeography (Nature Center Fee)	\$105.00
BIOL 2691 Forensic Computer Analysis	\$175.00
BIOL 2751 Principles of Herbal Medicine: Ethnobotanical Pharm	\$25.00
BIOL 2901 Special Topics in Biological Sciences	\$100.00
BIOL 3011 Developmental Anatomy	\$60.00
BIOL 3021 Human Anatomy	\$275.00
BIOL 3031 Histology	\$50.00
BIOL 3191 Forensic Microscopy	\$250.00
BIOL 3201 Immunology Lab	\$100.00
BIOL 3221 Bioscience Lab	\$125.00
BIOL 3241 Med Physiology 1	\$75.00
BIOL 3251 Med Physiology 2	\$75.00
BIOL 3291 Forensic Physical Methods	\$250.00
BIOL 3431 Histological Techniques	\$75.00
BIOL 3461 Clinical Microbiology	\$150.00
BIOL 3571 Forensic DNA Analysis	\$500.00

BIOL 3591 Wetland Delineation Practicum (Course Fee)	\$15.00
BIOL 3591 Wetland Delineation Practicum (Nature Center Fee)	\$70.00
BIOL 3601 North American Mammals (Course Fee)	\$35.00
BIOL 3601 North American Mammals (Nature Center Fee)	\$105.00
BIOL 3611 Entomology (Course Fee)	\$35.00
BIOL 3611 Entomology (Nature Center Fee)	\$105.00
BIOL 3621 Parasitology (Course Fee)	\$60.00
BIOL 3621 Parasitology (Nature Center Fee)	\$105.00
BIOL 3631 Ornithology (Course Fee)	\$95.00
BIOL 3631 Ornithology (Nature Center Fee)	\$35.00
BIOL 3641 Herpetology (Course Fee)	\$40.00
BIOL 3641 Herpetology (Nature Center Fee)	\$105.00
BIOL 3651 Forensic Entomology	\$125.00
BIOL 3671 Field Botany (Course Fee)	\$50.00
BIOL 3671 Field Botany (Nature Center Fee)	\$350.00
BIOL 3681 Ichthyology (Course Fee)	\$65.00
BIOL 3681 Ichthyology (Nature Center Fee)	\$490.00
BIOL 3691 Field Entomology (Course Fee)	\$50.00
BIOL 3691 Field Entomology (Nature Center Fee)	\$420.00
BIOL 3701 Marine Biology	\$1,100.00
BIOL 3731 Field Skills for Biologists (Course Fee)	\$50.00
BIOL 3731 Field Skills for Biologists (Nature Center Fee)	\$105.00
BIOL 3741 Freshwater Ecology (Course Fee)	\$50.00
BIOL 3741 Freshwater Ecology (Nature Center Fee)	\$105.00
BIOL 3751 Mammalogy (Course Fee)	\$65.00
BIOL 3751 Mammalogy (Nature Center Fee)	\$105.00
BIOL 3781 Behavioral Ecology	\$1,100.00
BIOL 3831 Animal Behavior	\$30.00
BIOL 3911 Pathophysiology	\$50.00
BIOL 3921 Practical Toxicology	\$100.00
BIOL 4571 Advanced Forensic DNA Analysis	\$500.00
BIOL 4761 Internship in Biology Capstone	\$50.00
BIOL 4771 Internship in Environmental & Field Biology Capstone	\$50.00
BIOL 4781 Internship in Forensic Biology Capstone	\$50.00
BIOL 4791 Internship in Molecular Biology Capstone	\$50.00
BIOL 4861 Biology Capstone Seminar	\$60.00
BIOL 4871 Environmental & Field Biology Capstone Seminar	\$60.00
BIOL 4881 Forensic Biology Capstone Seminar	\$60.00
BIOL 4891 Molecular Biology Capstone Seminar	\$60.00
BIOL 4901 Special Topics in Biology - Plant Taxonomy (Course Fee)	\$250.00
BIOL 4901 Special Topics in Biology - Plant Taxonomy (Nature Center Fee)	\$315.00
BIOL 4961 Independent Study in Biology	Varies by Course
BIOL 4971 Independent Research in Biology	\$100.00
CE 3411 Structural Engineering 1	\$33.00
CE 3431 Structural Design 1	\$60.00
CHEM 1201 Chemistry for the Health Sciences	\$30.00
CHEM 1551 Chemistry for Engineering Lab	\$30.00
CHEM 1711 General Chemistry 1	\$30.00
CHEM 1721 General Chemistry 2	\$30.00
CHEM 1811 General Chemistry 1-Majors	\$30.00
CHEM 1821 General Chemistry 2-Majors	\$30.00
CHEM 2311 Analytical Chemistry 1	\$30.00
CHEM 2321 Environmental Analysis	\$30.00
CHEM 2551 Organic Chemistry Lab 1	\$30.00
CHEM 2561 Organic Chemistry Lab 2	\$30.00
CHEM 2651 Organic Chemistry Lab 1-Majors	\$30.00
CHEM 2661 Organic Chemistry Lab 2-Majors	\$30.00
CHEM 3151 Biochemistry Lab	\$30.00
CHEM 3261 Medicinal Chemistry Lab	\$30.00
CHEM 3411 Physical Chemistry 1	\$30.00
CHEM 3421 Physical Chemistry 2	\$30.00
CHEM 3601 Organic Synthesis	\$30.00
CHEM 3751 Inorganic Chemistry 1 Lab	\$30.00
CHEM 4161 Advanced Biochemistry Lab	\$30.00
CHEM 4321 Analytical Chemistry 2	\$30.00
ECCS 3351 Microprocessors	\$35.00
EDUC 1151 Culture and Schooling	\$139.00
EDUC 4001 Literacy Assessment	\$139.00
EDUC 4951 Student Teaching Seminar	\$300.00
EXPH 1101 Medical Emergency Management	\$20.00
GEOG 2481 Introduction to Geographic Information Systems	\$10.00
GEOG 3481 Applied Geographic Information Systems	\$10.00

GEOL 2811 Geology Lab (Course Fee)	\$95.00
GEOL 2811 Geology Lab (Nature Center Fee)	\$105.00
HIST 0041 Teacher Licensure Orientation	\$105.00
HIST 3021 Nature Center Seminar in History	\$105.00
HIST 4121 Field School in Archaeology	\$320.00
ISTP 1111 Listening and Speaking 1	\$95.00
ISTP 1131 Reading and Vocabulary 1	\$95.00
ISTP 1211 Listening and Speaking 2	\$95.00
ISTP 1231 Reading and Vocabulary 2	\$95.00
LAW 1399 Negotiation Workshop	\$50.00
ME 4011 Process of Design	\$25.00
MGMT 4775 Executive Classroom: Leadership Realities	\$800.00
MLS 4601 Foundations of Medical Laboratory Science	\$100.00
MLS 4611 Professional Practice & Development	\$240.00
MLS 4621 Biological Fluids	\$100.00
MLS 4651 Blood Banking & Transfusion Science	\$100.00
MLS 4661 Medical Chemistry	\$100.00
MLS 4681 Medical Laboratory Practicum Orientation	\$100.00
MLS 4691 Medical Hematology Practicum	\$100.00
MLS 4701 Blood Bank Practicum	\$100.00
MLS 4711 Medical Chemistry Practicum	\$100.00
MLS 4721 Medical Microbiology Practicum	\$100.00
MLS 4731 Immunology & Infectious Diseases Practicum	\$100.00
MRKT 3541 GeoAnalytics	\$10.00
MUSC 4601 Senior Capstone Research Project	\$450.00
MUSE 1051 Marching Band	\$160.00
MUSL 0011A Applied Lessons for Non-Majors (Voice)	\$450.00
MUSL 0011 B-U Applied Lessons for Non-Majors	\$450.00
MUSL 0021A Supplemental Lessons for Music Majors (Voice)	\$150.00
MUSL 1111A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 1121A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 1211A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 1221A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 2111A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 2121A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 2211A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 2221A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 3111A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 3121A Applied Lessons for Musical Theater Majors (Voice)	\$150.00
MUSL 3211A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 3221A Applied Lessons for Musical Majors (Voice)	\$150.00
MUSL 3301 Half Recital	\$300.00
MUSL 3311 Junior Recital	\$450.00
MUSL 4111A Applied Lessons for Music Theatre Majors	\$150.00
MUSL 4121A Applied Lessons for Music Theatre Majors	\$150.00
MUSL 4211A Applied Lessons for Music Majors	\$150.00
MUSL 4221A Applied Lessons for Music Majors	\$150.00
MUSL 4311 Senior Capstone Recital	\$450.00
NURS 1101 Professional Concepts (ATI NCLEX Resources)	TBD
NURS 2101 Physical Assessment	\$130.00
NURS 2301 Fundamentals	\$130.00
NURS 3101 Medical Surgical Nursing 1 (Lab Fee)	\$130.00
NURS 3101 Medical Surgical Nursing 1 (ATI NCLEX Resources)	TBD
NURS 3311 Global Medical Mission Experience	\$1,400.00+ \$500.00 deposit
NURS 3501 Nursing Care of the Developing Child and Family	\$130.00
NURS 4101 Community Health Nursing	\$25.00
NURS 4401 Medical Surgical Nursing 2	\$130.00
NURS 4981 Transition to Professional Practice: Nursing Capstone	\$25.00
PHPR 2811 Global Healing Traditions	\$2,750.00 + \$500.00 deposit
PLSC 3021 Nature Center Seminar in Political Science	\$105.00
PLSC 4721 The Washington Center Seminar	\$125.00 per credit hour
PLSC 4731 The Washington Center Internship	\$125.00 per credit hour
PLSC 4751 Model United Nations	\$90.00
PLSC 4761 Mock Trial	\$60.00
PSYC 3151 Learning & Behavior with Lab	\$35.00
PSYC 3301 Sensation Perception with Lab	\$20.00
PSYC 3351 Physiological Psychology with Lab	\$30.00
PSYC 3401 Experimental Psychology with Lab	\$25.00
PSYC 4961 Senior Capstone in Psychology 2	\$30.00
TECH 4621 Programming in Embedded Systems	\$100.00
WAMS 3301 Narrative Photography	\$40.00

# Scholarships and Financial Aid

Ohio Northern University's Office of Financial Aid administers a comprehensive financial aid program designed to help you meet your demonstrated needs. We make every effort to understand your financial circumstances so that the assistance you receive fairly reflects your ability to contribute to your education expenses.

## Student Eligibility

Each applicant for student aid should complete the Free Application for Federal Student Aid (FAFSA) online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). Parents and/or students are encouraged to submit the FAFSA as early as possible. Eligibility for federal and state financial assistance (grants, loans and work opportunities) will be determined from information submitted on the FAFSA.

To qualify for institutional financial assistance, students must be enrolled full-time and degree seeking. Institutional financial assistance is not available to students for summer term or to students who already hold a bachelor's degree, though federal assistance may be available.

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.)

While full-time enrollment is normally required for a student to receive ONU scholarships, grants and awards, an exception will be made for one fall or spring semester during a student's enrollment at ONU provided the student is enrolled for at least 3 credit hours. For many students this is the final semester of enrollment where less than 12 credit hours are needed to complete the degree program or for a semester where a student is enrolled in a required internship for less than 12 credit hours. During this semester ONU scholarships, grants and awards will be prorated by dividing the number of hours registered by 12 and multiplying the resulting percentage by the full-time semester award amount of the scholarship or grant. To initiate this proration of funds, students must communicate intent to enroll for less than 12 credit hours to the financial aid office by the end of the last day to add a class of the applicable semester.

## 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, while also meeting minimum GPA requirements. Further information relative to the satisfactory progress standards and exceptions or appeals are referred to at [onu.edu/financial-aid](http://onu.edu/financial-aid).

## Types of Financial Assistance

### Federal Grants

**Federal Pell Grant** The FAFSA should be filed for this federal grant (the maximum award amount for the current academic year can be found at [studentaid.ed.gov](http://studentaid.ed.gov)). 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.

**TEACH Grant** To qualify, students must be going into a career in teaching and must commit to teach full-time at a Title I school in a "high-need" field for at least four years within eight years of becoming a highly qualified teacher. The maximum award per year is \$4,000. Other requirements and restrictions apply. Please contact the Financial Aid Office to apply for this grant.

### State Grants and Scholarships

**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 school year and attend an Ohio 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.

**Pennsylvania residents** should ask their high school guidance counselors about a grant from their state. Pennsylvania will send eligible students' approvals for an award directly to ONU.

**Choose Ohio First Scholarship** This scholarship is awarded to Ohio residents who pursue certain STEM degrees at ONU. Students must have a minimum 24 ACT (or SAT equivalent) and a 3.3 GPA. The scholarship application is located at [onu.edu/chooseohiofirst](http://onu.edu/chooseohiofirst).

## Institutional Grants and Scholarships

**ONU General Grant** The FAFSA form must be filed for this university grant award based on need. The amount is determined by the aid office.

**ONU Methodist Crusade** This application can be obtained from ONU's aid office for members of an Ohio United Methodist Church. Students must show a need on the FAFSA to qualify for this \$1,000 per year grant.

### Ohio Northern University Scholarships

Scholarships provided by Ohio Northern University recognize outstanding achievement by high school students and previous college achievement for transfer students. Financial need is not a requirement. For high school students, scholarships are awarded based on ACT and/or SAT scores and high school GPA. Ohio Northern will superscore ACT and SAT test results for scholarship purposes and will use a weighted GPA if provided by the high school. For transfer students, scholarships are awarded based on the GPA from the student's previous college.

ONU scholarships are awarded each year the student is enrolled in undergraduate coursework. For Pharmacy students scholarships are awarded for the first four years. There is a separate scholarship program for the fifth and sixth years.

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 admission application.

**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. This award will be coordinated with all other university financial aid. Academic scholarships may be adjusted.

**ONU Matching Grant for Churches** Ohio Northern will match any church awarded scholarship up to \$1,000 per year. The match is on a dollar-for-dollar basis up to, but not exceeding, established financial need. The application deadline is May 1 of each year. The application can be found at [onu.edu/financial-aid](http://onu.edu/financial-aid).

**ONU Legacy Award** Awarded to legally dependent (defined by IRS) sons or daughters of ONU graduates or a prospective student who already has a sibling enrolled full-time at ONU. Financial need is not a factor.

**ONU Dimension Award** This award is provided to qualified students who are underrepresented at ONU. Awards start at \$1,000 and are coordinated with other available funds.

**ONU Talent Award** Awards are available to students accepted into the School of Visual and Performing Art majoring in art, music, musical theatre or theatre, and students with a minor in dance. Orchestral and Choral awards are available for non-music majors as well as awards for students participating in marching and symphonic band. An audition, portfolio review, or interview is required for talent award consideration, except for marching band. The deadline to apply for the non-music talent award is Dec. 1.

Talent Awards are also available to students who choose any of our English majors (literature, creative writing, language arts education, and writing and multimedia studies). Talent awards are coordinated with other university grants and scholarships. Contact the office of admissions for more information.

## Military Assistance

ONU is committed to providing assistance to military members and their eligible dependents/spouses in taking full advantage of their educational benefits to the extent possible under current regulations. GI Bill® benefit recipients should provide a copy of their Certificate of Eligibility (COE) to the Financial Aid Office in order to be certified. ONU is a member of the Yellow Ribbon Program and additionally, guarantees Full Tuition and Fees coverage for all recipients with 60% or greater of Post 9/11 GI Bill benefits.

## Student Loans

The first two loans all feature 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 does not generally begin until the grace period elapses. These loans can also be deferred again for graduate school.

**Health Professions Loan** The FAFSA must be on file, with financial need being established as a dependent student, to be eligible for this 5% interest rate federal student loan. The loan is for Pharmacy students only and ONU is the lender. The grace period is 12 months. An application must be completed through the financial aid office.

**Federal Subsidized Loan** This federal program allows first-year students 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. The aid office will determine eligibility. The student should maintain Satisfactory Academic Progress. The interest rate is set at a fixed rate with a default fee subtracted by the federal government before the loan is disbursed to the student account. The grace period is six months. The application for the loan is located at [studentaid.gov](http://studentaid.gov).

**Federal Unsubsidized Loans** (dependent students) are available to students who were either limited or determined to be ineligible for the Federal Subsidized Loan. The amounts per grade level are the same as for the Federal Subsidized 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 set at a fixed rate with a default fee subtracted by the federal government before the loan is disbursed to the student account. Additionally all undergraduate dependent students are eligible to borrow \$2,000 of unsubsidized loans beyond the subsidized limits established.

**Federal Unsubsidized Loans** (independent students) The terms for this loan are the same as for dependent students. The amounts are up to \$4,000 for first-year and sophomores; \$5,000 for juniors, seniors and fifth-year students. Graduate (Law and MSA) students can use up to \$20,500 per year with Pharmacy graduate students (P5 and P6) qualifying for up to \$33,000 annually.

**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 a fixed interest rate. A default fee is subtracted by the federal government before the loan is disbursed to the student account. 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 [studentaid.gov](http://studentaid.gov).

**Federal Graduate PLUS Loan** A graduate student may borrow this loan to assist in covering the cost of their education. This loan has a fixed interest rate. A default fee is subtracted by the federal government before the loan is disbursed to the student account. The amount borrowed can be up to

the cost of education minus financial aid per year. Repayment begins six months after graduation. Income is not a criterion in obtaining a PLUS loan. A good credit history is required. The application for the Graduate PLUS loan is located at [onu.edu/loans](http://onu.edu/loans).

**Private Student Loan** This is 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. For many private loans the repayment of principal and interest begins after graduation or when the enrollment status drops below half-time. Other private loan options require some type of payment while enrolled in school. The length of repayment is based on the loan balance. There is no penalty for prepayment. A list of optional private loan lenders can be found at [onu.edu/loans](http://onu.edu/loans).

## Campus Employment

The **Student Employment Program** allows students to work on campus to offset educational expenses. Jobs are awarded regardless of the students Federal Work Study eligibility. A 15-hour week is the work limitation and paychecks are issued directly to students every two weeks. Students can search and apply for open jobs at <https://jobs.onu.edu/>

# Campus Student Life

## Policies

Policies relating to student life are available in the Student Handbook, published on the Student Life web page. Students are expected to conform to those requirements.

## Residence Life

ONU is a residential campus by design. All Ohio Northern full time students reside in ONU housing during their first three years, which includes traditional residence halls, affinity housing, suite-style housing, campus apartments, and Greek Letter Organization housing on and off campus. Living on campus is a great way to develop lifelong relationships with your peers and become an active member of the ONU community. In addition, living on campus is a convenient experience for students to live in a safe and inclusive environment close to their academic and social supports.

Priority for apartments and affinity housing is granted based on credit hour status. There are single, double, triple and quad bedroom apartment units available. Each apartment is equipped with its own kitchen and living room. The university may alter these arrangements to accommodate student housing needs.

All residence hall rooms are furnished with window treatments, beds, mattresses, desks, closets, ONU cable television hookup, and wireless or high speed computer connection capability. Every student that is residing in an on campus housing assignment has free access to use the washers and dryers, and recreation equipment. Many of our residence areas include fitness centers.

In accordance with the University Housing Policy (as stated in the Student Handbook) at least one of the following criteria must be met in order for a student to move out of the residence halls at the beginning of an academic year:

- 3 years (6 semesters) in the residence halls or apartments
- 23 years of age
- The Student will be commuting daily from the permanent home address of their parent(s) or legal guardian(s) within a 30-mile driving distance of ONU; Please note that the Office of Residence Life considers the permanent home address of the Student's parent(s) or legal guardian(s) to be the address of record on file with federal, state, and local tax agencies and where a minimum of one of the Student's parent(s) or legal guardian(s) reside. This is the information on file through Financial Aid and Admissions Offices.
- Proof of permanent residence of a parent, grandparent, or sibling, within a 30-mile drive of campus for commuting

- Proof of an undergraduate degree
- Proof of having served in the armed forces and qualified for veterans' benefits
- Proof of marriage

If you do not qualify for any of the above criteria, you are NOT eligible to live off campus. Please print, complete, and submit the Off Campus Housing form for review, verification and approval process to the Res Life Office. If you have any questions please email [reslife@onu.edu](mailto:reslife@onu.edu). In addition to completing the Off Campus Housing form, all students leaving ONU housing to live off campus must attend one Good Neighbor Meeting. The Good Neighbor Meetings are a collaborative effort by the Village of Ada and ONU and include presentations by the Chief of the Ada Police and the Ada Mayor, as well as presentations from Financial Aid, Student Conduct, and Residence Life.

Once a housing commitment has been made, it is for the entire academic year, fall and spring semester. Residents are not permitted to move from the residence halls, apartments or affinity housing to off-campus housing or Greek Letter Organization 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 campus apartment housing. Any student that chooses to stay during ONU approved breaks are to check in at The Office of Residence Life. In order for the student's access to residence halls to remain active, this information will be shared with Public Safety.

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 through The Housing System or an email to The Office of Residence Life. 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 roommate selection process and the housing lottery, for returning students begins in spring term. Assignments are available online.

## Dining Services

All students living in ONU housing are required to be on a meal plan. Students residing in the Residence Halls, Suites, and Affinity Village must choose a traditional meal plan that includes meal swipes. Students residing in an ONU on-campus apartment will receive 400 dining dollars. Off-campus Greek students, commuting or approved off-campus students have the option to purchase meal plans or pay per meal. Students who are living in a Greek on-campus assignment are required to be on the Greek 8 Meal Plan. WOW Cafe American Grill & Wingery, Polar Espresso and the main dining room are in McIntosh Center and open to everyone. Additional dining options include Così at Northern, located across from the main entrance into campus, and Northern Lights at Heterick Memorial Library. Sodexo Dining Services provides all of the dining services on campus, including the provision of catering services for special events and banquets.

## Student Health Center

The Health Center staff educate and encourage students to make informed decisions about health-care concerns and empower students to be self-directed and well informed citizens on personal health care.

The health center is staffed with a Nurse Practitioner four days a week, a Physician one day, and Registered Nurses daily Monday through Friday 8am – 4:30pm. During the summer a registered nurse is on staff Monday-Friday with limited hours.

The Health Center will require the student to call 419-772-2086 for a virtual appointment for all visits during the COVID pandemic. Students must wear a facial mask for all face to face visits inside the health center. All medical records are confidential, and only at the student's request will the University Health Center share medical information as requested. Medical records are destroyed four years after a student leaves ONU.

All students entering the university are required to submit a complete medical history with immunization record and a TB questionnaire.

## 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 Monday-Friday 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 support from the Counseling Center staff in order to better understand and resolve their difficulties. Some commonly presented concerns include loneliness, depression, suicidal thoughts, crisis intervention, homesickness, substance abuse, feelings of inadequacy, anxiety, roommate conflicts, relationship problems, loss or grief, and emotional trauma. In addition to counseling support, the outreach coordinator is also working to provide additional resources, information, and training relating to suicide and crisis prevention. The staff makes every effort to create an atmosphere where personal concerns of any type can be examined and discussed freely and confidentially. The staff also provides assistance to students who struggle with time management, procrastination, and test anxiety.

Any student interested in making an appointment can contact the Counseling Center directly; no referral is necessary. Normal office hours are 8:00 a.m. - 5:00 p.m. Evening appointments may be available upon request.

## Polar Careers

The Office of Polar Careers helps students throughout their time at ONU. Polar Careers staff coach students as they choose majors, internships, mentorship opportunities, and prepare for the transition from college to graduate/professional school and/or the world of work. The office serves as a liaison between students, alumni, and potential employers by making job referrals, distributing vacancy notices, and conducting on-campus recruiting programs. By using the services of this office, students will gain a better understanding of how to be successful as they develop their path toward meeting career and graduate school goals. A separate Career and Professional Development office is maintained by the College of Law.

## Office of Multicultural Development

The mission 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 underrepresented 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 limited to:

- Dimension Award Scholars Program
- Opening the Way Multicultural Reception
- Transitions: Rites of Passage Ceremony
- Cultural Conversation Hour Series
- Financial Aid Seminar
- Diversity Training/ Seminars

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 United Methodist Church-affiliated university, Ohio Northern recognizes the importance of faith in the life and education of its students. Opportunities are available for students and faculty to examine, develop, and practice their religious and spiritual traditions 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 middle of campus is Wesley Center, which consists of the Walter and Marian English Chapel and the Burgett Pavilion. English Chapel houses the chapel sanctuary, meeting room, prayer room, and multi-faith room. The Burgett Pavilion houses the academic programs of philosophy and religion (which includes a conference room and an area for the administrative assistant), three classrooms, office of the University Chaplain and the chaplain's administrative assistant, office for religious life staff, and a lounge. The chaplain is available to students seeking spiritual and personal counsel, spiritual direction, and friendly conversation. The Chaplain also coordinates "Get Connected ONU," a program that aims to connect student volunteers to area non-profit organizations that need volunteer help. Throughout the year, the Chaplain's Office will also sponsor retreats, spiritual formation groups, and other opportunities for spiritual growth.

The Religious Life Program seeks to help students develop a mature, thoughtful, and relevant faith that will serve them well in contemporary society. 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. Emphases are placed on spiritual formation, worship, and service. Opportunities are available through student groups to reach out and put faith into practice. Each student is free to choose the extent of his or her participation.

Chapel is held each Thursday at 11 a.m., beginning with a communal meal and fellowship time. Attendance is voluntary and is encouraged by scheduling it during an open hour. No classes or other university events are to be scheduled during this time. In addition, weekly prayer is held one afternoon each week. This reflective service in the liturgical tradition is an opportunity for members of the campus community to meet together to pray for the campus, the community, and the world.

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

## RELIGIOUS LIFE ORGANIZATIONS AND PROGRAMS

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

### Religious Life Staff

Eight students serve as members of the Religious Life Staff, overseeing several important areas of campus ministry, including:

Ada Friends Coordinators  
Programming Coordinator  
Community Building Coordinator  
Technical Team Coordinator  
Music Coordinator  
Worship Arts Coordinator

Organizations/teams in Religious Life:

### Ada Friends

A mentoring 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.

### Gospel Ensemble

A vocal outreach team that travels to churches singing primarily contemporary gospel music and frequently 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.



### **Jewish Student Union**

Is an organization made up of people who are interested in Judaism and Jewish life on campus.

### **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 Christian Fellowship (NCF)**

Works alongside Campus Crusade for Christ with the goal of providing a welcoming environment, using small groups, discipleship pairs, and a large group gathering, called Fusion, on Thursday evenings.

### **Pre-Ministry Students**

Students who are considering entering seminary or a church vocation; open to anyone interested in talking about professional ministry.

### **Sigma Theta Epsilon**

A national Christian service fraternity.

### **Tech Team**

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

### **Worship Band**

A musical group open to all types of musicians and singers that leads worship music during weekly Chapel.

## **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, Parkway, Maglott, Founders, and Park).

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.

## **Student Organizations**

### **GENERAL STUDENT ORGANIZATIONS**

Student Senate is the governing body for the students of Ohio Northern University and serves as a liaison between the students and administration. The purpose of the Student Senate is to serve as the official representative group of the student body and to work cooperatively with the faculty, the administration, and the Board of Trustees of the University in the formulation of University policy in matters pertaining to the student body. The Student Senate President serves as a member of the Board of Trustees of the University.

## **OFFICE OF STUDENT INVOLVEMENT**

### **Greek Life**

Ohio Northern University has seven national social fraternities and four national social sororities. The Interfraternity Council is the governing body for social fraternities, and the Panhellenic Council is the governing body for social sororities.

The seven men's national social fraternities with the dates of their establishment at Ohio Northern are: Alpha Sigma Phi, (2018), Delta Sigma Phi, (1920); Phi Gamma Delta (2014), Phi Mu Delta (Refounded 2016, Chartered 1926), Sigma Phi Epsilon, (1905); Sigma Pi (Refounded 2017, chartered 1912) and Theta Chi, (1966).

The four women's national social sororities with the dates of their establishment at Ohio Northern are: Alpha Xi Delta, (1959); Delta Zeta, (1959); Zeta Tau Alpha, (1959); and Kappa Alpha Theta (1994).

### **Student Activities**

The Student Planning Committee develops and implements social, educational, cultural, and recreational programs throughout the school year, for the university community.

Ohio Northern University has over 200 approved student organizations of a wide variety of interests.

In addition to the Greek life organizations on campus, there are six national professional fraternities and sororities with the dates of establishment at Ohio Northern: Kappa Epsilon (Pharmacy), (1957); Kappa Psi (Pharmacy), (2009); Phi Alpha Delta (Law), (1960); Phi Sigma Rho (Engineering/Computer Science for Women), (2002); Rho Chi (Pharmacy), (1962), Theta Tau (Engineering), (2018).

### **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 programming and events in the area of leadership development provided by Leaders' Council and maintaining a Leadership Library of resources and training materials.

## **HONORARY SOCIETIES**

**Alpha Epsilon Delta**, health pre-professional national honorary.

**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 first-year 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 of learning by reserving 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.

**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.

**Gamma Sigma Epsilon**, a national chemistry honorary founded in 1919, is open to all students who have completed two years of chemistry courses and labs.

**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. The group recognizes juniors and seniors for outstanding leadership across campus and represents the top 3% of Greek members on campus.

**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 Eta Sigma**, national scholastic society for first-year 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 international 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 engineering, 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 Americae**, 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.

## DEPARTMENTAL, PROGRAM, AND PROFESSIONAL ORGANIZATIONS

Special organizations, many of them chapters of national organizations, are active in all of the colleges of the University. Members of these groups meet regularly to discuss matters of interest in their respective areas:

**University:** Black Student Union; Cheerleaders; College Democrats; College Republicans; Latino Student Union; Muslim Student Association; Psi Sigma, Student Planning Committee; Leaders' Council; Good News Bears; Orientation Leaders; Student Senate; The President's Club; World Student Organization;

**Getty College of Arts & Sciences:** Academy of Criminal Justice Sciences; American Correctional Association; American Society for Biochemistry and Molecular Biology Undergraduate Affiliate Network; Amnesty International, Arts and Sciences Student Advisory Board; Association of Future Forensic Professionals; Association for Technology, Management and Applied Engineering; Biology Student Association; College Broadcaster Inc.; Collegiate Middle Level Association; Mathematical Association of America; Mock Trial; Model United Nations; Music Educators National Conference Student Chapter; National Student Nurses Association; ONU Astronomy Club; ONU Chapter of the Student Members of the American Chemical Society; ONU Construction Management Association; ONU-Solve (Mathematics Problem Solving Group); Pre-law Society; Professional Association for Design; Professional Association of Medical Laboratory Students; Professional Association of Women in Science; Public Relations Student Society of America; Secondary Education Society; SME (formerly Society of Manufacturing Engineering); Society for Collegiate Journalists; Society of Medical Professionals; Society of Physics Students; Student Chapter of the Association for Supervision and Curriculum Development; Technology Education Club; United States Institute for Theatre Technology (USITT);

**T.J. Smull College of Engineering:** American Society for Engineering Education (ASEE); American Society of Civil Engineers (ASCE); American Society of Mechanical Engineers (ASME); American Institute of Aeronautics & Astronautics (AIAA); Association for Computing Machinery (ACM); Institute of Electrical and Electronics Engineers (IEEE); Joint Engineering Council (JEC); Phi Sigma Rho; Polar Robotics Club; Society of Automotive Engineers (SAE); Society of Women Engineers (SWE);

**Raabe College of Pharmacy:** Academy of Managed Care Pharmacy (AMCP); Academy of Students of Pharmacy (ASP); American Society of Consultant Pharmacists (ASCP); Christian Pharmacists Fellowship International (CPFI); Kappa Epsilon (KE); Kappa Psi (KY) Medicinal Herb Club; National Community Pharmacists Association (NCPA); Personalized Medicine Coalition (PMC); Pharmacy Student Council; Pharmacy and Wellness Review (PAW); Phi Delta Chi; Polar Pediatrics; Psychiatric and Neurologic Pharmacists (CPNP); Rho Chi Honorary; Student National Pharmaceutical Association (SNPhA); Student Society of Health System Pharmacists (SSHPh);

**Dicke College of Business Administration:** American Marketing Association; Beta Alpha Psi, Beta Gamma Sigma, Dean's Advisory Council; Institute of Management Accountants; Northern Entrepreneurs' Organization; Sigma Iota Epsilon, Student Investment Group; Society for the Advancement of Management; and Society for Human Resource Management;

**Pettit College of Law:** Agriculture Law; Association for Immigration and Refugee Reform; Black Law Students Association (BLSA); Bruce Comly French American Inn of Court; Christian Legal Society; Environmental Law Society; Federalist Society; Icelandic Legal Exchange Program; International Law Society; J. Reuben Clark Law Society; Law School Veterans Association; Legal Association of Women; Moot Court; Ohio Northern University Law Review; Phi Alpha Delta International Fraternity; Public Interest Law Association; Sports and Entertainment Law Association; Student Animal Legal Defense Fund; Student Bar Association (SBA); Willis Society Law Honorary.

## Musical Activities

The School of Visual and Performing Arts sponsors a wide variety of music performing activities for all students. Non-music majors are especially welcome to participate and they constitute a large percentage of the personnel. Academic credit may be earned for participation in musical groups.

Non-major talent awards are available by audition online for Symphony Orchestra, Chamber Winds, and University Singers. Deadline to audition via Acceptd.com is December 1 of each academic year. See this web page for details: [www.onu.edu/academics/music](http://www.onu.edu/academics/music). Band Participation Grants are available for Marching Band/Symphonic Band with no audition.

**University Bands:** The Marching Band performs for football games and festivals. The Symphonic Band and Chamber Winds offer students the opportunity to play the finest literature at concerts, for other activities, and on tour. The Athletic Band performs for home basketball games.

**Symphony Orchestra:** Qualified university students are eligible to perform with the Symphony Orchestra in their full season of concert activities.

**Choral Groups:** University Singers and Chamber Singers are select vocal ensembles which offer students a wide variety of performing experiences.

**Ensembles:** A variety of smaller instrumental, jazz, and vocal groups available to all students including Jazz Ensemble, Percussion Ensemble, Composer's Workshop Ensemble, Steel Drum Band and various chamber groups.

## Communication and Multimedia Activities

### Communication Studies

Students have a variety of opportunities to participate in conferences as presenters or attendees. Additionally, speakers, workshops and internship and practicum experiences 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/Broadcasting and Writing and Multimedia Studies

Ohio Northern University is home to WONB, a digital stream radio station operating under the writing and multimedia studies program. 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 Writing and Multimedia Studies majors and scheduled over ONU3-TV.

The Writing and Multimedia Studies (WAMS) major and minor 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.

## Theatre Arts Activities

### Dance

The School of Visual and Performing Arts 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.

## Theatre

The School of Visual and Performing 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 for up to 120. All interested university students may audition for mainstage or studio productions, or they may become involved in technical or front of house work.

## Student Publications

*The Northern Review* is a digital campus newspaper published throughout the academic year. Positions on the staff of the newspaper are open to all students.

ONU's annual literary journal, *Polaris*, publishes selected undergraduate submissions, including works of poetry, fiction, nonfiction and art from around the nation and the world.

The *Student Handbook*, which is posted on the ONU web site, is a compilation of rules and information pertaining to student life on campus.

The *ONU Fraternity/Sorority Guide* is published annually by the Interfraternity Council and the Panhellenic Council.

The *Ohio Northern University Law Review* is a professional legal periodical. Published three times per year, it is subscribed to by practicing bar, bench, and government officials and legal scholars throughout the U.S. and eleven different countries. The *Review* publishes both student comments and articles by noted authors from within the legal community.

*Aurora*: The Research Journal of Ohio Northern University was founded in 2018 as the first University-wide undergraduate research journal. Its purpose is to provide undergraduate students from all disciplines with opportunities to publish original research and to learn editing and professional publication practice in a high-impact setting. *Aurora* is published in both print and digital formats with selected papers from the annual Undergraduate Research Colloquium, national undergraduate submissions, excerpts from faculty work, and poster sessions. We accept written works from students of all levels of undergraduate study, from first year to senior year.

## Athletics

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

**Intercollegiate Competition for Men.** Men at Ohio Northern participate in intercollegiate football, basketball, baseball, lacrosse, tennis, golf, wrestling, swimming and diving, cross country, indoor and outdoor track, lacrosse and soccer. Ohio Northern belongs to the NCAA Division III and Ohio Athletic Conference and follows their rules and regulations.

**Intercollegiate Competition for Women.** Women at Ohio Northern compete in volleyball, basketball, lacrosse, swimming and diving, tennis, indoor and outdoor track, cross-country, soccer, golf and softball. 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 flag football (men and women), volleyball (men, women and coed), basketball (men and women) and softball (men and 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 fencing, lacrosse (men and women), rugby (men and women), soccer (men and women), softball, ultimate Frisbee (men and women) and volleyball (men and women). 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 and recreational activities.

**E-Sports.** The athletics program launched a varsity e-sports team in 2019-20. Players compete in games such as *League of Legends* and *Overwatch*.

# The Educational Program of the University

## Academic Calendar

The Ohio Northern calendar in the undergraduate and pharmacy colleges divides the academic year (nine months) into two semesters of approximately equal length, designated as fall and spring. Fall semester ends before Christmas; spring semester ends before Memorial Day. Each semester typically includes 15 weeks of classes and one week of final examinations. The University undergraduate calendar is so constructed and course meeting times so scheduled that each semester hour credit is providing at least 700 minutes of classroom meeting time. A summer session of approximately 10 weeks is divided into two five-week terms. There is a short period of instruction in January known as J-term.

## University Organization

Ohio Northern University is composed of five colleges.

The Getty College of Arts & Sciences is organized into five schools and a center each providing one or more majors as a basis for degree programs leading to the Bachelor of Arts (B.A.), Bachelor of Fine Arts (B.F.A.), Bachelor of Music (B.M.), Bachelor of Science (B.S.), Bachelor of Science in Medical Laboratory Science (B.S.M.L.S.), or Bachelor of Science in Nursing (B.S.N.).

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

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 (J.D.) degree after successful completion of a three-year course of study. An earned baccalaureate degree from an accredited institution is required for graduation from the College 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 (B.S.B.A.) with majors offered in accounting, finance, management, marketing, and pharmaceutical and healthcare business. The college also awards the Master of Science in Accounting (M.S.A.).

## University General Learning Objectives

The general education plan is based on learning outcomes that specify the abilities that ONU expects each student to cultivate through general education. From matriculation and continuing through their educational experiences at ONU, our students will demonstrate:

1. Effective written communication
2. Effective spoken communication
3. Critical and creative thinking
4. Knowledge of the physical and natural world
5. Knowledge of mathematics and statistics
6. Knowledge of human thought and culture
7. Knowledge of human society and the interactions between society and individuals
8. Knowledge of the principles of aesthetics
9. Knowledge of the principles of civics or ethics on a professional, community, or global level
10. An understanding of diverse cultures

The University expects each student to achieve the General Education learning outcomes through curricular activities.

The University General Education Committee shall assign a General Education learning outcome to specific courses according to criteria that the committee has established. Generally, such assignment shall indicate that a majority of the course content is substantially aligned with a general education learning outcome. This assignment will be indicated in the University Catalog and course syllabi.

Typically, a course will only support one learning outcome. Multiple learning outcomes may be assigned to a course at the discretion of the General Education Committee. If a course supports multiple learning outcomes, a student may only use the course to fulfill one learning outcome.

ONU's learning outcomes are embedded in a curriculum that includes the following:

1. Transitions Experience: 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. This course is mandatory for all undergraduate students during their first semester of study as a degree-seeking student. Transfer students with 24 credits or more as a degree-seeking student may be waived from this course at the discretion of the student's respective college of enrollment.

2. Writing Seminar: Introduction to college-level writing skills, including critical reading, the formulation of arguments, researching and incorporating outside sources, and writing essays. The student must successfully complete the Writing Seminar course with a grade of "C" or better.

3. Understanding Diverse Cultures Seminar: These seminars will build intercultural knowledge and competence while exploring our role as members of a world community, knowing that we share the future with others. The course will have a significant written assignment that includes a revision process. Students can enroll this course after completion of ENGL 1221 Writing Seminar (or its equivalent). This course must be completed at Ohio Northern University.

Any course that the General Education Committee tags for at least one general education learning outcome is part of the general education curriculum. Students can search for courses that are part of the general education curriculum through their Self-service banner account or via the registrar's website (Schedule/Catalog search). Students who would like to have their transfer work evaluated as meeting a specific learning outcome can do so by contacting the Director of General Education or their academic faculty advisor.

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. The full general education plan and a master list of general education curriculum is available from the Academic Affairs website under the topic of General Education.

## Honors Program

The ONU Honors Program has been established to stimulate highly qualified students in any field of study 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. 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. The Honors Program requirements support the University and College General Education requirements through special seminars, while allowing participants to work closely with faculty members in their major. Additional information about the ONU Honors Program can be found on page 34.

## 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 available 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 various academic areas.

Access to the digital campus is through the ONU website giving access to integrated services like email, student records, academic calendar, and course information.

Classrooms are equipped with state-of-the-art instructional technology. Students have a variety of technology available for their use including smart boards, video-conferencing units, high-end workstations and various software applications.

Students have access to a range of support services including network printing, document scanning, desktop publishing, and videoconferencing capability. In addition students have access to a digital video camera and several digital still cameras.

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 instruction is provided using MoodleRooms and Echo360.

## Institute for Civics and Public Policy (ICAPP)

The Institute for Civics and Public Policy (ICAPP) at Ohio Northern University is a non-partisan, education based community of scholars dedicated to conducting high-quality research to support civic literacy and an informed understanding of public policies with a focus on those issues affecting citizens in the Industrial Midwest. We believe an informed citizenry is necessary in a representative democracy. Toward this end, the ICAPP conducts public opinion polling, produces policy briefs, and engages the public in a variety of ways. Through faculty, student, and partner collaborations, the ICAPP serves as an important resource for policymakers and citizens throughout the region.

## International Scholar Transition Program

The International Scholar Transition Program (ISTP) supports students fully admitted to degree programs. ISTP courses earn academic credit which may be used toward graduation.

## 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, internship or work experience abroad, and other types of student travel exchanges. Recent additions of faculty-led programs include short term travel to Peru, Ecuador, Germany and Ireland embedded in courses in Biology, Communication, Business, and Pharmacy. Opportunities for study abroad with exchange partner schools in Asia and Europe, as well as summer and semester long study and cultural immersion programs with study abroad program partners, exist for every major offered at ONU.

The university is a member of the Institute for International Education, the NAFSA Association of International Educators, and has recently hosted international Fulbright Scholars in Residence in Philosophy, Music, Law and Theatre. The University has international exchange agreements with Aalto University School of Business, Mikkeli, Finland; Arnhem Business School, Arnhem, The Netherlands; Dankook University, Seoul, South Korea; Glasgow Caledonian University, Glasgow, Scotland; Hanyang University, Seoul, South Korea; Kansai Gaidai University, Osaka, Japan; Ming Chuan University, Taipei, Taiwan; Ritsumeikan University, Kyoto, Japan; Universidad Antonio de Nebrija, Madrid, Spain; University of Eastern Finland, Joensuu, Finland; University of Iceland, Reykjavik, Iceland; and the University of Salford, Manchester, UK. Additional study abroad opportunities are provided through the university's affiliation with the University Study Abroad Consortium (USAC), International Studies Abroad (ISA), Athena Study Abroad, Foundation for International Education (FIE), The Intern Group, AIFS, and Semester at Sea.

International and domestic study opportunities are also available through exchanges among members of the New American Colleges and Universities. Examples of these Signature Programs include the



Entertainment and Music Business semester at Belmont University in Nashville, and the New York Semester at Manhattan College. More information is available from the Office of Global Initiatives in Academic Affairs.

Numerous scholarships and fellowships are available for students wanting to pursue study abroad.

## Library

Heterick Memorial Library's mission as the University's undergraduate library is to meet the diverse and changing information needs of the students, faculty and staff through library and information literacy instruction and by collecting, creating, organizing, preserving and providing access to information sources. The library strives to foster a collaborative environment conducive to academic achievement, critical thinking, scholarly communication and lifelong learning.

To meet this mission, the library provides individual and collaborative study space through its centrally located building named for Dr. Robert Hynton Heterick and Frances Felker Heterick. A renovation of the first floor in 2016 into the Oscar J. and Judith D. Mifsud Collaborative Learning Center provides more group and collaborative study space for students. This renovation also includes the addition of a library café, whiteboards and eco-friendly LED lighting. A variety of quiet and social study spaces throughout the library meet the diverse study needs of students.

The library maintains a collection of print and electronic resources to support student and faculty research at Ohio Northern. These resources include books, e-books, print and electronic journals, streaming media and over 250 databases. The library also houses the Ohio Northern Archives which contains historical documents, books, and other rare and unique materials related to the history of ONU and surrounding (or associated) communities. Additional resources are available through interlibrary loan and through the library's membership in the OhioLINK consortium.

The library is committed to helping its students find the best information for their research papers and projects. Through the library's information literacy program, librarians partner with faculty in the four undergraduate colleges to teach students information seeking skills and strategies.

## Polar Analytical Laboratory (PAL)

The Polar Analytical Laboratory (PAL) is a collaboration between the ONU Forensic Biology and Medical Laboratory Science programs. Under the direction of certified faculty, upper-level students gain valuable real-world experience performing urine drug screen testing on an Olympus AU400 analyzer. The lab currently provides testing for the Hardin County (OH) Juvenile Court, with hopes of expanding services to other agencies in the future.

## ROTC

The Bowling Green State University provides college-level instruction to Ohio Northern University students interested in either the Air Force Reserve Officers Training Corps (ROTC) or the Army ROTC programs. Further information about either of these programs can be found on pages 35 and 36, respectively.

## 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 short-term seminars where students can receive academic credit. A limited number of scholarships from The Washington Center are available. More information is available from the undergraduate deans or the academic affairs office.

## Writing Center

The Writing Center provides free tutoring to all ONU students. Whether students are looking for an experienced eye to read over already polished work or struggling to get started on a writing assignment, the Writing Center's trained peer tutors help students reach the goals that they set for their writing. The Writing Center serves students in all majors and subject areas and can even help students with non-academic writing. Students can attend one-on-one tutoring sessions, email writing-related questions to [writing-help@onu.edu](mailto:writing-help@onu.edu), or write in the Writing Room where a tutor is available to answer questions. Appointments can be made by visiting the Writing Center at Heterick 209, calling (419) 772-2186, or using the Writing Center's online tutoring system at <http://onu.mywconline.com>. For more information about the ways that the Writing Center can support your needs, visit: [http://my.onu.edu/academics/resources/the\\_writing\\_center](http://my.onu.edu/academics/resources/the_writing_center).

# 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 enrollment 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 enrollment, 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 enrollment must be one of these two colleges and the tuition charged will be the Pharmacy or Engineering College rate as appropriate.

**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 accruing additional overload hour fees.

## Pre-law Options

Ohio Northern University offers three options for students interested in law school. These options may be combined.

- Pre-Law Program
- Pre-Law Minor
- 3+3 Law Admissions Program

## Pre-Law Program

Ohio Northern University has developed a unique pre-law program that 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 & Sciences, Business Administration, Engineering, or Pharmacy and to those participating in the 3+3 Law Admissions Program (see below).

Students in the pre-law program select a major and complete the necessary requirements like other students. The University Pre-law 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 pre-law orientation course, a Law School Admissions Test (LSAT) preparatory workshop, and a mentoring program involving pre-law students with local attorneys. Members of the committee advise students on related matters such as applying for admission to law school.

Students in the pre-law program will gain automatic admission to the Pettit College of Law if they (1) maintain an undergraduate grade point average of at least 3.4/4.00; (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) are deemed by the College of Law Admissions Committee to appear capable of satisfactorily completing its program and being admitted to the bar pursuant to ABA Admissions Standard 501. 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.

## Pre-Law minor

The Pre-Law minor is open to all students enrolled at Ohio Northern University in the Colleges of Arts and Sciences, Business Administration, Engineering, or Pharmacy. Its purpose is to provide students with courses that require the analytical reasoning, analysis of difficult texts, intensive writing, and technical skills that will prepare them for the LSAT and law school. In addition, every year the Political Science Program offers at least one course taught by a member of the College of Law faculty, which provides students with the opportunity to familiarize themselves with legal pedagogy prior to attending law school. For more information and the course options, see the Pre-Law minor listing in the College of Arts and Sciences.

## 3+3 Law Admissions Program

Ohio Northern University recognizes that certain students have the capacity and readiness to complete their undergraduate education and their law degree training in less than the normally required seven years of study. Ohio Northern University desires to encourage and educationally stimulate these students by providing an opportunity for them to accelerate their course of study by completing both their undergraduate degree and their Juris Doctor degree in approximately six years of full-time study—that is, three years of undergraduate courses and three years of law school.

## Admission

For admission to the Pettit College of Law, all participating students must have completed a minimum of 90 semester hours and a minimum of 2 ½ years of residency in their undergraduate college at ONU, including (1) all ONU general education requirements; (2) all courses required for their degree as determined by the primary undergraduate college in which the student is enrolled; and (3) all major requirements as determined by the college or the department or program in which the student is majoring. Participating students will gain automatic admission to the College of Law if they meet the following requirements: (1) a cumulative GPA in their undergraduate program of 3.4 or above; (2) an LSAT score at or above the 75th percentile; (3) two academic letters of recommendation from members of the undergraduate ONU faculty; and (4) a character and fitness record that suggests that the applicant has the requisite maturity and character needed for the practice of law as

determined by the faculty and dean of the College of Law. Participating students who do not meet the conditions for admission listed in (1) and (2) above will, upon the recommendation of their academic advisor for their primary major, be interviewed for admission to the College of Law, solely for admission to its Summer Starter Program. Following the receipt by the College of Law of all required admission materials, the College of Law will review and arrive at an admission decision. The Admissions Committee of the College of Law reserves the right to conduct an in-person interview of any applicant when arriving at the admission decision. Students not admitted through the program may apply for regular admission to the College of Law.

## Program Requirements

The academic requirements are determined by appropriate undergraduate college depending on the student's major in one of the following programs: Business (BSBA), Literature (BA), Criminal Justice (BA), Chemistry (BA), History (BA), Political Science (BA), Philosophy, Politics, and Economics (BA), Philosophy (BA), Psychology (BA), Religion (BA), and Sociology (BA). Please refer to the major and degree requirements listed in the sections for the Getty College of Arts and Sciences and the Dicke College of Business Administration.

The undergraduate college will accept as transfer credits applicable to the appropriate bachelor degree up to 30 semester credits of course work taken at the Pettit College of Law in which the student received a grade of 2.0 or better. The undergraduate college shall not accept as transfer credits any credits of course work awarded by the Pettit College of Law in which the student received a grade of less than a 2.0. A student's undergraduate GPA for degree-granting purposes in the undergraduate college will be the GPA at the end of the undergraduate phase of the program; grades from the Pettit College of Law are not transferable to the undergraduate college.

The Pettit College of Law will not accept for transfer credit any coursework taken in one of the undergraduate colleges. A student's GPA at the Pettit College of Law will be determined only based on courses for which credit is awarded by the Pettit College of Law.

If a student withdraws from the Pettit College of Law for any reason whatsoever before completing the first year of work, in order to obtain a bachelor degree from ONU, the student shall be required to complete the undergraduate degree in the undergraduate college according to its regular program requirements. Any such student returning to his/her undergraduate college to complete a bachelor degree shall be allowed to transfer all credits for course work completed at the Pettit College of Law with a grade of 2.0 or better.

## Tuition and Financial Aid

During the three years in residence in the undergraduate college, students will pay tuition to Ohio Northern University at the undergraduate college rate. During the three years in residence at the Pettit College of Law, students will pay tuition to Ohio Northern University at the law school rate.

During the three years in residence in the undergraduate college and the three years in residence at the Pettit College of Law, financial aid will be calculated in accordance with the relevant college's then-current student eligibility policies. All participating students will be eligible for scholarships and grants made generally available to all incoming students by the Pettit College of Law.

# Registrar

## 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 completion of prerequisites for courses for which enrolled and for securing the approvals needed as indicated in the University Catalog. Unless otherwise specified, a grade of "D" or better will satisfy a course prerequisite. The student is expected to complete registration in the

prescribed manner and to complete payment of 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 student's 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 registration matters. Students can either register on the World Wide Web using the alt-pin provided by their advisor or go to the Office of the Registrar to complete registration by presentation of a course request form signed by an advisor. Undergraduate students requesting more than 19 hours must have the dean's signature. Law students with fewer than 12 hours or more than 17 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 summer orientations. New students or re-entry students may also register for fall semester the day 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 officially registered for the class in the Office of the Registrar.

## Auditors

A student who wishes to attend a class but who does not wish to receive a grade or credit for the course may register to audit a course(s) any time during the regular registration period as long as all prerequisites have been met, enrollment capacity has not been reached and with permission from instructor. The instructor must sign the add/drop form. Activity, studio and laboratory courses cannot be audited. In lecture/laboratory courses only the lecture can be audited.

Normal tuition rates and all course and general fees apply.

Students registering to audit a course must indicate at the registrar's office that the course is to be audited during the standard add period at the start of a semester. Students, having registered to audit a course, may not change their registration to receive credit after the end of the add period. Credit by examination is not allowed for courses that have been audited. An automatic grade of AU is recorded and does not impact GPA calculation. Students requesting to audit will not be processed to audit a course until the end of the add period to permit non-auditing students enrollment opportunities.

## 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, concentration, or option is housed. Next, the student should meet with a financial aid staff member to discuss financial aid implications and obtain a signature on the form. Then the student should obtain a signature from their college dean's office. Finally, 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 business 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 withdrawn (W on transcript) after the end of the twelfth week of a semester to the beginning of final examination week with approval of the dean of the college of enrollment 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 twelfth week of a semester and before the beginning of finals. The instructor may make inquiry to the dean of the college of enrollment concerning the circumstances and will be provided the rationale with sensitivity for the student's right to privacy.

Courses may be withdrawn (W on transcript) 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 enrollment. In the event that there is disagreement with the withdrawal by any of these persons, and the disagreement cannot be resolved, the vice president for academic affairs will provide a decision and inform all parties directly involved. The vice president 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 enrollment, 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 Registrar.

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 withdrawal with the student's advisor and submitting the withdrawal form to the following offices for signature — dean of the college of enrollment (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 "Declaration of Major 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 provide the dean of the college to which the student is transferring copies of all documents relating to academic actions at ONU (suspension, probation, dismissal). Transfers between colleges may be done for the current term through the drop period. If submitted after the drop period, the transfer will be completed effective the following semester.

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 in writing to his or her college an academic suspension or dismissal.

## Grades and Quality Points

The value of credit courses is expressed in semester hours. Our definition of a credit hour is based on the Carnegie Unit, which has stipulated that one semester credit hour be awarded for fifteen sessions of 50-minute duration in classroom lecture-recitation, each requiring two hours of outside preparation by the student. This minimum standard does not restrict a higher standard that requires more student work per credit hour. See the ONU registrar's web site for further definition.

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.

In the College of Law a plus and minus letter grade system is used: (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 mark 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 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.

All Incomplete (I) grades must be removed within 12 weeks after the beginning of the next regular semester unless the time is extended by the dean of the college in which the student is registered. The grade will be converted to a failing grade if this time limit is not observed.

The cumulative grade point average is derived by dividing the total number of graded 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, 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 recent 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) for a semester is placed on the Dean's List. Special, transient, and some postgraduate students are not eligible for the recognition.

Entry of a grade (A, B, C, D, F) or a mark (I, S, U) 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 incomplete.

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 a student's grades are available for viewing via Self-Service Banner. Grade reports are not mailed to the individual student.

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. Transcripts may be ordered through the National Student Clearinghouse.

## 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 Vice President of Student Affairs, 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 or director 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, director, 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.

## 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. Additionally, the student must be making Satisfactory Academic Progress, as defined in the Student Handbook.

## General Academic Regulations

Mid-term examinations are held at the discretion of the faculty member. In the College of Arts & 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.

## Transient Credit and Status

University policy strongly encourages 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

should consult with their advisor and submit a transient 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 should 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 or as part of a 3+2 degree program.

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 student (excluding those whose college of enrollment is Law) 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).

The examination is evaluated as either S (satisfactory) or U (unsatisfactory). Only satisfactory evaluations 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.

## Modern Languages Retroactive Credit Policy

All students are eligible for retroactive credits for all Modern Languages courses below the level of the first course satisfactorily completed at ONU (see chart on page 109). To determine entry into the appropriate course level, Spanish students should take the Spanish placement exam and consult with faculty in Modern Languages. French students may self-place and should consult with faculty in Modern Languages. The Modern Language faculty strongly recommend that students begin foreign language study during their first year.

## 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 at 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 their admission as a degree seeking student.

A student can make an irrevocable request in writing to change the catalog used to determine their graduation requirements. 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.

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. All participants must be approved to participate 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. If a student has applied for graduation in a given semester, any transfer work needed to complete requirements for graduation at the end of that semester must be received by the Office of the Registrar before the beginning of the next regular semester term.

In order to be eligible for a degree from Ohio Northern University, a student must register for and successfully complete at least 25% of the course requirements for that degree at Ohio Northern University. The last 30 semester hours for the degree must be completed at Ohio Northern University (ONU online courses, co-ops, internships, etc. are included). To complete a major, minor, or option for a degree from Ohio Northern University, a student must complete at least 25% of the course requirements for the major, minor, or option at Ohio Northern University.

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 undergraduate, MSA, and pharmacy 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. This policy does not apply to the College of Law.

## Transcripts of Academic Record

The University offers online transcript ordering through the National Student Clearinghouse (NSC), a non-profit organization serving the higher education community. Requests may be made to NSC via Self-Service Banner. Two to five working days should be allowed for processing transcript requests. Special handling will be granted upon request, at the registrar's office, 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/academics/registrars-office](http://www.onu.edu/academics/registrars-office).

## Graduate Placement

The University assists its graduates with identifying career opportunities and helping them develop professional networking materials and skills. These services are available to seniors and alumni and are free-of-charge.

Seniors planning to continue their education are advised to research their potential graduate programs to ascertain the graduate entrance examination required. Several of these exams are 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.

## Degree/Enrollment Verification

The National Student Clearinghouse (NSC) is Ohio Northern University's authorized agent for providing degree verifications for graduates and enrollment verification for current students. Ohio Northern University submits data electronically to the National Student Clearinghouse, and in compliance with FERPA, the Clearinghouse dispenses the information electronically to lending institutions, background investigation firms, prospective employers, and credit granting agencies.

Ohio Northern University reports enrollment and expected graduation dates to the NSC every 30 days, and awarded degrees are reported after each semester. Students are strongly encouraged to contact their lenders and/or insurance agents to determine continued eligibility before dropping/withdrawing from classes and decreasing their enrollment status to below full-time.

# University Academic Programs

## CENTER FOR INTERDISCIPLINARY PROGRAMS

**Director:** Professor Raymond F. Person, Jr.

**Steering Committee for Public Health: Professors** DiPietro-Mager, Kier, North; **Associate Professor** DiPietro; **Assistant Professors** Kauffman (*Chair*), Walden

**Steering Committee for Data Analytics: Professor** Estell; **Associate Professors** Rahrig, Youssfi; **Assistant Professors** Aronson, Jung, Wong

**Steering Committee for Environmental Studies: Professors** Clingerman (*Co-Chair*), Mager, **Associate Professors** Dixon, Riley (*Co-Chair*), Spiese; **Assistant Professor** Rossiter

**Steering Committee for Gender & Sexuality Studies: Professor** Person; **Associate Professor** Hofman; **Assistant Professors** Pullen, Wu; **Instructor** Graytock

**Steering Committee for Leadership Studies: Professors** Alexander, Boulanger, McHugh (*Chair*), **Assistant Professors:** Lambdin, Parker

**Steering Committee for Philosophy, Politics, and Economics: Associate Professors** McClough, Nsia-Pepira; **Assistant Professors** Spelman

**Steering Committee for Medical Humanities: Professor** North; **Associate Professors** Dixon, Dowland (*Chair*), Kraynok

### Mission Statement

The Center houses some of the university's interdisciplinary programs in order to insure excellent coordination of these programs with the participation of faculty members from various departments and colleges. Students in these programs are able to examine common topics from the perspective of various academic disciplines. The Center also provides support for interdisciplinary teaching and research throughout the university.

### Definition of Interdisciplinary Programs

An interdisciplinary academic program draws from two or more distinct academic disciplines. The program is based upon a conceptual

model that links or integrates theoretical frameworks from those disciplines, uses study design and methodology that is not limited to any one field, and requires the use of perspectives and skills of the involved disciplines throughout multiple phases of the program.

Each interdisciplinary program within The Center will have its own Steering Committee, consisting of at least five faculty members who represent at least three different departments/colleges that contribute significantly to the program. The Steering Committees will have primary responsibility for maintaining the quality of the academic programs, including curriculum, development, and assessment.

### Majors, Minors and Degrees Offered

Data Analytics Major (BS)  
Philosophy, Politics, and Economics Major (BA)  
Public Health Major (BS)  
Data Analytics Minor  
Environmental Studies Minor  
Gender & Sexuality Studies Minor  
Leadership Studies Minor  
Medical Humanities Minor  
Public Health Minor

### Major Course Requirements

All required courses for the major must be completed with a grade of C or higher.

### Data Analytics Major

The major in data analytics is designed to prepare students for careers such as medical records analyst, Census Bureau analyst, digital media analyst, marketing analyst, and GIS analyst.

ECCS 1011	Problem Solving with Python (4)
ECCS 1611	Programming 1 (4)
ECCS 2011	Introduction to Data Science (3)
ECCS 2021	Machine Learning (3)
ECCS 2671	Data Structures and Algorithms 1 (3)
ECCS 3481	Databases (3)
ECCS 3021	Data Mining (3)
ECCS 3031	Big Data Analytics (3)
MATH 1631	Calculus 1 (4)
STAT 1561	Statistics for Professionals 1 or STAT 2501 Statistics for Scientists and Engineers (3)
STAT 2561	Statistics for Professionals 2 (3)
STAT 3571	Introduction to Statistical Computing with SAS (3)
STAT 2581	Introduction to Statistical Computing with R (3)

Select one of the following subject areas:

Geography (9 hrs.):  
GEOG 2481 Introduction to GIS (3)  
GEOG 3481 Applied GIS (3)

Select one of the following courses:

GEOG 2401 Political Geography (3)  
GEOG 2421 Population Geography (3)  
GEOG 3041 Historical Geography (3)  
MRKT 3541 GeoAnalytics (3)

Health Informatics (12 hrs.):

PBHE 1201 Introduction to Public Health (3)  
PBHE 4201 Health Informatics (3)

Select two of the following:

STAT 3531 Survey Sampling Methods (3)  
PBHE 2201 Public Health Research Methods (3)  
BIOL 2551 Epidemiology (3)  
BIOL 3541 Bioinformatics (3)

Marketing (12 hrs.):

BIZ 2511 Principles of Marketing (3)  
MRKT 3821 Marketing Research (3)  
MRKT 3541 GeoAnalytics (3)  
MRKT 4731 Logistics and Supply Chain Management (3)

Social Media (9 hrs.):  
CAMS 1401 Principles of Social Media (3)  
CAMS 2401 Social Media Strategies and Campaigns (3)  
CAMS 3401 Digital Branding (3)

Select one of the following:

DATA 4001 Data Analytics Research Capstone (3)  
DATA 4021 Data Analytics Internship (3-6)

### **Philosophy, Politics and Economics (PPE) Major**

PPE is an interdisciplinary major that draws together the knowledge base and intellectual skills of the three component disciplines: philosophy, political science, and economics. Philosophy provides students with an understanding of the normative foundations of social organization; political science provides them with an understanding of the workings of social institutions; and economics provides them with the contemporary analysis of market forces and their effects on social issues. All three disciplines hone the critical thinking skills of students as well as their analytical skills in reading and writing, but each of them do so from a different vantage point: philosophy from the normative and theoretical standpoint; political science from the theoretical, empirical, and applied standpoint; and economics from the quantitative standpoint at the levels of both theory and practice.

The breadth of multidisciplinary skills required of the PPE major prepares students for careers in private enterprise, government, private foundations, research institutes, and non-profit organizations. PPE is excellent preparation for graduate study in business, public affairs, public policy, and especially appropriate preparation for law school.

#### **Philosophy: (9 credits)**

PHIL 2341: Logic (3)  
PHIL 2281: Philosophy of Law (3)

Select one:

PHIL 3441: Ethical Theory (3)  
PHIL 3101: Environmental Ethics (3)  
PHIL 3201: Political Philosophy (3)

#### **Political Science: (9 credits)**

PLSC 1011: Introduction to American Politics (3)  
PLSC 1021: Introduction to International Relations (3)

Select one:

PLSC 25x1 or higher (3)  
HSPS 25x1 or higher (3)

#### **Economics: (9 credits)**

BIZ 2021: Principles of Microeconomics (3)  
BIZ 2031: Principles of Macroeconomics (3)  
ECON 3831: Managerial Economics (3)

[See page 163 and 164 for the James F. Dicke College of Business Administration for the coursedescriptions of BIZ and ECON.]

PPE 4811: Senior Essay I (1)  
PPE 4911: Senior Essay II (2)

Select one (Elective):

PHIL 3xx1 or higher (3)  
PLSC 3xx1 or higher (3)  
HSPS 3xx1 or higher (3)  
ECON 3xx1 or higher (3)

### **Public Health Major**

The major in public health is designed to prepare students for careers such as health education, disease prevention and control, and health promotion.

PBHE 1201 Introduction to Public Health (3)  
STAT 1561 Statistics for Professionals 1 (3)  
BIOL 1131 Principles and Concepts of Human Biology (4)

BIOL 2011 Environmental Issues (3)  
BIOL 2551 Epidemiology (3)  
PBHE 2201 Public Health Research Methods (3)  
CAMS 2331 Health Communication (3)  
PHIL 2401 Professional Ethics (3)  
PLSC 3601 Introduction to Health Policy (3)  
PHPR 2521 Issues in Prevention Medicine (3)  
SOC 3481 Sociology of Health and Health Care (3)  
PBHE 4921 Capstone 1 (2-3)  
PBHE 4941 Capstone 2 (1-3)

Eighteen (18) credit hours of electives from approved courses to total a minimum of 55 credit hours.

### **Minor Course Requirements**

All required courses for the minors must be completed with a grade of "C" or higher.

#### **Data Analytics Minor**

ECCS 1611 Programming 1 (4)  
or ECCS 1011 Problem Solving with Python (4)  
ECCS 2011 Introduction to Data Science (3)

Select one statistics course:

STAT 2561 Statistics for Professionals 2 (3)  
STAT 1761 Statistics for Pharmacy (3)  
BIZ 2001 Principles of Business Analytics (3)

Select at least one applied course:

PBHE 4201 Health Informatics (3)  
BIZ 3631 Advanced Business Analytics (3)

Select one elective in statistics:

STAT 3571 Introduction to Statistical Computing with SAS (3)  
STAT 3581 Introduction to Statistical Computing with R (3)

Select one elective in computer science:

ECCS 1621 Programming 2 (4)  
ECCS 2671 Data Structures & Algorithms 1 (3)  
ECCS 2021 Machine Learning (3)

#### **Environmental Studies Minor**

BIOL 2011 Environmental Issues (3)  
BIOL 2131 Natural History (2)  
PHIL 3101 Environmental Ethics (3)  
ENVR 4011 Environmental Studies Integrative Portfolio (1 hr.)

Select one natural science or applied science elective:

BIOL 1401 Biology 2: Biodiversity, Organismal Biology, and Ecology (4)  
BIOL 1031 Earth & Life Science (4) (Biology majors may not count this course towards the science elective)  
BIOL 2511 Ecology (4)  
CHEM 2321 Environmental Analysis (4)  
CE 3211 Environmental Engineering 1 (3)  
GEOG 2371 Physical Geography (3)  
CE 4321 Water-Energy-Society Infrastructure Nexus (3)  
ME 4321 Renewable Energy (3)  
TECH 2011 Sustainability in Society (3)

Select at least two humanities or social science electives:

BIZ 2031 Macroeconomic Principles (3)  
ENGL 3151 Literature & Environment (3)  
HIST 2801 History of the American Environmental Movement (3)  
PLSC 3061 Environmental Law (3)  
RELG 1021 Christianity & the Natural World (3)  
RELG 1061 The Bible & Environment (3)

#### **Minor in Gender & Sexuality Studies**

GNSX 1001: Intro to Gender & Sexuality Studies (3)  
GNSX 4001: Integrative Portfolio in Gender & Sexuality Studies (1)

Students must select at least one course from each of the following four groups without duplication to total at least 19 hrs.

Select One:

ENGL 2261: Literature, Sexuality, & Gender (3)  
PHIL 2061: Philosophy of Identity (3)  
RELG 2081: Women and Religion (3)

Select One:

ENGL 2631: Women's Literature (3)  
ENGL 3171: Women and Writing (3)  
PHIL 2061: Philosophy of Identity (3)  
RELG 1041: Women in the Bible (3)  
SOC 2461: Social Construction of Difference (3)

Select One:

ENGL 2631: Women's Literature (3)  
HIST 2081: Women's Sports History (3)  
PLSC 2701: Gender & Politics (3)  
RELG 1041: Women in the Bible (3)  
SOC 3461: Social Stratification (3)

Select One:

ENGL 2261: Literature, Sexuality, & Gender (3)  
ENGL 3171: Women and Writing (3)  
HIST 2081: Women's Sports History (3)  
PLSC 2701: Gender & Politics (3)  
RELG 2081: Women and Religion (3)  
SOC 2461: Social Construction of Difference (3)  
SOC 3461: Social Stratification (3)

#### Leadership Studies Minor

LEAD 1001 Introduction to Leadership Studies (3)  
LEAD 4001 Integrative Portfolio in Leadership Studies (1)

Select one:

BIZ 1201 Ethical Leadership (3)  
PHIL 2401 Professional Ethics (3)  
PHIL 1051 Ethics, Justice and Law (3)  
PLSC 4581 Western Political Thought 1 (3)  
PLSC 4591 Western Political Thought 2 (3)

Select one of the following summative courses:

LEAD 3001 Leadership Seminar (3)  
MGMT 4775 Executive Classroom: Leadership Realities (3)  
MLS 4611 Professional Practice & Development (3)  
NURS 4201 Leadership & Management in Nursing (2)  
and LEAD 4991 Leadership Practicum (1)  
PHPR 5501 Leadership, Entrepreneurship, and Administration in Pharmacy (6)

Select additional electives from the following to total at least 19 hrs. Note that no more than 9 hrs. from one college or in the case of the College of Arts & Science from one subject heading may count towards the summative course and electives.

CAMS 2311 Interpersonal Communication (3)  
CAMS 2321 Group Dynamics & Team Interaction (3)  
CAMS 3321 Organizational Communication (3)  
LEAD 4991 Leadership Practicum (1-2)  
MGMT 3271 Leadership Skills and Development (3)  
MGMT 3341 Organizational Behavior (3)  
PSYC 3011 Social Psychology (3)  
SOC 2461 Social Construction of Difference (3)  
SOC 3461 Social Stratification (3)  
SPMG 3101 Organization/Administration in Sport (3)  
PLSC 2661 Public Administration (3)  
PLSC 3211 Political Parties & Interest Groups (3)  
PLSC 3421 Conflict Analysis & Resolution (3)  
PLSC 3541 Judicial Process, Behavior & Impact (3)  
PLSC 3671 Policy Analysis (3)  
PLSC 4091 The Presidency (3)  
PHPR 2211 Peer Student Mentorship (1)

PHPR 2411 Contemporary Health Care Issues & Opportunities 1 (2)  
PHPR 2421 Contemporary Health Care Issues & Opportunities 2 (2)  
PHPR 2611 Professional Leadership Development (1)  
PHPR 2431 Careers & Leadership in Pharmacy

#### Medical Humanities Minor

MEDH 2011 Perspectives in Medical Humanities (3)  
ENGL 3271 Literature and Medicine (3)  
MEDH 4011 Integrative Portfolio in Medical Humanities (1)

Select One:

PHIL 1051 Ethics, Law and Justice (3)  
PHIL 2401 Professional Ethics (3)  
PHIL 3201 Political Philosophy (3)  
PHIL 3441 Ethical Theory (3)

Select Three:

PLSC 3601 Introduction to Health Policy (3)  
PSYC 2151 Development Across the Lifespan (3)  
PSYC 2201 Health Psychology (3)  
RELG 1071 Religions East and West (3)  
SOC 3481 Sociology of Health and Health Care (3)  
SOC 3491 Sociology of Mental Health and Illness (3)

#### Public Health Minor

PBHE 1201 Introduction to Public Health (3)  
PBHE 2201 Public Health Research Methods (3)

Select One:

STAT 1561 Statistics for Professionals 1 (3)  
STAT 1761 Statistics for Pharmacy (3)  
STAT 2501 Statistics for Scientists and Engineers (3)

Select Two:

BIOL 2011 Environmental Issues (3)  
BIOL 2551 Epidemiology (3)  
BIOL 2331 Anatomy & Physiology 1 (4)  
or BIOL 3241 Medical Physiology 1 (4)  
or BIOL 3311 Human Physiology 1 (4)  
BIOL 2341 Anatomy & Physiology 2 (4)  
or BIOL 3251 Medical Physiology 2 (4)  
or BIOL 3321 Human Physiology 2 (4)  
BIOL 2151 Microbiology for Nurses (3)  
or BIOL 3131 Medical Microbiology (3)  
BIOL 3051 Environmental Toxicology (3)  
BIOL 3231 Virology (3)  
BIOL 3211 Immunology (3)  
BIOL 3621 Parasitology (3)

Select Two:

CAMS 2331 Health Communication (3)  
PBHE 2101 Global Health (3)  
PBHE 3201 Community Health Assessment (3)  
PBHE 3401 Health Education Planning (3)  
PBHE 4201 Health Informatics (3)  
PHPR 2521 Issues in Prevention Medicine (3)  
PLSC 3601 Introduction to Health Policy (3)  
PSYC 2201 Health Psychology (3)  
SOC 3481 Sociology of Health and Health Care (3)  
SOC 3491 Sociology of Mental Health and Illness (3)

At least one of the BIOL electives or one of the public health electives must be at the 3000-level or above.

### **Subject – Data Analytics (DATA)**

#### **DATA 4001 - Data Analytics Research Capstone**

##### *3 Credits Normal Grading Mode*

Building on the major project in ECCS 3021 or ECCS 3031, students will work in cooperation with two faculty members, one in data analytics and the other in the chosen subject area to complete a research project that demonstrates competency in analyzing a complex computing problem using both computer science principles and mathematical/statistical models and designing, implementing, and evaluating a data-driven solution to a problem in their chosen subject area. The project must be consistent with legal and ethical principles and students must be able to communicate their results effectively in writing and in a oral presentation. Offered spring semesters. Prerequisite(s):ECCS 3021 Minimum Grade of D and ECCS 3031 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Data Analytics. Must be enrolled in one of the following Classifications: Senior.

#### **DATA 4021 - Data Analytics Internship**

##### *3 to 6 Credits Normal Grading Mode*

A supervised field experience that requires students to demonstrate competency in analyzing a complex problem using both computer science principles and mathematical/statistical models. The project must include the implementation of evaluation of a data-driven solution to a problem in their subject area and must be consistent with legal and ethical principles. Students must demonstrate their ability to communicate their results effectively in writing and oral presentation as well as function effectively as a member or leader of a team. Students receive 1 credit hour for every 100 on-site hours they work at their internship site. Students must complete 3 credit hours to fulfill the capstone requirement with their internship (300 total on-site hours). Students may earn up to 6 hours (600 on-site hours) towards their degree requirements, but only 4 hours may apply to the hours in the major. Student must have a 2.75 or higher cumulative GPA in order to apply for the internship and all internships must be approved by the Steering Committee for Data Analytics. Offered summer, fall, or spring semesters.

### **Subject – Environmental Studies (ENVR)**

#### **ENVR 4011 - Environmental Studies Integrative Portfolio**

##### *1 Credit Normal Grading Mode*

In this course, students will develop a portfolio and other assignments written throughout the courses they have taken in the minor. Students will then make a proposal for an essay or research project derived from the portfolio. With the consultation of the faculty of the Environmental Studies steering committee, the student will undertake this cumulative essay or research project in order to demonstrate the interdisciplinary connections in the fields of Environmental Studies. Prerequisite(s):BIOL 2011 Minimum Grade of D and BIOL 2131 Minimum Grade of D and PHIL 3101 Minimum Grade of D.

### **Subject – Gender & Sexuality Studies (GNSX)**

#### **GNSX 2001 - Introduction to Gender and Sexuality Studies**

##### *3 Credits Normal Grading Mode*

An introduction to interdisciplinary, critical perspectives of gender and sexuality to understand the concepts of social construction, power and privilege, and intersectionality on race, gender, and class in society, both past and present. This course will consist of lecture and discussion of primary and secondary sources. Prerequisite(s):ENGL 1221 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures.

#### **GNSX 4001 - Integrative Portfolio in Gender & Sexuality Studies**

##### *1 Credit Normal Grading Mode*

Students will develop a portfolio of papers and other assignments written throughout the courses they have taken in the minor. Students will then make a proposal for an essay or research project derived from the portfolio. With the consultation of the faculty of the Steering Committee for Gender & Sexuality Studies, the student will undertake this cumulative essay or research project in order to demonstrate the interdisciplinary connections in Gender & Sexuality Studies. Prerequisite(s):GNSX 2001 Minimum Grade of D. Must be enrolled in one of the following Minor fields of study: Gender and Sexuality Studies. Must be enrolled in one of the following Classifications: Junior, Senior.

### **Subject – Leadership (LEAD)**

#### **LEAD 1001 - Introduction to Leadership Studies**

##### *3 Credits Normal Grading Mode*

Introduction to leadership studies, including interpersonal interaction, group dynamics, organizational behavior, connections to society, ethics, and decision-making skills. Emphasis on individual/personal leadership.

#### **LEAD 3001 - Leadership Seminar**

##### *3 Credits Normal Grading Mode*

Continuation of discussion of leadership skills with the emphasis on the role of leadership in a broader context - organizational, societal, and global. Prerequisite(s):LEAD 1001 Minimum Grade of D.

#### **LEAD 4001 - Leadership Capstone**

##### *1 Credit Normal Grading Mode*

This course will be largely structured discussion based on a variety of case studies, speakers and interdisciplinary readings. The primary outcome of the course will be an assigned summative research project and presentation based on an aspect of leadership (theory/model); in-depth analysis of a particular leader - relating their history, education, style, successes, and failures to the concepts learned throughout the minor; or development of an original case study based on the student's leadership success or failure and its impact on the followers, organization, and society. Prerequisite(s):LEAD 1001 Minimum Grade of D and (LEAD 3001 Minimum Grade of D or MLS 4611 Minimum Grade of D or NURS 4201 Minimum Grade of D or PHPR 5501 Minimum Grade of D or MGMT 4775 Minimum Grade of D) and (PHIL 2401 Minimum Grade of D or PHIL 1051)

#### **LEAD 4991 - Leadership Practicum**

##### *1 to 2 Credits Normal Grading Mode*

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. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Fields of Study: Leadership Studies Option. Must be enrolled in one of the following Classifications: Senior, Junior. This course may be repeated 1 time. This course is repeatable for a total of 2 hours.

### **Subject – Medical Humanities (MEDH)**

#### **MEDH 2011 - Perspectives in Medical Humanities**

##### *3 Credits Normal Grading Mode*

An introduction to the interdisciplinary field of medical humanities. The course examines the human dimension of health care through the study of literature, art and other humanities disciplines to explore the ways in which culture and society work to influence the understanding of medicine. Prerequisite(s):ENGL 1221 Minimum Grade of D or HONR 1221 Minimum Grade of D. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**MEDH 4011 - Integrative Portfolio in Medical Humanities***1 Credit Normal Grading Mode*

Required for completion of the medical humanities minor. Includes the creation of a portfolio of papers written throughout coursework the minor, as well as the composition of a cumulative essay that synthesizes those papers to demonstrate an interdisciplinary connection in the field of medical humanities. Must be enrolled in one of the following Minor fields of study: Medical Humanities.

**Subject – Public Health (PBHE)****PBHE 1201 - Introduction to Public Health***3 Credits Normal Grading Mode*

This course is designed to provide students with a working definition of public health and an overview of the core disciplines of public health. Students will be exposed to different career options with in Public Health, introduced to public health assessment and analysis, and will engage with current public health issues and how public health relates to the overall health care system in the U.S. and globally. Course Attributes: GE\_Knowledge of Human Society.

**PBHE 1911 - Public Health Summer Honors Institute***1 Credit Grading mode is S/U*

Topics in Public Health. Enrollment is restricted to attendees of the Summer Honors Institute. May be repeated as the topic varies. Course Attributes: Requires Instructor Approval. This course may be repeated 6 times.

**PBHE 2101 - Introduction to Global Health***3 Credits Normal Grading Mode*

Why are some people on some countries so much healthier than others? Explore the factors that explain the unequal distribution of global health, including the burden of disease, epidemiology, cost effectiveness and health systems. Discussion will include social determinants of health, modes of intervention, and key global health issues (access to pharmaceuticals, maternal, and child health, HIV/AIDS) from an interdisciplinary perspective. Prerequisite(s):ENGL 1221 Minimum Grade of D. Course Attributes: GE\_Diverse Cultures.

**PBHE 2201 - Public Health Research Methods***3 Credits Normal Grading Mode*

This course is an introduction to research methods used in public health. Topics include selecting a topic, developing a research design, ethics, measurement, sampling, and different data collection techniques such as experiments, surveys, qualitative methods, and secondary analysis. The use of descriptive as well as inferential statistics, developing budgets for proposed studies, and presenting one's findings are discussed. The course addresses both quantitative and qualitative public health research methods. Prerequisite(s):PBHE 1201 Minimum Grade of D.

**PBHE 2901 - Special Topics in Public Health***1 to 4 Credits Normal Grading Mode*

Coverage of special topics in public health. May be repeated for credit as topic varies. Unlimited repeats permitted.

**PBHE 2971 - Independent Study in Public Health***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated for credit as the topic varies. Unlimited repeats permitted.

**PBHE 3201 - Community Health Assessment***3 Credits Normal Grading Mode*

Examines the concepts, methods, and practices for assessing the health of a community. Topics include measuring community health status, developing community health profiles, identifying the determinants of health, the inclusion of community health assessment in developing public health interventions, and the utilization of public health surveillance data to understand community health profiles. Prerequisite(s):CAMS 2331 Minimum Grade of D.

**PBHE 3401 - Health Education Planning***3 Credits Normal Grading Mode*

This course provides students with an overview of the practical and theoretical aspects of health promotion. Students acquire the hands-on skills needed to plan, implement, and evaluate health education and health promotion programs in various settings. Students develop and plan an evaluation for a health education/health promotion program for a health problem in a population at risk. Prerequisite(s):PBHE 1201 Minimum Grade of D.

**PBHE 3901 - Special Topics in Public Health***1 to 4 Credits Normal Grading Mode*

Coverage of special topics in public health. May be repeated for credit as topic varies. Unlimited repeats permitted.

**PBHE 3971 - Independent Study in Public Health***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated for credit as the topic varies. Unlimited repeats permitted.

**PBHE 4201 - Health Informatics***3 Credits Normal Grading Mode*

Principles of Health Informatics providing an introduction to the theory and practice of digital information analysis and communication within the healthcare industry. Prerequisite(s):STAT 1561 Minimum Grade of D or STAT 1761 Minimum Grade of D or STAT 2501 Minimum Grade of D or PSYC 2401 Minimum Grade of D.

**PBHE 4901 - Special Topics in Public Health***1 to 4 Credits Normal Grading Mode*

Coverage of special topics in public health. May be repeated for credit as topic varies. Unlimited repeats permitted.

**PBHE 4921 - Public Health Capstone 1***2 to 3 Credits Normal Grading Mode*

Practical applied experience in a public health area that may include a research project, internship, field placement in a clinical setting, or other approved experience in a public health discipline.

**PBHE 4941 - Public Health Capstone 2***1 to 3 Credits Normal Grading Mode*

Culmination of theoretical and practical experience from Capstone 1, resulting in a final oral and written synthesis of the experience. Prerequisite(s):PBHE 4921 Minimum Grade of C.

**PBHE 4971 - Independent Study in Public Health***1 to 4 Credits Normal Grading Mode*

Individual Study of a topic of particular interest to the student. May be repeated for credit as the topic varies.

**Subject – Philosophy, Politics and Economics (PPE)****PPE 4811 - Senior Essay 1***1 Credit Normal Grading Mode*

The first stage of the capstone project: completion of a prospectus of a critical essay on a topic selected in consultation with faculty advisors. Course Attributes: AS-HUM - Humanities, AS-SOCSCI - Social Science, Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Philosophy Politics & Economics.

**PPE 4911 - PPE Senior Essay II***2 Credits Normal Grading Mode*

The second and final stage of the PPE capstone project: completion and presentation of the critical essay began in PPE 4811. Prerequisite(s):PPE 4811 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, AS-SOCSCI - Social Science. Must be enrolled in one of the following Major fields of study: Philosophy Politics & Economics.

## INTERNATIONAL SCHOLAR TRANSITION PROGRAM (ISTP)

The International Scholar Transition Program, a Student and Exchange Visitor Program (SEVP) approved pathway program, provides international students holding a TOEFL score of 50-78 iBT with solid foundation in academic English and American academic culture through concurrent enrollment in general education and composition courses. The Transition Program facilitates advancement of academic English skills for study in students' respective majors. All courses carry academic credit and fulfill degree requirements or elective credits towards graduation. Degree-seeking students with iBT scores between 50 and 78 are admitted to the ISTP and must complete the program before moving to full academic study. Exchange and other fully enrolled students are invited to take ISTP coursework for help in English but are not admitted to the program. Students not admitted to degree programs may also take ISTP course work during their final semesters in the IEP, but without coursework in a major.

ISTP students study full time for two semesters during the academic year, August to May. ISTP is not available in the summer. For ISTP students, non-ISTP courses are chosen in consultation with advisors in the student's major.

Students who complete ISTP course work earning 2.0 or better in all courses and demonstrating English proficiency with an Institutional TOEFL (ITP) score greater than 500 (no sub-scores below 50) are eligible for full time degree study. The ISTP must be completed before registration in courses numbered 3000 or greater. Students receiving less than 2.0 in any ISTP course repeat that course. The program must be completed within three semesters.

Earlier graduation from any English Program requires meeting the ONU admission standards for English proficiency (79 on the iBT with matching sub-scores; 6.0 on the IELTS with no sub-score below 5.5).

Students meeting English proficiency levels while enrolled in the IEP or ISTP must complete English courses before entering full time regular degree study the following semester.

### **Subject - International Scholar Transition Program (ISTP)**

#### **ISTP 1111 - Listening & Speaking 1**

*6 Credits Normal Grading Mode*

This course develops listening and speaking skills for academic purposes for students with TOEFL ITP Section 1 subscores of 46 (minimum) or equivalent. Listening strategies to strengthen comprehension of academic lectures and introduction to effective note-taking. Additional focus on enhancing speaking skills, including pronunciation practice and role-play, as well as individual and group presentation and class discussions.

#### **ISTP 1131 - Reading and Vocabulary 1**

*4 Credits Normal Grading Mode*

This course develops reading and vocabulary skills for academic purposes for students with TOEFL ITP Section 3 subscores of 46 or equivalent. Students review and demonstrate ability to predict content, identify main and supporting ideas and details, and make inferences when reading academic texts. Students will also expand and apply academic vocabulary, while increasing reading speed and comprehension.

#### **ISTP 1191 - Special Topics**

*3 to 6 Credits Normal Grading Mode*

From time to time, special topics in English Language will be added to the schedule. Special Topics may be added to the term curriculum and required of all students or may be substituted for another course. This course may be repeated 2 times. This course is repeatable for a total of 12 hours.

#### **ISTP 1211 - Listening and Speaking 2**

*6 Credits Normal Grading Mode*

This course develops advanced listening and speaking skills for academic purposes for students with minimum TOEFL ITP Section 1 subscores of 50 or equivalent. Further development of listening strategies to optimize comprehension of complex academic lectures and discussion, as well as more sophisticated note-taking are included. Additional focus on enhancing speaking skills, including pronunciation practice and role-play, in-depth class discussion, as well as extensive individual and group presentations. Prerequisite(s):ISTP 1111 Minimum Grade of C.

#### **ISTP 1231 - Reading and Vocabulary 2**

*4 Credits Normal Grading Mode*

This course develops advanced reading and vocabulary skills for academic purposes for students with minimum TOEFL ITP Section 3 subscores of 50 or equivalent. Students focus on critical thinking skills, inferences, interpretation, evaluation, synthesis analysis and application as well as additional emphasis on academic vocabulary development to maximize comprehension. Students will read authentic academic texts, articles, essays and novels. Prerequisite(s):ISTP 1131 Minimum Grade of C.

## COLLEGE COMPOSITION PROGRAM

The ONU English Programs provide instruction for international students in the area of college composition. A two semester sequence of courses (ENGL 1511 & 1521) is available for international students, each of which meets the writing requirement of the Writing Seminar, ENGL 1221.

By university policy all students whose first language is not English, including non-ISTP students, enroll in the College Composition courses.

## UNIVERSITY COURSES

### **Subject - Varsity Sports (VARS)**

#### **VAR5 1001 - Cross Country (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 1011 - Cross Country (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 1021 - Football - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 1031 - Soccer (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 1041 - Soccer (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 1051 - Volleyball - Varsity**

*1 Credit Grading mode is S/U*

Offered fall semester. This course may be repeated 4 times.

#### **VAR5 2001 - Basketball (Men) - Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2011 - Basketball (Women) - Varsity**

*0 to 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2021 - Indoor Track (Men) - Varsity**

*0 to 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2031 - Indoor Track (Women) - Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2041 - Swimming & Diving (Men) - Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2051 - Swimming & Diving (Women) - Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

#### **VAR5 2061 - Wrestling - Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.



**VARS 2071 - ESports- Varsity**

*0 or 1 Credits Grading mode is S/U*

Offered fall and spring semesters. This course may be repeated 8 times.

**VARS 3001 - Baseball - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3011 - Golf (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3021 - Golf (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3031 - Outdoor Track (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3041 - Outdoor Track (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3051 - Softball - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3061 - Tennis (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3071 - Tennis (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3081 - Lacrosse (Men) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

**VARS 3091 - Lacrosse (Women) - Varsity**

*1 Credit Grading mode is S/U*

Offered spring semester. This course may be repeated 4 times.

## 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) and a high school GPA of 3.5 (or top 10% of graduating class) may apply to enter the Honors Program. International applicants who do not submit an ACT or SAT score for university admission may substitute an iBT of 90 or higher or IELTS of 7.0 or higher for consideration to the Honors Program. Enrolled students who complete their first academic semester with an ONU GPA of 3.50 or higher also may apply if space is available. Candidates can petition to apply to the Honors Program if they do not meet these requirements, but have similar evidence of academic success. 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 Program Orientation and three additional Honors Seminars (10 credit hours total); two Contract Courses done in conjunction with classes at the 3000-level or above (each class 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/college 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 will not be permitted to enroll in the Honors Program Capstone Enhancement.

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. However, only Honors Program students may enroll in the Honors Program Orientation. With the approval of the Honors Program Director, 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 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. With the approval of the Honors Program Director, Contract Course requirements may also be fulfilled following up on a research experience for undergraduates (REU), study abroad, internship, co-op, practicum or service experience.

The Honors Capstone Enhancement builds on the department/college capstone. A Capstone Enhancement plan must be approved by the department/college 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 and the attainment of a cumulative GPA of 3.30 or higher at the time of graduation. 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** The Honors Program is administered by a faculty Director, the Honors Program Faculty Board, and the Honors Program Student Board. The current director of the honors program is Dr. Forrest Clingerman. The Honors Program Faculty Board with membership to include faculty from each of the undergraduate colleges provides oversight to the Honors Program. The Honors Program Student Board provides leadership for student activities, including academic, social, and service opportunities.

### Subject - ONU Honors Program (HONR)

**HONR 1001 - Honors Program Orientation**

*1 Credit Grading mode is S/U*

Preparation for the various elements of the Honors Program including seminar-style discussions, small group work and other active-learning techniques. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 1221 - Honors Writing Seminar**

*3 Credits Normal Grading Mode*

Introduction to college-level writing skills, including critical reading, the formulation of arguments, researching and incorporating outside sources, and writing essays. An emphasis on active learning. Course Attributes: Effective Comm Writing, GE\_Effective Written Communication. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 1301 - Honors Presentational Speaking Seminar**

*3 Credits Normal Grading Mode*

Basic principles of preparation, organization, and delivery of original informative and persuasive speeches. An emphasis on active learning. Course Attributes: GE\_Effective Spoken Communication. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 2041 - Honors Great Works Seminar**

*3 Credits Normal Grading Mode*

Exploration of themes in literature with an emphasis on writing and active learning. Course Attributes: AS-HUM - Humanities, Effective Communication Writing, GE\_Knowledge/Principles of Aesthetics, Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 2261 - Honors Nonverbal Communication Seminar**

*3 Credits Normal Grading Mode*

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. Course Attributes: Communication Studies, Effective Comm Non-Writing. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 2401 - Honors Professional Ethics Seminar**

*3 Credits Normal Grading Mode*

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. An emphasis on active learning. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/Principles of Civics/Ethics. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 2461 Diversity and Stratification**

*3 Credits Normal Grading Mode*

The origins, institutionalization, and change of class, status, prestige, power, and other forms of social inequality with attention to the effects of stratification on individuals. Increasing importance of diversity in the modern world and understanding. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**HONR 2901 - Honors Special Topics Seminar**

*3 Credits Normal Grading Mode*

May be repeated as the topic varies. This course is repeatable for a total of 9 hours. Must be enrolled in one of the following Concentration fields of study: Honors Program. This course is repeatable for a total of 9 hours.

**HONR 2971 - Honors General Education Contract**

*0 Credits Grading mode is S/U*

Activity enhancing an existing general education class to receive Honors Seminar credit. Must be approved by the Honors Program Committee. Must be enrolled in one of the following Concentration fields of study: Honors Program. This course may be repeated 3 times.

**HONR 3901 - Honors Advanced Topics Seminar**

*3 Credits Normal Grading Mode*

Advanced topics for Honors. May be repeated as the topic varies. This course is repeatable for a total of 9 hours. Must be enrolled in one of the following Concentration fields of study: Honors Program. This course is repeatable for a total of 9 hours.

**HONR 3971 - Honors Major Contract**

*0 Credits Grading mode is S/U*

Activity done under supervision of ONU faculty members enhancing a class in the student's major or following up on experiential learning such as research experience for undergraduates (REU), study abroad, internship, co-op, practicum, or service-learning. Must be enrolled in one of the following Concentration fields of study: Honors Program. This course may be repeated 3 times.

**HONR 3991 - Honors Capstone Enhancement Research**

*1 to 3 Credits Grading mode is S/U*

Research for the Honors Capstone Enhancement. Must be enrolled in one of the following Concentration fields of study: Honors Program. This course may be repeated 1 time.

**HONR 4001 - Honors Capstone Enhancement**

*1 Credit Normal Grading Mode*

Final version of the Honors Capstone Enhancement and oral presentation. Must be enrolled in one of the following Concentration fields of study: Honors Program.

**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 campuses, 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. Enrollment of foreign students is governed by Air Force regulations.

For both GMC and POC, students will be required to attend weekly physical training (three times per week) and leadership lab (two 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 graduate 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, email [det620@bgsu.edu](mailto:det620@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 [det620@bgsu.edu](mailto:det620@bgsu.edu).

## 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 & SCIENCES

#### **ARMY 1000 - Lifetime Leadership Skills**

*2 Credits Normal Grading Mode*

Skills needed to be successful in a wide range of environments to include academic, corporate and military. Subjects include but are 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 officership. No military obligation or prerequisites.

#### **ARMY 1010 - ROTC and the National Defense Organization**

*2 Credits Normal Grading Mode*

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.

#### **ARMY 2010 - Leadership/Officership**

*2 Credits Normal Grading Mode*

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.

#### **ARMY 2020 - Military Tactics**

*2 Credits Normal Grading Mode*

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.

#### **ARMY 3010 - Professionalism/Leadership**

*3 Credits Normal Grading Mode*

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. Requires 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. Requires Department Approval.

#### **ARMY 3020 - Small Unit Operations**

*3 Credits Normal Grading Mode*

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.

#### **ARMY 4010 - Unit Management and Officer Development**

*3 Credits Normal Grading Mode*

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. Requires Department Approval.

#### **ARMY 4020 - Military Law & Leadership**

*3 Credits Normal Grading Mode*

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.

#### **ARMY 4700 - Studies In Military Science**

*1 to 3 Credits Normal Grading Mode*

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. This course is repeatable for a total of 6 hours.

## 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 & SCIENCES

#### **AERO 1110 - Air Force Heritage and Values 1.0**

*2 Credits Normal Grading Mode*

Cadets will learn the foundations of Air Force values and organizational structure. The focus is on developing basic knowledge and comprehension of Air Force heritage, standards and customs and courtesies. An introduction to Air Force communication skills will also be covered. No military obligation or prerequisites - offered fall semester only. Credit may be offered for prior Active duty, Air Guard/Reserve duty, Civil Air Patrol or JROTC experience.

#### **AERO 1120 - Air Force Heritage and Values 2.0**

*2 Credits Normal Grading Mode*

Candidates will learn the principles of war and the tenets of Airpower. The focus is on developing basic knowledge and comprehension of how the Department of Air Force is structured and how it supports National Defense. A continuation of Air Force communication skills will also be covered. No military obligation or prerequisites - offered in spring semester only. Credit may be offered for prior Active duty, Air Guard/Reserve Duty, Civil Air Patrol or JROTC experience.

#### **AERO 2110 - Air Force Team and Leadership Fundamentals 1.0**

*2 Credits Normal Grading Mode*

Cadets will learn the foundations of the Air Force approach to team dynamics. Develops Air Force leadership traits through a broadening of listening, followership and problem solving skills. Credit maybe offered to prior Active duty , Air Guard/Reserve duty, Civil Air Patrol or JROTC experience. Dual enrollment with AERO 1110 allowed with department approval. No military obligation - offered fall semester only. Prerequisite(s):AERO 1110 Minimum Grade of D or AERO 1120 Minimum Grade of D.

#### **AERO 2120 - Air Force Team and Leadership Fundamentals 2.0**

*2 Credits Normal Grading Mode*

Cadets will expand on Air Force team dynamics through human relations and conflict management principles. Develops Comprehensive Airman Fitness and prepares cadets for a leadership capstone event. Credit may be offered for prior Active duty, Air Guard/Reserve duty, Civil Air Patrol or JROTC experience. Dual enrollment with AERO 1120 allowed with department approval. No military obligation - offered spring semester only. Prerequisite(s):AERO 2110 Minimum Grade of D and AERO 1110 Minimum Grade of D and AERO 1120 Minimum Grade of D.

#### **AERO 3110 Leading People and Effective Communication 1.0**

*3 Credits Normal Grading Mode*

This course continues the development of future Air Force leaders by establishing a comprehensive level of knowledge on the enlisted force and cross cultural competence. Additionally, it expands on Air Force writing and briefing skills developed in the AE Course Attributes: Requires Department Approval.

#### **AERO 3120 - Leading People and Effective Communication 2.0**

*3 Credits Normal Grading Mode*

This course builds on the lessons learned and leadership attributes developed during AERO 3110. Air Force values and ethics are reinforced, and organizational climate assessment skills are introduced. Additionally, Air Force communication skills are enhanced through student presentation of lesson materials and briefings. Prerequisites: Successful completion of Field Training and AERO 3110, unless enrolled in a two-year commissioning program with department approval.

**AERO 4110 - National Security/ Leadership Responsibilities/ Commissioning Preparation 1.0**

*3 Credits Normal Grading Mode*

This course delivers comprehensive elements of national security policy and process. The intent is for students to comprehend air and space power operations as well as understand selected roles of the military in society. Additionally, current domestic and international issues affecting the military profession will be discussed, as well as certain provisions of the military justice system. Prerequisite(s):AERO 3120 Minimum Grade of D. Course Attributes: Requires Department Approval.

**AERO 4120 - National Security/ Leadership Responsibilities/ Commissioning Preparation 2.0**

*3 Credits Normal Grading Mode*

This course serves as the culmination of the AFROTC program and prepares cadets for transition to military life and the leadership of Airmen. Officer and Enlisted evaluations and military pay and benefits systems are covered in depth. The Law of Armed Conflict and the Oath of Office are internalized in preparation for commissioning. Prerequisite(s):AERO 4110 Minimum Grade of D. Course Attributes: Requires Department Approval.



THE GETTY COLLEGE OF  
**Arts & Sciences**

# Arts & Sciences

Holly Baumgartner, *Dean*

## Accreditation 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  
Committee on Accreditation for the Exercise Sciences  
Council for the Accreditation of Educator Preparation  
National Accrediting Agency for Clinical Laboratory Science  
National Association of Schools of Music  
Ohio Board of Nursing  
Ohio Department of Higher Education

## Membership in

American Association for Higher Education and Accreditation  
American Association of Colleges of Nursing  
American Association of Colleges for Teacher Education  
American College Dance Festival Association  
American College Theatre Festival  
American Council of Academic Deans  
American Physical Society  
American Political Science Association  
American Psychological Association  
American Sociological Association  
Associated Collegiate Press  
Associated Schools of Construction  
Association for Practical and Professional Ethics  
Association for Psychological Science  
Association for Theatre in Higher Education  
Association for Women in Mathematics  
Association of Departments of English  
Association of Independent Liberal Arts College for Teacher Education  
Association of Technology, Management, and Applied Engineering  
College English Association of Ohio  
College Media Advisors  
Council of Colleges of Arts and Sciences  
Council for the Accreditation of Educator Preparation  
Fibonacci Association  
International Technology and Engineering Educators Association  
Mathematical Association of America  
Midwestern Psychological Association  
Modern Language Association of America  
Musical Theatre Educators Alliance  
National Association of Schools of Music  
National Communication Association  
National Council of Teachers of Mathematics  
National Dance Education Organization  
Ohio Academy of Science  
Ohio Association of Colleges for Teacher Education  
Ohio Association of Private Colleges of Teacher Education  
Ohio Biological Survey  
Ohio Council of Criminal Justice Education  
Ohio Dance  
Ohio Historical Society  
Ohio Newspaper Association  
Ohio Philosophical Association  
Ohio Scientific, Education, and Research Association  
Ohio Technology and Engineering Educators Association  
Sleep Research Society  
Society for Industrial and Applied Mathematics  
Society for Neuroscience  
Society of Collegiate Journalists  
Society of Manufacturing Engineers  
South Eastern Theatre Conference  
United States Institute of Theatre Technology

## Academic Divisions

Center for Teacher Education (CTE): Early Childhood Education, Middle Childhood Education, licensures

The School of Health and Behavioral Sciences (HBS): Athletic Training, Exercise Physiology, Medical Laboratory Science, Nursing, Pre-professional Programs, Psychology, Strength and Conditioning

The School for the Humanities and Global Cultures (HGC): Creative Writing, History, Language Arts Education, Literature, Philosophy, Religion, Social Studies, Spanish, Writing and Multimedia Studies, Youth Ministry

The School of Science, Technology, and Mathematics (STM): Biochemistry, Biology, Chemistry, Construction Management, Environmental and Field Biology, Forensic Biology, Manufacturing Technology, Mathematics, Molecular Biology, Physics, Pre-professional Programs, Statistics, Technology Education

The School of Social Sciences and Human Interaction (SSHI): Communication Studies, Criminal Justice, Geography, Political Science, Sociology, Writing and Multimedia Studies

The School of Visual and Performing Arts (VPA): Art Education, Graphic Design, International Theatre Production, Music, Music Education, Musical Theatre, Studio Arts, Theatre

## Endowed Chairs

**The Eleanor H. and Robert W. Biggs Chair in Chemistry** was established in 1992. The 2019-20 recipient is Dr. Chris Spiese. The 2020-21 recipient is Dr. Tevye Celius.

**The Eleanor H. and Robert W. Biggs Chair in the Arts** was established in 1992. The 2019-20 recipient is Professor. Luke Sheets. The 2020-21 recipient is Professor. Melissa Eddings-Mancuso.

**The Eleanor H. and Robert W. Biggs Chair in Sciences** was established in 1992. The 2019-20 recipient is Dr. Leslie Riley. The 2020-21 recipient is Dr. Vicki Motz.

**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 2019-20 recipient is Dr. Rob Waters. The 2020-21 recipient is Dr. Michael Loughlin.

**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 2019-20 recipient is Professor Michelle Wilson. The 2020-21 recipient is Dr. Robert Carrothers.

**The Mary Reichelderfer Chair in Mathematical Sciences** was established in 1983 with funds from the estate of Mary K. Werkman. The 2018-19 recipient is Dr. Yong Wang. The 2019-20 recipient is Dr. Anup Lamichhane. The 2020-21 recipient is Dr. Tena Roepke.

**The Sara A. Ridenour Chair of Humanities** was established in 1983 from funds provided by her daughter. The 2019-20 recipient is Dr. Patrick Croskery (posthumously). The 2020-21 recipient is Dr. Douglas Dowland.

**The Kernan Robson Chair of Government**, inaugurated in 1972, has been made possible by a trust established by the late Kernan Robson. The 2019-20 recipient is Dr. Robert Alexander. The 2020-21 recipient is Dr. Kofi Nsia-Pepira.

## Mission Statement

The Getty College of Arts & 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 & Sciences are required to meet the general requirements for admission to the University. The College of Arts & 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 strongly encouraged to complete four years of 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.

## Graduation Requirements

The College of Arts & Sciences offers a variety of majors under the framework of six different degrees: BA, BFA, BM, BS, BSMLS, and BSN. To graduate, all degree-seeking students in the College must meet the following requirements. 1) Complete the university general education program outlined on page 21 of this catalog. 2) Complete the distribution requirements listed below and specific to the degree sought. An approved Honors Seminar may fulfill a distribution requirement for any degree offered by the College of Arts & Sciences. For specific information, see the Office of the Dean. 3) Complete the requirements for the major as outlined by the relevant program. 4) Complete a minimum of 120 credit hours. 5) Possess a cumulative GPA of 2.00 or higher.

### Distribution Requirements for All A&S Degrees

To ensure that Arts & Sciences undergraduate students achieve the breadth of a liberal arts education, all students must take courses in the following disciplinary areas. These courses may support a specific general education learning outcome. Please note: only three (3) credit hour courses will satisfy the University General Education requirements.

- Humanities: Three non-activity courses, each of 2 credit hours or more, taken from different disciplines in philosophy, religion, history, or literature
- Fine Arts: One non-activity course of 2 credit hours or more taken from art, design, theatre arts (TADN, TADP, TAMT, or TATH), or music (MUSC)

Or four credit hours of a music ensemble (MUSE)

MUSE 1011	University Singers
MUSE 1021	Symphony Orchestra
MUSE 1041	Symphonic Band
MUSE 1051	Marching Band
MUSE 1131	Chamber Singers
MUSE 1171	Jazz Ensemble
MUSE 1181	Steel Drum Band
MUSE 1191	Brass Ensemble
MUSE 1201	Percussion Ensemble
MUSE 1231	Athletic Band
MUSE 1241	Composer's Workshop Ensemble
MUSE 1251	Chamber Music
MUSE 1261	Chamber Winds

Or four credit hours of a single, continuing theatre arts practicum (TADN, TADP, TAMT, or TATH):

TADN 2601	Dance Practicum
TADP 2571	Shop Practicum
TADP 2651	Stage Management Practicum
TADP 2761	Production Practicum
TADP 3761	Advanced Production Practicum
TADP 3781	Design Practicum
TAMT 2601	Musical Theatre Performance Practicum
TAMT 2611	Musical Theatre Pit Orchestra Practicum
TATH 2611	Theatre Performance Practicum
TATH 3621	Directing Practicum

Or four credit hours of a single style of dance (TADN):

TADN 1201	Ballet I
TADN 1301	Modern Dance I
TADN 1401	Jazz Dance I
TADN 1501	Tap Dance I
TADN 2201	Ballet II
TADN 2301	Modern Dance II
TADN 2401	Jazz Dance II
TADN 2501	Tap Dance II
TADN 3201	Ballet III
TADN 3301	Modern Dance III
TADN 3401	Jazz Dance III
TADN 3501	Tap Dance III
TADN 4201	Ballet IV Pointe

- Communication Studies: One 3-credit course selected from CAMS 1301, CAMS 1311, CAMS 2301, CAMS 2311, CAMS 2321, CAMS 2331, CAMS 3301, CAMS 3311, CAMS 3321, CAMS 4301, CAMS 4311, or CAMS 4331. Please note: Only CAMS 1301, 1311, 2301, 2321 and 2331 will satisfy the University General Education requirement for effective spoken communication.
- Mathematics or Statistics: One non-activity course of 2 credit hours or more
- Natural Sciences: One non-activity course of 2 credit hours or more
- Social Sciences: One non-activity course of 2 credit hours or more

### Additional Requirements for the BA Degree

- Foreign language: First-year competency (two semesters)
- One additional course in the humanities outside the discipline
- One additional course in the fine arts outside the discipline (one of the fine arts must be a non-activity course)
- One additional course in the social sciences outside the discipline

### Additional Requirements for the BFA Degree

- One additional course in the fine arts outside the discipline

### Additional Requirements for the BS Degree

- One additional course in the natural sciences outside the discipline
- One additional course in mathematics or statistics outside the discipline
- One additional course in the natural sciences or mathematics or statistics outside the discipline

## Completing a Major

The degree candidate is required to complete in a logical sequence a major of not less than 30 semester hours. Students may be listed as majoring in general studies during their first year and sophomore year, 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 & 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 & Sciences:

Major (Concentration)	Degree
Art Education*	BA
Athletic Training (Pre-program)	BA, BS
Biochemistry	BS
Biology*	BS



Chemistry*	BA, BS
Communication Studies	BA
Construction Management	BS
Creative Writing	BA
Criminal Justice	BA
Education-Early Childhood*	BA, BS
Education-Middle Childhood*	BA, BS
Environmental and Field Biology	BS
Exercise Physiology	
(Clinical & Rehabilitation Sciences)	BA, BS
(Strength & Conditioning/ Human Performance)	BA, BS
Forensic Biology	BS
Graphic Design	BA, BFA
History	BA
International Theatre Production	BFA
Language Arts Education*	BA
Literature	BA
Manufacturing Technology	
(Applied Robotics)	BS
(Manufacturing Management)	BS
Mathematics	
(Advanced Mathematical Studies)	BA, BS
(Applied Mathematics)	BA, BS
(Teacher Licensure)*	BA, BS
Medical Laboratory Science	BSMLS
Molecular Biology	BS
Multimedia Journalism	BA
Music	
(Applied Studies)	BA
(Music History and Literature)	BA
(Music Theory and Composition)	BA
(Sound Recording Technology)	BA
Music Education*	BM
Musical Theatre	BFA
Nursing	BSN
Philosophy	BA
Physics*	
(Applied Physics)	BS
(Astronomy)	BS
(Physics)	BS
Political Science	BA
Professional Writing	BA
Psychology	
(Behavioral Neuroscience)	BS
(Clinical and Counseling Psychology)	BA, BS
(General Psychology)	BA, BS
Public Relations	BA
Religion	BA
Social Studies*	BA
Sociology	
(General Sociology)	BA
(Social Services Administration)	BA
Spanish*	BA
Statistics	
(Actuarial Science)	BA, BS
(Applied Statistics)	BA, BS
Strength and Conditioning	BA, BS
Studio Arts	BA
Technology Education*	BS
Theatre	BA
Writing and Multimedia Studies	BA
Youth Ministry	BA

\*Education licensure programs offered

### Minors

A formal program of academic minors is available in several of the subject matter areas. Consult the program in question for specific procedural instructions. Minors require a minimum of 18 semester hours of approved courses, including at least 1 course at the 3000 or 4000 level. Minors are for students who wish to pursue organized study in a discipline without completing a major.

### Pre-Law Minor

The Pre-Law minor is open to all students enrolled at Ohio Northern University in the Colleges of Arts and Sciences, Business Administration, Engineering, or Pharmacy. Its purpose is to provide students with courses that require the analytical reasoning, analysis of difficult texts, intensive writing, and technical skills that will prepare them for the LSAT and law school. In addition, every year the Political Science program offers at least one course taught by a member of the law faculty, which provides students with the opportunity to familiarize themselves with legal pedagogy prior to attending law school.

The Pre-Law minor is overseen by the University Pre-Law Advising Committee, with representatives from the Social Science and Humanities faculties in the College of Arts and Sciences, the Business College, and the Law College. The minor is neither necessary nor sufficient for admission to law school, but successful completion should improve chances for law school admission and academic success.

Pre-Law minors are required to take three one-hour Pre-Law courses and to choose five courses from a list of approved electives. One course must come from the Business College, one from the Humanities School, and one from the Social Sciences School. The remaining two courses are electives from any subject on the list. Students are encouraged to take more than the minimum number of courses from the list.

Ohio Northern University graduates 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.

### Pre-Law Minor

AASG 1101	Pre-Law Orientation (1)
AASG 1111	Introduction to Legal Reasoning (1)
AASG 1131	Pre-Law Seminar (1)

Choose five electives:

Business (select at least one):

ACCT 3011	Intermediate Financial Accounting 1 (3)
ACCT 3021	Intermediate Financial Accounting 2 (3)
ACCT 3871	Taxation 1 (3)
BIZ 2021	Principles of Microeconomics (3)
BIZ 2101	Principles of Accounting (3)
BIZ 2131	Legal Environment (3)
MGMT 3251	Employment Law (3)

Humanities (select at least one):

ENGL 3161	Law, Literature, and Culture (3)
ENGL 3321	Readings in Comparative Literature (3)
ENGL 3521	Rhetorical Theory (3)
ENGL 3671	Readings in the Novel (3)
ENGL 4121	Shakespeare Studies (3)
ENGL 4351	Studies in British Literature (3)
HIST 2041	Historiography (3)
HIST 3421	The Constitutional Era in United States History (3)
HIST 4511	History of Law (3)
PHIL 2281	Philosophy of Law (3)
PHIL 2341	Logic (3)
PHIL 3401	Metaphysics (3)
PHIL 3551	Epistemology (3)
WAMS 2101	Writing for Action (3)

Social Sciences (select at least one):

CAMS 2301	Persuasion (3)
CAMS 4001	Free Speech and Democracy (3)
CJ 2101	Criminal Justice Systems: The Courts (3)
CJ 3431	Substantive Criminal Law (3)
CJ 3601	Criminal Investigation (3)

- PLSC 3411 Human Rights (3)
  - PLSC 3501 Constitutional Law and Government (3)
  - PLSC 3511 Constitutional Law and Civil Liberties (3)
  - PLSC 3881 International Law & Organizations (3)
  - PLSC 4581 Western Political Thought 1 (3)
  - PLSC 4591 Western Political Thought 2 (3)
  - PLSC 4761 Mock Trial (3 one-hour classes)
  - SOC 3611 Delinquency & Juvenile Justice (3)
- Select two additional courses from any remaining on the list

### 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/forensics for students majoring in biology or molecular biology or forensics science or investigative accounting for students majoring in criminal justice. The courses involved are listed under the program of the primary major. Accounting and Business options are also available to all students in the College of Arts & Sciences. They are as follows:

#### Accounting Option

ABUS 2221 Principles of Entrepreneurship	3 hrs
BIZ 2101 Principles of Accounting	3 hrs
ACCT 2201 AIS and the Accounting Cycle	3 hrs
One of the following sequences:	6 hrs
ACCT 3011/3021 Intermediate Financial Accounting 1 & 2	
ACCT 3141/3151 Intermediate Managerial Accounting 1 & 2	
One additional 3000-4000-level accounting course approved by the department of the student's major.	<u>3 hrs</u>
	18 hrs

#### Business Option

ABUS 2221 Principles of Entrepreneurship	3 hrs
BIZ 2101 Principles of Accounting	3 hrs
BIZ 2131 Legal Environ. for Bus. Plan.	3 hrs
Two of the following courses:	6 hrs
BIZ 2331 Principles of Management	
BIZ 2511 Principles of Marketing	
BIZ 3621 Principles of Finance	
One additional 3000-4000-level business courses approved by the department of the student's major.	<u>3 hrs</u>
	18 hrs

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 director of their school for specific procedural instructions on all options.

## Dual Degree Programs

Information concerning dual degree programs involving the College of Arts & Sciences appears on page 23 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 Council for the Accreditation of Educator Preparation (CAEP). 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 the Core PRAXIS for Educators or equivalent, 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

### Pre-Medical Sciences Programs

The Pre-medical Sciences Advisory Committee oversees the advising of students in the areas of the medical sciences (pre-medicine, pre-dentistry, pre-veterinary medicine, pre-optometry, 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 pre-professional education in the medical sciences, and to serve as a source of recommendations to professional schools in the medical sciences.

The first year program usually includes biology, chemistry, English, and mathematics. After the first year, with the exceptions of organic chemistry, and physics, psychology, and sociology, the program is a function of the student's choice of major and the specific requirements of the professional program being pursued. This usually includes completing a one-semester internship in the appropriate clinical setting and participating in faculty-mentored research. For further information, contact the Coordinator of the Pre-medical Sciences Advisory Committee or contact your academic advisor for assistance..

### Pre-law

Students in the pre-law program select a major and complete the necessary requirements like other students. The program is open to all students enrolled in any academic program in the Colleges of Arts & Sciences, Engineering, Pharmacy, or Business Administration. For additional information, see page 24. Additionally, students may opt to pursue a minor in pre-law. For additional information, see page 40.

### Pre-athletic Training

The curriculum prepares students for entry into most professional masters programs in athletic training. The program includes coursework in the following areas: biological sciences (biology, anatomy, physiology), chemistry and physics, each with a laboratory component), math/statistics, exercise physiology, nutrition, kinesiology and psychology. Observation hours can be completed within ONU's pre-athletic training program if needed to fulfill prerequisites for graduate programs. Because admission requirements, prerequisites and program components differ among graduate athletic training programs, details of the curriculum may vary depending on the chosen graduate program. For further information, contact the pre-athletic Training Coordinator in the Exercise Physiology program or contact your academic advisor for assistance.

### Pre-occupational Therapy

The curriculum prepares students for entry into most masters and doctoral programs in occupational therapy. The program includes coursework in the following areas: biological sciences (biology, physiology, and human anatomy each with a laboratory component), behavioral sciences, exercise physiology/kinesiology, written/verbal communication, physics, chemistry, biostatistics, and medical terminology. The pre-occupational therapy curriculum also recommends completion of observation hours in various clinical therapy settings. Because admission requirements, prerequisites and program components differ among occupational therapy programs, details of the curriculum may vary depending on the chosen graduate program. For further information, contact the Pre-occupational Therapy Coordinator in your academic major or contact your academic advisor for assistance.

### Pre-physical Therapy

The curriculum prepares students for entry into most doctoral programs in physical therapy. The program includes coursework in the following areas: one year of biology, one year of general chemistry, one year of physics and one year of mathematics at the level of pre-calculus and above. Courses in psychology are included in addition to various recommended electives considered necessary for application to graduate programs. The pre-physical therapy curriculum also recommends completion of observation hours in a various clinical therapy settings. Because admission requirements, prerequisites and program components differ among physical therapy programs, details of the curriculum may vary depending on the chosen graduate program. For further information, contact the Pre-physical Therapy Coordinator in your academic major or contact your academic advisor for assistance.

### Pre-physician Assistant

The pre-physician assistant program prepares students for entry into most master level physician assistant programs. The basic program 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 Sciences include physiology, human anatomy, developmental anatomy, 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 the Pre-physician Assistant Coordinator in your academic major or contact your academic advisor for assistance.

### Pre-seminary

A faculty member in Religion serves as advisor to Pre-seminary students in planning a pre-professional program. The recommendations of the American Association of Theological Schools are followed in counseling the student. A major Philosophy, Religion or in another appropriate program may be selected.

## Credit for Intercollegiate Athletics

By participating in intercollegiate athletics, a student may receive a maximum of two additional credits that may be applied toward graduation. In order to receive 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 quits the team, is dismissed from the team or participates in less than 50 percent of the season. Participation in intercollegiate athletics constitutes one hour of credit per sport to a maximum of two sports. Only one credit of intercollegiate participation in each sport may count toward graduation.

## 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 11 for overload charges beyond 19 credit hours. A full-time course load consists of 12 to 19 scheduled hours.
2. All new students in the College of Arts & 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 & Sciences from another institution, students who transfer in fewer than 24 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 school director 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 director may allow one D toward the academic program at the director's discretion.
5. Juniors and seniors are expected to schedule a majority of their courses from the 3000- and 4000-levels.
6. With the permission of the instructor and the school director any course prerequisite may be waived.
7. Except where noted, credit hours earned in repeated courses may count only once toward the total hours required for graduation.
8. The Writing Seminar should be completed by all first-year students 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

Certain courses normally result in the S/U grade, as noted in the catalog course descriptions. Students in the College of Arts and Sciences who have registered for a course that is normally graded (A-F) may request through the Office of the Dean to register instead for that course on an S/U grading basis. The request must be submitted to the Office of

the Dean before the end of the second week of classes. Students may only request this option of an S/U grade, instead of the A-F grading scale, on at most one course per semester and the following stipulations must be met:

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 one that the student already completed on a normally graded basis of A-F.
4. The requested course cannot be a 1000-level general education course.
5. The grade of S is to be equated with A, B, C. The grade of U is equated with D or F.
6. 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 (GPA) 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.

Any student on probation who does not earn a minimum 2.00 term GPA the semester following placement on probation 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 action is taken to suspend a student, the suspension will be for a definite 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 & 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 & 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 & Sciences.

## Graduation

To graduate with a Bachelor of Arts, a Bachelor of Fine Arts, a Bachelor of Music 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.

To graduate with a Bachelor of Science in Medical Laboratory Science, a student must also 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 also earn 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).

The minimum residency requirement for all students is the last two semesters and the completion of at least 30 semester hours.

# THE CENTER FOR TEACHER EDUCATION (CTE)

Carrie D. Wysocki, Interim Director

## Programs: Early Childhood Education, Middle Childhood Education, licensures

**Assistant Professors** Brady, Wysocki ; **Visiting Assistant Professor** McClusky; **Coordinator for Partnership Development** Fiebiger

The Center for Teacher Education includes the Education faculty above plus the following licensure faculty from other areas of Ohio Northern University: C. Bates, S. Bates, Crawford, France, Larsen, Lenzo, Mager, Miller, Pinkney, Roepke, Rouch, Youngpeter

### Mission Statement

The enabling teacher develops knowledge, skills, and dispositions that utilize understanding of the learner, the discipline and pedagogy to impact student learning. The model demonstrates the synergistic relationship that comes from the interaction of the four independent gears which, when properly meshed, result in an integrated mechanism that guides the development of autonomous lifelong learners, capable of contributing both individually and collectively to the common good of the larger society.

### Accreditation

The Center for Teacher Education is currently accredited by the Council for the Accreditation of Educator Preparation (CAEP). In addition, the Teacher Education Programs are approved by the Chancellor of the Ohio Department of Higher Education 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)

### Teacher Licenses Offered

The Center for Teacher Education offers the following teacher licensure programs for Early Childhood (EC), Middle Childhood (MC), Adolescent/Young Adult (AYA), Multi-age (MA), and Career Technical (CT) teacher candidates:

Early Childhood (grades PK-5)  
Middle Childhood (grades 4-9)  
AYA Engineering Education (grades 7-12) offered through Integrated Mathematics licensure  
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: Physics (grades 7-12)  
AYA Physical Sciences: Chemistry (grades 7-12)  
MA Music (grades PK-12)  
MA Visual Art (grades PK-12)  
MA Foreign/World Languages (Spanish) (grades PK-12)  
CT Technology (grades 4-12)

### Endorsements Offered

Middle Childhood Generalist Endorsement (grades 4-6)

Those candidates pursuing the AYA, MA, or CT licensure must complete the major and degree requirements in the subject area from the appropriate ONU program 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 second year. Requirements include a minimum 2.50 grade point average, passage of the Praxis™

Core Academic Skills for Educators examination a grade of 'C' or higher in specified prerequisite courses, and favorable recommendations. Candidates should contact the Education Office for complete requirements and application procedures. Applications for admission are considered by the Center for Teacher Education faculty. The Praxis Core is waived if candidates have specific ACT/SAT scores.

### Special Programs

Candidates participate in experiences that prepare them to teach in diverse settings. One optional experience is the Urban Experience, a weeklong trip in which candidates teach in Nashville Metropolitan Schools and work in a family homeless shelter. Another optional experience is study abroad in New Zealand, one of the most literate nations in the world.

### 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 PK-12 classroom teachers and students to develop the knowledge, skills, and dispositions necessary to become competent teachers. Field experience requirements differ by program and are available in the Education office.

### Early Childhood Education (PK-5) Major

EDUC 1151 Culture and Schooling (3) (20 field hours)  
EDUC 2001 Foundations of Literacy (3)  
EDUC 2051 Multicultural Literature (3)  
EDUC 2101 Exceptional Learners (3) (20 field hours)  
EDUC 2121 Phonics and Word Study (3) (10 field hours)  
EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
EDUC 2501 Introduction to Education (3) (10 field hours)  
EDUC 3061\* Language Arts Methods and Intervention PK-9 (3) (20 field hours)  
EDUC 3071\* Social Studies Methods and Intervention PK-9 (3) (20 field hours)  
EDUC 3081\* Mathematics Methods and Intervention PK-9 (3) (20 field hours)  
EDUC 3091\* Science Methods and Intervention PK-9 (3) (20 field hours)  
EDUC 3401 Educational Psychology (3) (10 field hours)  
EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
EDUC 4001\* Literacy Assessment (3) (10 field hours)  
EDUC 4201\* The Teaching Profession (1)  
EDUC 4901\* Student Teaching (12)  
EDUC 4951\* Student Teaching Seminar (2)  
MUSC 2551 Music Integration for PK-5 Education (3)

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 & Sciences.

CAMS 1311 Communication in the Classroom (3)  
HIST xxx1 History elective (3)  
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)  
SOC xxx1 Sociology elective (3)

Select one:

GEOG 2261 World Regional Geography (3)  
GEOG 2371 Physical Geography (3)

One literature elective (3)

Additional requirements for the BA Degree

Select one:

- ART 1651 Visual Literacy (3)
- MUSC 1001 Music Appreciation (3)
- MUSC 2201 Non-Western Music (3)
- TATH 1051 Introduction to the Performing Arts (3)
- RELG xxx1 Religion elective (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)

One year of a modern language (or equivalent through placement) (6)

Additional requirements for the BS Degree

Select one:

- BIOL 1031 Life/Earth Sciences for EC/MC (3)
- BIOL 2011 Environmental Issues (3)

Select one:

- CHEM 1001 Chemistry in Society (3)
- GEOL 2801 Geology (3)
- PHYS 1001 Conceptual Physics (3)
- PHYS 1051 Planetary Astronomy (3)

One additional mathematics or science elective (3)

**Middle Childhood Education (4-9) Major**

- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2001 Foundations of Literacy (3)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2121 Phonics and Word Study (3) (10 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 2501 Introduction to Education (3) (10 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4001\* Literacy Assessment (3) (10 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)

In addition, all Middle Childhood Education majors must select two of the following four areas in which to concentrate: Language Arts/Reading, Mathematics, Science, and Social Studies.

Middle Childhood Language Arts/Reading

- CAMS 1311 Communication in the Classroom (3)
- EDUC 2051 Multicultural Literature (3)
- ENGL 1221 Writing Seminar (3)
- ENGL 2001 Grammar in Context (3)
- EDUC 3061\* Language Arts Methods and Intervention PK-9 (3) (20 field hours)
- ENGL xxx1 Writing elective (3)
- TATH 1051 Introduction to the Performing Arts (3)
- One Literature elective (3)

Middle Childhood Mathematics

- EDUC 3081\* Mathematics Methods and Intervention PK-9 (3) (20 field hours)
- MATH 1201 Mathematics for Liberal Arts (3)
- MATH 1661 Fundamental Mathematics I (3)
- MATH 1671 Fundamental Mathematics 2 (3)
- MATH 2011 Mathematics History (3)

Select one:

- MATH 1251 College Algebra (3)
- MATH 1401 Precalculus (3)

Select one:

- MATH 1461 Calculus for Life Sciences (3)
- MATH 1631 Calculus 1 (4)

Select one:

- STAT 1311 Introduction to Statistical Reasoning (3)
- STAT 1561 Statistics for Professionals I (3)

Middle Childhood Science

- BIOL 1031 Life/Earth Sciences for EC/MC (3)
- BIOL 2011 Environmental Issues (3)
- CHEM 1001 Chemistry in Society (3)
- EDUC 3091\* Science Methods and Intervention PK-9 (3) (20 field hours)
- GEOL 2801 Geology (3)
- PHYS 1001 Conceptual Physics (3)
- PHYS 1051 Planetary Astronomy (3)
- One additional science elective (3)

Middle Childhood Social Studies

- BIZ 2021 Principles of Microeconomics (3)
- EDUC 3071\* Social Studies Methods and Intervention PK-9 (3) (20 field hours)
- HIST 1131 U.S. History to 1877 (3)
- HIST 1141 U.S. History since 1877 (3)
- HIST 1151 World Civilizations I (3)
- HIST 1161 World Civilizations II (3)
- PLSC 1011 Introduction to American Politics (3)

Select one:

- GEOG 2261 World Regional Geography (3)
- GEOG 2371 Physical Geography (3)

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 & Sciences.

- CAMS 1311 Communication in the Classroom (3)
- HIST xxx1 History elective (3)
- PHIL 2401 Professional Ethics (3)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

One literature elective (3)

Additional requirements for the BA Degree

- ART 1651 Visual Literacy (3)
- RELG xxx1 Religion elective (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:

- MATH 1661 Fundamental Mathematics 1 (3)
- MATH 1671 Fundamental Mathematics 2 (3)

Select one:

- MUSC 1001 Music Appreciation (3)
- MUSC 2201 Non-western Music (3)
- TATH 1051 Introduction to the Performing Arts (3)

One year of a modern language (or equivalent through placement) (6)

Additional requirements for the BS Degree

- MATH 1661 Fundamental Mathematics 1 (3)
- MATH 1671 Fundamental Mathematics 2 (3)

Select one:

- BIOL 1031 Life/Earth Sciences for EC/MC (3)
- BIOL 2011 Environmental Issues (3)

Select one:

- CHEM 1001 Chemistry in Society (3)
- GEOL 2801 Geology (3)
- PHYS 1001 Conceptual Physics (3)
- PHYS 1051 Planetary Astronomy (3)

One additional math or science elective (3)

Select one:

- ART 1651 Visual Literacy (3)
- MUSC 1001 Music Appreciation (3)
- MUSC 2201 Non-western Music (3)
- TATH 1051 Introduction to the Performing Arts (3)

### Middle Childhood Generalist Endorsement

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 2051 Multicultural Literature (3)
- EDUC 3061\* Language Arts Methods and Intervention PK-9 (3) (20 field hours)

Middle Childhood Generalist Mathematics

- EDUC 3081\* Mathematics Methods and Intervention PK-9 (3) (20 field hours)
- MATH 1671 Fundamental Mathematics II (3)

Middle Childhood Generalist Science

One additional science course (3 credit hours) chosen from the following (one biological science required; one physical science required - choose based on category not yet fulfilled).

Select one biological science:

- BIOL 1031 Life/Earth Sciences for EC/MC (3)
- BIOL 2011 Environmental Issues (3)

Select one physical science:

- CHEM 1011 Chemistry in Society (3)
- EDUC 3091\* Science Methods and Intervention PK-9 (3) (20 field hours)
- GEOL 2801 Geology (3)
- PHYS 1001 Conceptual Physics (3)
- PHYS 1051 Planetary Astronomy (3)

Middle Childhood Generalist Social Studies

- EDUC 3071\* Social Studies Methods and Intervention PK-9 (3) (20 field hours)
- GEOG 2261 World Regional Geography (3)  
or
- GEOG 2371 Physical Geography (3)

### Adolescent/Young Adult (AYA) Professional Education (7-12) Requirements

Candidates pursuing AYA licensure must complete the appropriate major and general requirements within the subject area. The course of study is slightly different for Engineering Education licensure students (see below). In addition, the following professional education requirements must be completed:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)

- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

Select the appropriate course:

- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4521\* Integrated Language Arts Methods (3) (20 field hours)
- EDUC 4531\* Integrated Social Studies Methods (3) (20 field hours)
- MATH 3021\* Mathematics and Pedagogy (4) (20 field hours)

### Adolescent/Young Adult (AYA) Engineering Education Professional Education (7-12) Requirements

Candidates pursuing AYA licensure must complete the appropriate major and general requirements within the subject area. In addition, the following professional education requirements must be completed:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- ENGR 3201\* Technology and Engineering Education Methods (3)
- MATH 3021\* Mathematics and Pedagogy (4)
- PSYC 2151 Development Across the Lifespan (3)

### Multi-age (MA) Professional Education Requirements

Candidates pursuing MA licensure must complete the appropriate major and general requirements within the subject area. In addition, the following professional education requirements must be completed:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 2151 Development Across the Lifespan (3)

Select the appropriate course:

- EDUC 4561\* Integrated Modern Language Methods (3)
- EDUC 4571\* Integrated Art Methods (3)
- EDUC 4591\* Integrated Music Methods (3)

### Career Technical (CT) Technology Education Professional Education Requirements

Candidates pursuing Technology licensure must complete the appropriate major and general requirements within the subject area. In addition, the following professional education requirements must be completed:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4041 Strategies for Technology Education (3)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- ENGR 3201\* Technology and Engineering Education Methods (3)
- PSYC 2151 Development Across the Lifespan (3)

# THE SCHOOL OF HEALTH AND BEHAVIORAL SCIENCES

Kami L. Fox, Director

Kristie E. Payment, Assistant Director

**Programs: Athletic Training, Exercise Physiology, Medical Laboratory Science, Nursing, Pre-professional Programs, Psychology, Strength and Conditioning**

## EXERCISE PHYSIOLOGY

**Associate Professors** Potkanowicz, Swanson, Wilson, M. (Director ATTR); **Assistant Professor** Wilson, K.

### Mission Statement

The exercise physiology programs prepare 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 exercise physiology programs 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 and Certifications

The exercise physiology program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP) and the Committee on the Accreditation of Exercise Sciences (CoAES). CAAHEP and CoAES accreditation establishes standards and guidelines for academic programs that facilitate the preparation of students seeking employment in the health, fitness, and exercise industry.

The Strength & Conditioning/Human Performance concentration is recognized by the National Strength & Conditioning Association (NSCA) as meeting Education Recognition Program (ERP) standards. The NSCA ERP recognizes and distinguishes baccalaureate degree granting academic institutions with standardized, approved strength and conditioning curricula that is designed to prepare students for professional certifications in strength and conditioning.

The athletic training program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). CAATE accredits professional programs at the baccalaureate and master's degree levels and post-professional degree programs at the master's and doctoral degree levels and non-degree residency programs in specialty areas of athletic training in the United States and internationally.

### Majors, Minors and Degrees Offered

Athletic Training

Exercise Physiology Major

Clinical and Rehabilitation Sciences Concentration (BA, BS)

Strength & Conditioning/Human Performance Concentration (BA, BS)

Strength & Conditioning Major (BA, BS)

Exercise Physiology Minor

### Major Course Requirements

Students must earn a grade of 'C' or higher in all courses completed for the major.

### Program 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 to an internship, practicum or clinical until their GPA rises to the minimum accumulative 2.00.

Students are responsible for all costs associated with off-campus internships, practicums or clinical experiences, 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, vaccinations, or drug testing, as required by the facility.

## ATHLETIC TRAINING

Ohio Northern University Athletic Training is currently accredited by the Commission on Accreditation of Athletic Training Education (CAATE), 6850 Austin Center Blvd., Suite 100, Austin, TX 78731-3101. The program has chosen to Voluntarily Withdraw its CAATE Accreditation effective August 23, 2021. As a result, incoming undergraduate students will no longer be admitted into the Athletic Training program after the 2018-19 academic year.

Students interested in a career in athletic training are advised to enroll in the Exercise Physiology major with a concentration in clinical and rehabilitation sciences (see below). In addition, ONU has entered into 3+2 Athletic Training articulation agreements with Xavier University. The articulation agreement allows students to earn an undergraduate degree in Exercise Physiology from ONU while pursuing a Master's degree in Athletic Training. If you are interested in this articulation agreement, please see the program coordinator or your advisor for more information.

ATTR 1001	Basic Athletic Training (3)
ATTR 1011	Basic Athletic Training Lab (1)
ATTR 1101	Professional Emergency Care (2)
ATTR 1201	Advanced Weight Control/Sports Nutrition (2)
ATTR 2101	Advanced Strength and Conditioning w/ Lab (3)
ATTR 2401**	AT Clinical Level 1 (2)
ATTR 2451**	AT Clinical Level 2 (2)
ATTR 2601	Evaluation Techniques of AT 1 (3)
ATTR 2651	Evaluation Techniques of AT 2 (3)
ATTR 2801	Athletic Taping and Bracing (1)
ATTR 3101	Therapeutic Modalities in Athletic Training (4)
ATTR 3201	Exercise Rehab in AT (4)
ATTR 3301	Psychosocial Factors of AT (2)
ATTR 3401**	AT Clinical Level 3 (2)
ATTR 3451**	AT Clinical Level 4 (2)
ATTR 3501*	Off-campus AT Clinical Experience (0)
ATTR 4101	Medical Considerations (even years) (3)
ATTR 4201	Trends in Athletic Training (odd years) (3)
ATTR 4401**	AT Clinical Level 5 (2)
ATTR 4451**	AT Clinical Level 6 (2)
ATTR 4601	Senior Seminar in Athletic Training (2)
ATTR 4651	Senior Research in Athletic Training (1)
BIOL 2331	Anatomy and Physiology 1 (4)
BIOL 2341	Anatomy and Physiology 2 (4)
EXPH 1301	Anatomical Structure & Function (3)
EXPH 2201	Kinesiology (3)
EXPH 2301	Exercise Physiology (4)
EXPH 3201	Research and Design (3)
EXPH 4801	Exercise Pathophysiology (3)

### Note:

\*The credit received for this clinical is given through either AT Clinical Level 3, 4, 5, or 6 (ATTR 3401, 3451, 4401, 4451), one of which is taken concurrently with the Off-Campus AT Clinical Experience.

\*\*Students must earn 2 credits in each of these courses. Depending on the clinical assignment, this course may be taken as a 2-credit course in the fall or spring semester, or may be taken as a 1-credit course fall semester and 1-credit course spring semester for a total of 2 credits.

### Exercise Physiology Major

Students majoring in exercise physiology must complete one of two concentrations: clinical and rehabilitation sciences or strength & conditioning/human performance.

EXPH 1001	Introduction to Exercise & Health (3)
EXPH 1101	Medical Emergency Management (3)
EXPH 1201	Basic Strength & Conditioning (3)
EXPH 2101	Sports Nutrition and Supplementation (3)



EXPH 2301	Exercise Physiology (4)
EXPH 3101	Exercise Testing and Prescription I (3)
EXPH 3151	Exercise Testing and Prescription II (3)
EXPH 3201	Research and Design (3)
EXPH 3351	Organization and Administration (3)
EXPH 3501	Practical Applications of Exercise Programming (3)
EXPH 3701	Behavioral Strategies in Exercise Physiology (2)
EXPH 4301	Physiology of Aging (3)
EXPH 4501	Exercise Physiology Internship (3)
EXPH 4801	Exercise Pathophysiology (3)

**Other required courses**

BIOL 1131*	Principles & Concepts of Human Biology (4)
BIOL 2331*	Anatomy and Physiology I (4)
BIOL 2341*	Anatomy and Physiology II (4)
STAT 1561*	Statistics for Professionals 1 (3)

\*Grade of D or better required

**Clinical and Rehabilitation Sciences Concentration**

EXPH 2701	Orthopedic Measurement and Assessment (3)
EXPH 3451	Therapeutic Interventions (3)
EXPH 3551	Orthopedic Taping, Bracing and Casting (2)
BIOL 3021	Human Anatomy (4)

**Strength and Conditioning/Human Performance Concentration**

EXPH 2201	Kinesiology (3)
EXPH 2501	Application and Response to Strength & Conditioning (3)
EXPH 2551	Programming and Management of Strength & Conditioning (3)
EXPH 3251	Biomechanics (3)

**Minor Course Requirements**

Students must earn a grade of 'C' or higher in all courses completed for the minor.

**Exercise Physiology Minor**

EXPH 1001	Introduction to Exercise and Health (3)
EXPH 2301	Exercise Physiology (4)
EXPH 3101	Exercise Testing and Prescription I (3)
BIOL 1131*	Principles and Concepts of Human Biology (4)
BIOL 2331*	Anatomy and Physiology I (4)

**Select one:**

EXPH 1201	Basic Strength and Conditioning (3)
EXPH 2101	Sports Nutrition and Supplementation (3)
EXPH 2201	Kinesiology (3)
EXPH 4301	Physiology of Aging (3)

**MEDICAL LABORATORY SCIENCE**

**Lisa Walden, Director**

**Assistant Professor** Walden; **Adjunct Instructor** Sherrick

**Accreditation**

Ohio Northern University's West Central Ohio Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119.

**Majors, Minors and Degrees Offered**

Medical Laboratory Science Major (BSMLS)

**Certification Offered**

Medical Laboratory Science Post-Baccalaureate Certificate

**West Central Ohio Medical Laboratory Science Program**

The West Central Ohio Medical Laboratory Science (WCOMLS) Program is a full-year (12 months) clinical training experience for those pursuing the BSMLS degree or the post-baccalaureate certificate. During the first two semesters, students complete didactic coursework in medical laboratory science theory and practice, hematology, clinical chemistry, clinical microbiology, clinical immunology, blood banking, biological fluids, and professional practice and development. The students complete

their last semester of clinical coursework at an assigned clinical affiliate laboratory that may include Lima Memorial Hospital (Lima, OH), Blanchard Valley Hospital (Findlay, OH), University Hospitals (Cleveland, OH), Nationwide Children's Hospital (Columbus, OH) or Lutheran Hospital (Fort Wayne, IN).

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 WCOMLS Program is to educate students in the medical 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.

**Accreditation**

Ohio Northern University's West Central Ohio Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119.

**Admission Requirements**

The WCOMLS Program has an enrollment capacity of twelve students per year. The start date for the program is the first day of fall 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, BSMLS applicants to the WCOMLS 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 MLS 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) GPA on a 4.00 scale
- Demonstrate comprehension and commitment to MLS professionalism

At a minimum, non-degree seeking (Post-Baccalaureate Certificate) applicants to the WCOMLS 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 3 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) GPA on a 4.00 scale
- Demonstrate comprehension and commitment to MLS professionalism

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

### Medical Laboratory Science Major

The BSMLS 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 29 semester hours of approved general education coursework, (b) a minimum of 31 semester hours of biology requisites, (c) a minimum of 18 semester hours of chemistry requisites, (d) 9 semester hours of MLS enrichment courses and (e) a minimum of 45 semester hours of medical laboratory science core coursework. 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 MLS specific courses and complete clinical training at an area clinical affiliate. 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 Medical Laboratory Science and are eligible to seek 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 MLS courses must be completed with a grade of "C" or higher.

#### BSMLS Degree Requirements

BIOL 1301	Biology 1: Cells, Molecules, and Evolution - Majors (4)
BIOL 1401	Biology 2: Biodiversity, Organismal Biology and Ecology (4)
BIOL 2101	Genetics (4)
BIOL 2171	Molecular Biology (3)
BIOL 2181	Molecular Biology Laboratory (1)
BIOL 2331	Anatomy and Physiology 1 (4)
BIOL 2341	Anatomy and Physiology 2 (4)
BIOL 3031	Histology (4)
BIOL 3201	Immunology Lab (1)
BIOL 3211	Introduction to Immunology (3)
BIOL 3431	Histological Techniques (3)
BIOL 3461	Clinical Microbiology (4)

#### MLS core courses

MLS 4601	Foundations of Medical Laboratory Science (3)
MLS 4611	Professional Practice and Development (3)
MLS 4621	Biological Fluids (4)
MLS 4641	Hematology and Hemostasis (4)
MLS 4651	Blood Banking and Transfusion Science (4)
MLS 4661	Medical Chemistry (4)
MLS 4691	Medical Hematology Practicum (4)
MLS 4701	Blood Bank Practicum (4)
MLS 4711	Medical Chemistry Practicum (3)
MLS 4721	Medical Microbiology Practicum (4)
MLS 4741	Case Studies in Medical Lab Science (1) – Post Bacc Cert. only
MLS 4921	Capstone Experience (1) – BSMLS only
MLS 4941	Capstone Seminar (1) – BSMLS only

#### MLS Enrichment - Select 3 (nine hours)

BIOL 3231	Introduction to Virology (3)
BIOL 3451	Pharmacology (3)
BIOL 3621	Parasitology (3)
BIOL 3921	Practical Toxicology (2)
PHBS 3411	Biochemistry 1 (3)
PLSC 3601	Introduction to Health Policy (3)

#### 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)
STAT 1561	Statistics for Professionals 1 (3)

### Essential Functions

Essential functions are nonacademic standards that all WCOMLS Program students must master and execute successfully to participate in and complete the program without compromising the safety and the well-being of students, instructors, and patients and the public. The WCOMLS 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.
3. Read numbers, letters and symbols displayed in print whether transmitted through non-electronic or other technological media.
4. Identify and respond to warning signals.
5. 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.
6. Engage in a sustained physical activity that may require sitting, standing or walking for extended periods of time.
7. Practice laboratory safety and respond to emergent situations in accordance with established guidelines to minimize harm and danger to self and others.
8. 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.
9. Use available modes of transportation to travel between the university campus and off-campus training sites.
10. Collect specimens in a safe, timely and professional manner without compromising sample integrity or causing the patient undue pain and suffering.
11. Ask appropriate scientific questions and demonstrate ability to evaluate and draw conclusions.
12. 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.
13. Identify and employ strategies that minimize miscommunication.
14. Adhere to established policies to safeguard confidentiality of information communicated by non-electronic and electronic means.
15. Perform multiple tasks with focused attention on safety, accuracy and quality.
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.

### Medical Laboratory Science Post-Baccalaureate Certificate

The ONU post-baccalaureate certificate in MLS focuses on educating academically qualified individuals in the medical laboratory sciences using a community-partnered curriculum. Specifically, students must complete a minimum of 47 semester hours of clinical laboratory science core coursework including the supervised applied clinical experience.

### Post-Baccalaureate Certificate Requirements

All MLS core courses must be completed with a grade of "C" or higher.

### Essential Functions

See the list of Essential Functions above.

## NURSING

**Associate Professors** Fox (Director), Liebrecht; **Assistant Professors** Bassitt, Hunsicker, Lieb; **Adjunct Instructors** Bostick, Hattery-Roberts, Hoying, Kerber, Richard, K. Schroeder, Waldo, Welch

### 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 Nursing program 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 660, Columbus, OH 43215-3466, 614-466-3947) and is accredited by Commission on Collegiate Nursing Education (655 K Street, Suite 750, Washington DC 20001, 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 3.30 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 1130.
4. Before beginning clinical nursing courses pass a criminal background check and drug screening.

### 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 in order to remain in the nursing curriculum.

### Policy for Progression/Program Completion within the Nursing Major:

All students must meet the following criteria to progress to the next nursing course and complete the nursing program:

### Program Progression

- Students must meet and follow the Academic Standing policy of The Getty College of Arts and Sciences and the Nursing Program;
- A student must receive of grade of "C or higher" and a Satisfactory evaluation in the clinical portion of all clinical nursing courses to receive a passing grade (A, B, or C) in the course, students unsuccessful (D, F, or W) must repeat both sections;
- A letter grade of "C" or above is required as a passing grade (D, F, or W are failing grades) for identified general education courses, all identified other required courses and all nursing courses. Students who do not meet this requirement must repeat deficient coursework with a "C" or better before progressing in the program. No exceptions will be made.
- An accumulation of two (2) failures (D, F, or W) in nursing courses may result in dismissal from the nursing program;
- Students with two failures (D, F, or W) in nursing courses must submit a re-entry application for continuation in the nursing program (including self-assessment of reasons for failure and strategies which will increase learning and program success) to the faculty and Director of the program;
- Students with three failures (D, F, or W) in nursing courses will be dismissed from the program
- If a student fails a Nursing Core Course (D, F, or W) or does not complete a Nursing Core Course (withdrawal), re-entry in that course is based on space availability, and faculty recommendation.

### Program Completion

Students must attain the following to meet the requirements for program completion:

- complete every nursing core major requirement, required other courses and general education courses identified in the nursing curriculum;
- all nursing, required other courses and identified required courses a letter grade of "C" or higher is required;
- maintain good academic standing;
- meet university GPA requirement for graduation
- meet Getty College of Arts and Sciences Bachelor of Science basic and graduation requirements

Graduates of the program are eligible to take the National Council Licensure Examination for licensure (NCLEX) as a Registered Nurse.

### Nursing Major

NURS 1101	Professional Concepts (1)
NURS 2101	Physical Assessment (3)
NURS 2201	Pathophysiology (3)
NURS 2301	Fundamentals of Nursing (5)
NURS 2501	Pharmacology (3)
NURS 3101	Medical Surgical Nursing I (5)
NURS 3231	Older Adult Nursing (2)
NURS 3301	Transcultural Healthcare (2)
NURS 3351	Nursing Research 1 and Informatics (3)
NURS 3441	Mental Health Nursing (3)
NURS 3501	Nursing Care of the Developing Child and Family (5)
NURS 4101	Community Health Nursing (3)
NURS 4201	Leadership and Management in Nursing (2)
NURS 4351	Nursing Research 2 (3)
NURS 4401	Medical Surgical Nursing II (5)
NURS 4981	Transition to Professional Practice: Nursing Capstone (6)

### Other required courses

BIOL 1131*	Principles and Concepts of Human Biology (4)
BIOL 1151*	Medical Terminology (1)
BIOL 2151*	Microbiology for Nurses (3)
BIOL 2331*	Anatomy and Physiology 1 (4)
BIOL 2341*	Anatomy and Physiology 2 (4)
BIOL 2531*	Nutrition for Nurses (3)
CHEM 1201*	Chemistry for the Health Sciences (5)
PSYC 1001*	Psychology (3)
PSYC 2151*	Development Across the Lifespan (3)
STAT 1561*	Statistics for Professionals 1 (3)

Select one:

- CAMS 1301\* Presentational Speaking (3)
- CAMS 2321\* Group Dynamics and Team Interaction (3)
- CAMS 2331\* Health Communication (3)

\*Indicates other required courses outside of the major requiring a grade of 'C' or higher.

## PSYCHOLOGY

**Associate Professors** Johnson, Kraynok, Payment, Zoladz; **Assistant Professor** Stokes

### Mission Statement

The mission of the Psychology program is to provide students a broad foundation in the discipline; teaching students to critically evaluate, theoretically analyze, and scientifically produce research findings about everyday life. Experiential learning opportunities both inside and outside the classroom build strong research, communication and interpersonal skills, preparing students for success in graduate work and future careers while also serving others, locally and globally.

### Majors, Minors and Degrees Offered

Law 3+3 in Psychology (BA)

Psychology Major

- Behavioral Neuroscience Concentration (BS)
- Clinical and Counseling Psychology Concentration (BA, BS)
- General Psychology Concentration (BA, BS)

Psychology Minor

### Pre-Law Program

Students majoring in Psychology (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### Honoraries and Organizations

Psi Chi, the international 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.

PSCJ is a student organization open to all students with an interest in either psychology, sociology, or criminal justice. The club sponsors speakers and fundraisers for community organizations.

### Practicums and Research

Students majoring in psychology have the opportunity to pursue practicum experiences and research. Psychology practicums may include anything from experience with childhood or older adult development to experiences with school psychologists. Students may gain research experience by working closely with a specific faculty member to conduct empirical investigations in various areas of psychological 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 Major

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.

- PSYC 0011 Psychology Major Orientation (1)
- PSYC 1001 Psychology (3)
- PSYC 2001 Brain and Behavior (3)
- PSYC 2401 Statistics for the Behavioral Sciences with Lab (4)
- PSYC 3401 Experimental Psychology with Lab (4)
- PSYC 4951 Senior Capstone in Psychology I (1)
- PSYC 4961 Senior Capstone in Psychology II (1)

### Behavioral Neuroscience Concentration

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)

Select one course from each of the following two categories:

Developmental Cognate:

- PSYC 2161 Child Psychology<sup>1</sup>(3)
- PSYC 2171 Adolescent Psychology (3)
- PSYC 3171 Adulthood and Aging (3)

Social/Clinical Cognate:

- PSYC 2311 Abnormal Psychology (3)
- PSYC 3011 Social Psychology (3)
- PSYC 3111 Psychology of Personality (3)

### Clinical and Counseling Psychology Concentration

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 2311 Abnormal Psychology (3)
- PSYC 3131 Introduction to Clinical Psychology (3)

Select two of the following (one must be PSYC 3xx1-4xx1):

- PSYC 2201 Health Psychology (3)
- PSYC 3111 Psychology of Personality (3)
- PSYC 3901 Special Topics in Psychology (3)
- PSYC 4301 Multicultural Psychology (3)
- PSYC 4311 Child Psychopathology (3)
- PSYC 4351 Psychopharmacology (3)
- SOC 3461 Social Stratification (3)
- SOC 3491 Sociology of Mental Health and Illness (3)

Select one course from each of the following three categories:

Physiological Cognate:

- PSYC 3301 Sensation and Perception with Lab (4)
- PSYC 3351 Physiological Psychology with Lab (4)

Learning/Cognitive Cognate:

- PSYC 3151 Learning and Behavior with Lab (4)
- PSYC 3251 Cognitive Psychology with Lab (4)

Developmental Cognate:

- PSYC 2161 Child Psychology<sup>1</sup> (3)
- PSYC 2171 Adolescent Psychology<sup>1</sup> (3)
- PSYC 3171 Adulthood and Aging<sup>1</sup> (3)

### General Psychology Concentration

The general psychology concentration is designed to prepare students for immediate entry into the workforce or graduate study in most subdisciplines of experimental psychology.

- PSYC 2xx1-4xx1 PSYC elective (3)
- PSYC 2xx1-4xx1 PSYC elective (3)
- PSYC 2xx1-4xx1 PSYC elective (3)

Select one course from each of the following four categories:

Physiological Cognate:

- PSYC 3301 Sensation and Perception with Lab (4)
- PSYC 3351 Physiological Psychology with Lab (4)

Learning/Cognitive Cognate:

- PSYC 3151 Learning and Behavior with Lab (4)
- PSYC 3251 Cognitive Psychology with Lab (4)

#### Developmental Cognate:

PSYC 2161 Child Psychology<sup>1</sup> (3)  
PSYC 2171 Adolescent Psychology<sup>1</sup> (3)  
PSYC 3171 Adulthood and Aging<sup>1</sup> (3)

#### Social/Clinical Cognate:

PSYC 2311 Abnormal Psychology (3)  
PSYC 3011 Social Psychology (3)  
PSYC 3111 Psychology of Personality (3)

#### Minor Course Requirements

All courses required for a minor must be completed with a grade of 'C' or higher.

#### Psychology Minor

PSYC 1001 Psychology (3)  
PSYC 2xx1-4xx1 Psychology elective<sup>2</sup> (3)  
PSYC 2xx1-4xx1 Psychology elective<sup>2</sup> (3)

Complete at least one course from each of the following three categories:

#### Cognitive/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 Cognate:

PSYC 2161 Child Psychology<sup>1</sup> (3)  
PSYC 2171 Adolescent Psychology<sup>1</sup> (3)  
PSYC 3171 Adulthood and Aging<sup>1</sup> (3)

#### Social/Clinical Cognate:

PSYC 2311 Abnormal Psychology (3)  
PSYC 3011 Social Psychology (3)  
PSYC 3111 Psychology of Personality (3)

#### Notes:

<sup>1</sup>Development 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, PSYC 3171). Students taking PSYC 2151 should not take PSYC 2161, PSYC 2171, or PSYC 3171 and vice-versa.

<sup>2</sup>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.

## STRENGTH & CONDITIONING

**Associate Professors** Potkanowicz, Swanson, Wilson, M. (Director ATTR); **Assistant Professor** Wilson, K.

#### Mission Statement:

The mission of the ONU strength and conditioning education program is to promote academic excellence through comprehensive, challenging and unique educational experiences. We will provide a supportive learning environment and foster independent investigation. Our program will strive to promote excellent practitioners through scholarship, skill and professionalism.

#### Program Vision Statement:

Our vision is to be known as one of the premiere private universities in the nation in undergraduate education of strength and conditioning professionals by providing high impact learning, collaboration, and practical educational opportunities.

#### Certifications

The Strength & Conditioning/Human Performance concentration is recognized by the National Strength & Conditioning Association (NSCA) as meeting Education Recognition Program (ERP) standards.

The NSCA ERP recognizes and distinguishes baccalaureate degree granting academic institutions with standardized, approved strength and conditioning curricula that is designed to prepare students for professional certifications in strength and conditioning.

#### Majors, Minors and Degrees Offered

Strength and Conditioning Major (BA, BS)

#### Major Course Requirements

Students must earn a grade of 'C' or higher in all courses completed for the major.

#### Program Requirements

Students must maintain a minimum accumulative 2.00 GPA in order to remain eligible for their practicum and internship assignments. Students who have been assigned to a practicum or internship and who have dropped below an accumulative 2.00 GPA will be immediately removed from that assignment and will not be reassigned to a practicum or internship until their GPA rises to the minimum accumulative 2.00.

Students are responsible for all costs associated with practicums or internships including, but not limited to, clothing/equipment, travel to and from the facility or affiliated sites, a criminal background check (BCI and/or FBI), a health assessment, vaccinations, or drug testing, as required by the facility.

#### Strength and Conditioning Major

EXPH 1101 Medical Emergency Management (3)  
EXPH 1201 Basic Strength & Conditioning (3)  
EXPH 2101 Sports Nutrition and Supplementation (3)  
EXPH 2201 Kinesiology (3)  
EXPH 2301 Exercise Physiology (4)  
EXPH 2501 Application and Response to Strength & Conditioning (3)  
EXPH 2551 Programming and Management of Strength & Conditioning (3)  
EXPH 3251 Biomechanics (3)  
EXPH 3351 Organization and Administration (3)  
EXPH 3701 Behavioral Strategies in Exercise Physiology (2)  
EXPH 3801 Practicum in Strength and Conditioning (3)  
EXPH 4xx1 Test and Measurement in Strength and Conditioning (3)  
EXPH 4xx1 Strength and Conditioning Internship (3)

#### Other required courses

BIOL 1131\* Principles & Concepts of Human Biology (4)  
BIOL 2331\* Anatomy and Physiology I (4)  
BIOL 2341\* Anatomy and Physiology II (4)

\*Grade of D or better required

## THE SCHOOL FOR THE HUMANITIES AND GLOBAL CULTURES

#### Jennifer Moore, Director

#### Errol G. Katayama, Assistant Director

#### Programs: Creative Writing, History, Language Arts Education, Literature, Philosophy, Religion, Social Studies, Spanish, Writing and Multimedia Studies, Youth Ministry

#### Mission Statement

The School for the Humanities and Global Cultures teaches students to examine the present and learn from our past by studying cultural, historical, linguistic, literary, philosophical, and religious traditions. In humanities courses, students learn to celebrate and challenge these traditions, including the virtues that drive us and the passions that inspire us. Faculty and students in the humanities interrogate the frameworks that people use to make sense of the human experience by thinking critically and creatively, reading with insight, and writing with purpose about the past, present, and future.

## Vision Statement

We will provide leadership in the humanities and global cultures by advocating for the vitality and value of our disciplines in higher education, by grounding our general education and major curricula in high-impact practices, and by partnering with other programs across the university.

## ENGLISH

**Professors** Baumgartner (Dean), McManus, Robeson, R. Scott; **Associate Professors** Cullen, Dowland, Moore, Pitts; **Assistant Professors** Lutz, Johnston, Post, Pullen; **Instructors** J. Smith, Youngpeter

### Mission Statement

Based on its commitment to the values of the humanities, the English program faculty teach analytical reading and critical, creative, and professional writing as forms of art, as sources of pleasure, as a means of understanding diverse peoples and cultures, and as practical, marketable skills. Through close interaction with written, oral, and digital texts, students develop as critical thinkers and writers to become producers of knowledge. Through close interaction with peers and faculty, and active engagement with a variety of publications and professional experiences, students learn the value of creating texts and, in turn, become thoughtful members of our global community. Studies in English prepare students for professional, business and teaching careers, for law school, for graduate study in English and other disciplines, as well as for a lifetime of continual engagement with language and literature.

### Vision or Overview Statement

The English programs at Ohio Northern University will continue to strengthen unique and individualized majors in Creative Writing, Language Arts Education, Literature, and Writing and Multimedia Studies, 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 Council for Accreditation of Educator Preparation (CAEP). Additionally, the program holds memberships in the Modern Language Association (MLA), College English Association of Ohio (CEAO), and Sigma Tau Delta, the international English honor society.

### Majors, Minors and Degrees Offered

Creative Writing Major (BA)  
Language Arts Education Major (BA)  
Literature Major (BA)  
Law 3+3 in Literature (BA)  
Writing and Multimedia Studies Major (BA)  
Creative Writing Minor  
Literature Minor  
Writing in Business, Science, and Technical Fields Minor

### Licensure Offered

Adolescent Young Adult (7-12) Language Arts Licensure for students majoring in Language Arts Education.

### Admission Requirements

Only one major, 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 the Praxis Core for Educators exams or equivalent, have a 2.5 overall GPA, and have met specific CTE course and field experience requirements.

## Special Programs

### Pre-Law Program

Students majoring in Literature (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### Internships and Study Abroad

The English programs require either an internship or study abroad experience for all majors. Writing and Multimedia Studies requires an internship. Student teaching fulfills the internship requirement for Language Arts Education majors. Students in Creative Writing and Literature may choose an internship or study abroad.

### Publications

The English programs produce three publications: *Polaris* (national literary magazine), *Aurora* (ONU's undergraduate research journal) and *Dialogue* (alumni newsletter). Students in all major concentrations are required to have experience working on program 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, including the Association of Writers and Writing Programs conference (AWP). 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 program funding.

### College Composition Program

The English programs provide instruction for international students in the area of college composition. A two semester sequence of courses (ENGL 1511 & 1521) is available for international students, each of which meets the writing requirement of the Writing Seminar, ENGL 1221. By university policy, all students whose first language is not English, including non-ISTP students, enroll in the College Composition courses.

### Major Course Requirements

All majors include a capstone project for which students prepare a professional project or paper under the guidance of an instructor in a 3000- or 4000-level course. In ENGL 4461, they revise and formally present their projects to faculty, students, and families in a professional conference setting.

The student may complete two majors or a major and a minor within the English programs so long as there is no more than 30% duplication of courses within the second major or minor. In addition, the English faculty encourages complementary majors, minors, or options in other disciplines.

### Creative Writing Major

ENGL 1011 Introduction to English Studies (1)  
ENGL 2001 Grammar in Context (3)  
ENGL 2011 Introduction to Creative Writing (3)  
ENGL 2101 Text and Theory (3)  
ENGL 2221 Words at Work (1)  
ENGL 3771 Writing for Publication (3)  
ENGL 4451 Capstone Project (1)  
ENGL 4461 Capstone Presentation (2)

### Practicum Requirement (select 2):

ENGL 2511 Magazine Publishing Practicum (1-3)  
ENGL 2531 Web Publishing Practicum (1-3)  
ENGL 2551 Creative Writing Workshop (1-3)

### Breadth Requirement (select 3; two must be at the 3000-4000 level):

ENGL 2071 Topics in Fiction (3)  
ENGL 2081 Topics in Drama (3)  
ENGL 2091 Topics in Poetry (3)  
ENGL 2111 American Literature 1 (3)  
ENGL 2121 American Literature 2 (3)

ENGL 2131 British Literature 1 (3)  
 ENGL 2141 British Literature 2 (3)  
 ENGL 2191 Topics in World Literature (3)  
 ENGL 2601 Introduction to Shakespeare (3)  
 ENGL 2631 Women's Literature (3)  
 ENGL 2741 American Multicultural Literature (3)  
 ENGL 3151 Literature and the Environment (3)  
 ENGL 3321 Readings in Comparative Literature (3)  
 ENGL 3671 Readings in the Novel (3)  
 ENGL 3681 Readings in Poetry (3)  
 ENGL 4101 Chaucer (3)  
 ENGL 4121 Shakespeare Studies (3)  
 ENGL 4131 Major Authors (3)  
 ENGL 4311 Studies in American Literature (3)  
 ENGL 4351 Studies in British Literature (3)  
 ENGL 4971 Independent Study in Literature (1-3)

Workshops (select 3; two must be sequential):

ENGL 3401 Intermediate Poetry Writing (3)  
 ENGL 3411 Intermediate Fiction Writing (3)  
 ENGL 3421 Screenwriting (3)  
 ENGL 3761 Topics in Writing (3)  
 ENGL 4401 Advanced Poetry Writing (3)  
 ENGL 4411 Advanced Fiction Writing (3)  
 ENGL 4421 Nonfiction Writing (3)  
 TATH 3821 Playwriting (3)

Theory Requirement (select 1):

ENGL 3051 Studies in Literary and Cultural Theory (3)  
 ENGL 3521 Rhetorical Theory (3)

Experiential Requirement (select 1):

ENGL 4821 Internship in English (1-3)  
 ENGL 4831 Library Studies Internship (1-3)  
 OVRC xxx1 Study Abroad

Only 6 hours of practicum (ENGL 2511, 2531, or 2551) or workshop credits will count toward graduation.

### Language Arts Education Major

Successful completion of this major meets the curriculum and experience requirements for the Adolescent Young Adult (7-12) Teaching Licensure.

ENGL 1011 Introduction to English Studies (1)  
 ENGL 2001 Grammar in Context (3)  
 ENGL 2101 Text and Theory (3)  
 ENGL 2221 Words at Work (1)  
 ENGL 2251 Young Adult Literature (3)  
 ENGL 3051 Studies in Literary and Cultural Theory (3)  
 ENGL 3511 English Language (3)  
 ENGL 3751 Teaching Writing (3)  
 ENGL 4121 Shakespeare Studies (3)  
 ENGL 4451 Capstone Project (1)  
 ENGL 4461 Capstone Presentation (2)

Practicum Requirement (select 2):

ENGL 2511 Magazine Publishing Practicum (1-3)  
 ENGL 2531 Web Publishing Practicum (1-3)  
 ENGL 2551 Creative Writing Workshop (1-3)

Breadth Requirement (select 1):

ENGL 2011 Introduction to Creative Writing (3)  
 ENGL 2021 Business Writing (3)  
 ENGL 2031 Technical and Science Writing (3)  
 ENGL 3401 Intermediate Poetry Writing (3)  
 ENGL 3411 Intermediate Fiction Writing (3)  
 ENGL 3421 Screenwriting (3)  
 ENGL 3761 Topics in Writing (3)  
 ENGL 3771 Writing for Publication (3)  
 ENGL 4401 Advanced Poetry Writing (3)  
 ENGL 4411 Advanced Fiction Writing (3)  
 ENGL 4421 Nonfiction Writing (3)

WAMS 4101 Advanced Professional Writing (3)  
 TAAD 2411 Grant Writing/Arts Fundraising (3)  
 WAMS 2101 Writing for Action (3)

Survey (select 3):

ENGL 2111 American Literature 1 (3)  
 ENGL 2121 American Literature 2 (3)  
 ENGL 2131 British Literature 1 (3)  
 ENGL 2141 British Literature 2 (3)

Culture and Diversity (select 1):

ENGL 2191 Topics in World Literature (3)  
 ENGL 2631 Women's Literature (3)  
 ENGL 2741 American Multicultural Literature (3)  
 ENGL 3321 Readings in Comparative Literature (3)

Major Electives (select 2):

ENGL 3151 Literature and the Environment (3)  
 ENGL 3671 Readings in the Novel (3)  
 ENGL 3681 Readings in Poetry (3)  
 ENGL 4311 Studies in American Literature (3)  
 ENGL 4351 Studies in British Literature (3)  
 ENGL 4971 Independent Study in Literature (1-3)

Additional Education requirements:

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3401 Educational Psychology (3) (10 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4521\* Integrated Language Arts Methods (3) (20 field hours)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 PSYC 1001 Psychology (3)  
 PSYC 2171 Adolescent Psychology (3)

Experiential Requirement:

EDUC 4901\* Student Teaching (12)

In addition to the requirements above, all language arts education majors must attend two professional conferences. The appropriate subject exam must be passed prior to application for the AYA license. Only 6 hours of practicum (ENGL 2511, 2531, or 2551) or workshop credits will count toward graduation.

### Literature Major

ENGL 1011 Introduction to English Studies (1)  
 ENGL 2101 Text and Theory (3)  
 ENGL 2221 Words at Work (1)  
 ENGL 3051 Studies in Literary and Cultural Theory (3)  
 ENGL 3511 English Language (3)  
 ENGL 4451 Capstone Project (1)  
 ENGL 4461 Capstone Presentation (2)

Practicum Requirement (select 1):

ENGL 2511 Magazine Publishing Practicum (1-3)  
 ENGL 2531 Web Publishing Practicum (1-3)  
 ENGL 2551 Creative Writing Workshop (1-3)

Breadth Requirement (select 2; one must be at the 3000-4000 level):

ENGL 2011 Introduction to Creative Writing (3)  
 ENGL 2021 Business Writing (3)  
 ENGL 2031 Technical and Science Writing (3)  
 ENGL 3401 Intermediate Poetry Writing (3)  
 ENGL 3411 Intermediate Fiction Writing (3)  
 ENGL 3421 Screenwriting (3)  
 ENGL 3751 Teaching Writing (3)  
 ENGL 3761 Topics in Writing (3)  
 ENGL 3771 Writing for Publication (3)



ENGL 4401 Advanced Poetry Writing (3)  
ENGL 4411 Advanced Fiction Writing (3)  
ENGL 4421 Nonfiction Writing (3)  
WAMS 4101 Advanced Professional Writing (3)  
TAAD 2411 Grant Writing/Arts Fundraising (3)  
WAMS 2101 Writing for Action (3)

Experiential Requirement (select 1):

ENGL 4821 Professional Writing Internship (1-3)  
ENGL 4831 Library Studies Internship (1-3)  
OVRC xxx1 Study Abroad

Survey (select one from each category):

ENGL 2111 American Literature 1 (3)  
or  
ENGL 2131 British Literature 1 (3)  
AND  
ENGL 2121 American Literature 2 (3)  
or  
ENGL 2141 British Literature 2 (3)

Culture and Diversity (select 1):

ENGL 2191 Topics in World Literature (3)  
ENGL 2631 Women's Literature (3)  
ENGL 2741 American Multicultural Literature (3)  
ENGL 3321 Readings in Comparative Literature (3)

Major Author (select 1):

ENGL 4101 Chaucer (3)  
ENGL 4121 Shakespeare Studies (3)  
ENGL 4131 Major Authors (3)

Major Elective (select two; one must be at the 3000 or 4000-level):

ENGL 2071 Topics in Fiction (3)  
ENGL 2081 Topics in Drama (3)  
ENGL 2091 Topics in Poetry (3)  
ENGL 2601 Introduction to Shakespeare (3)  
ENGL 3151 Literature and the Environment (3)  
ENGL 3271 Literature and Medicine (3)  
ENGL 3671 Readings in the Novel (3)  
ENGL 3681 Readings in Poetry (3)  
ENGL 4311 Studies in American Literature (3)  
ENGL 4351 Studies in British Literature (3)

Only 6 hours of practicum (ENGL 2511, 2531, or 2551) or workshop credits will count toward graduation.

**Writing and Multimedia Studies Major**

Students selecting this major must declare a second major or a minor.

WAMS 1001 Introduction to Writing and Multimedia Studies (3)  
WAMS 1201 Adaptive Media Production (3)  
WAMS 2101 Writing for Action (3)  
WAMS 2201 The Digital Newsroom (3)  
WAMS 2301 Layout and Design (3)  
WAMS 3001 Culture Studies and Media Analysis (3)  
WAMS 3501 Internship (1)  
ENGL 3521 Rhetorical Theory (3)  
WAMS 4501 Capstone Project (3)

Practica Component – Select three:

CAMS 2161 Northern Review Practicum (1-3)  
CAMS 2171 A/V Practicum (1-3)  
ENGL 2511 Magazine Publishing Practicum (1-3)  
ENGL 2531 Web Publishing Practicum (1-3)  
ENGL 2551 Creative Writing Workshop (1-3)

Content Production Component – Select 3 from one category to provide depth in one area or select any 3 courses from any category:

Writing and Business, Science, and Technical Fields:  
ENGL 2021 Business Writing (3)  
ENGL 2031 Technical and Science Writing (3)

TAAD 2411 Grant Writing (3)  
WAMS 4101 Advanced Professional Writing (3)

Digital Composition in Journalism:

WAMS 3201 Writing for Advocacy and Activism (3)  
WAMS 3211 Memes and Society (3)  
WAMS 3221 Freelance Journalism (3)  
WAMS 4211 Data Journalism and Infographics (3)

Multimedia Production:

CAMS 2151 Multimedia Writing (3)  
CAMS 3141 Video Storytelling (3)  
CAMS 3151 Podcasting (3)  
WAMS 3301 Narrative Photography (3)

**Minor Course Requirements**

The student completing an English major may also complete a minor within the English programs 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**

ENGL 2011 Introduction to Creative Writing (3)  
ENGL 2101 Text and Theory (3)

Workshops (select 2; one must be at the 4000-level):

ENGL 3401 Intermediate Poetry Writing (3)  
ENGL 3411 Intermediate Fiction Writing (3)  
ENGL 3421 Screenwriting (3)  
ENGL 3761 Topics in Writing (3)  
ENGL 4401 Advanced Poetry Writing (3)  
ENGL 4411 Advanced Fiction Writing (3)  
ENGL 4421 Nonfiction Writing (3)  
TATH 3821 Playwriting (3)

Practicum (select 1):

ENGL 2511 Magazine Publishing Practicum (1-3)  
ENGL 2531 Web Publishing Practicum (1-3)  
ENGL 2551 Creative Writing Workshop (1-3)

Only 6 hours of practicum (ENGL 2511, 2531, or 2551) or workshop credits will count toward graduation.

Literature electives (select 2; one must be at the 3000-4000 level):

ENGL 2071 Topics in Fiction (3)  
ENGL 2081 Topics in Drama (3)  
ENGL 2091 Topics in Poetry (3)  
ENGL 2111 American Literature 1 (3)  
ENGL 2121 American Literature 2 (3)  
ENGL 2131 British Literature 1 (3)  
ENGL 2141 British Literature 2 (3)  
ENGL 2191 Topics in World Literature (3)  
ENGL 2601 Introduction to Shakespeare (3)  
ENGL 2631 Women's Literature (3)  
ENGL 2741 American Multicultural Literature (3)  
ENGL 3151 Literature and the Environment (3)  
ENGL 3321 Readings in Comparative Literature (3)  
ENGL 3671 Readings in the Novel (3)  
ENGL 3681 Readings in Poetry (3)  
ENGL 4101 Chaucer (3)  
ENGL 4121 Shakespeare Studies (3)  
ENGL 4131 Major Authors (3)  
ENGL 4311 Studies in American Literature (3)  
ENGL 4351 Studies in British Literature (3)  
ENGL 4971 Independent Study in Literature (1-3)

**Literature Minor**

ENGL 2101 Text and Theory (3)

American Literature (select 1):

ENGL 2111 American Literature 1 (3)

- ENGL 2121 American Literature 2 (3)  
 ENGL 4311 Studies in American Literature (3)

British Literature (select 1):

- ENGL 2131 British Literature 1 (3)  
 ENGL 2141 British Literature 2 (3)  
 ENGL 4351 Studies in British Literature (3)

Diverse Literature (select 1):

- ENGL 2191 Topics in World Literature (3)  
 ENGL 2631 Women's Literature (3)  
 ENGL 2741 American Multicultural Literature (3)  
 ENGL 3321 Readings in Comparative Literature (3)

Major Electives (select 2):

- ENGL 3051 Studies in Literary and Cultural Theory (3)  
 ENGL 3151 Literature and the Environment (3)  
 ENGL 3271 Literature and Medicine (3)  
 ENGL 3671 Readings in the Novel (3)  
 ENGL 3681 Readings in Poetry (3)  
 ENGL 3901 Special Topics in English (3)  
 ENGL 4101 Chaucer (3)  
 ENGL 4121 Shakespeare Studies (3)  
 ENGL 4131 Major Authors (3)  
 ENGL 4901 Special Topics (3)

**Writing in Business, Science, and Technical Fields Minor**

- WAMS 1001 Introduction to Writing and Multimedia Studies (3)  
 WAMS 2101 Writing for Action (3)

Select one:

- WAMS 1201 Adaptive Media Production (3)  
 ENGL 3521 Rhetorical Theory (3)  
 WAMS 3001 Culture Studies and Media Analysis (3)

Select three:

- ENGL 2021 Business Writing (3)  
 ENGL 2031 Technical and Science Writing (3)  
 TAAD 2411 Grant Writing (3)  
 WAMS 4101 Advanced Professional Writing (3)

**HISTORY**

**Professors** Crawford, Loughlin; **Associate Professor** R. Waters;  
**Assistant Professor** Strittmatter

**Mission**

The mission of the History program is to graduate students who have the knowledge, skills, and critical thinking ability to achieve success in their post-graduate endeavors. Our graduates, and others who take our courses, will leave ONU equipped to be valuable employees, successful graduate students, and will be effective and active citizens. To ensure this, the majors offered are interdisciplinary, offering students historical, political, and geographical tools that enable them to critically analyze the world around them and act on their conclusions, whether that be locally, nationally, or internationally.

**Professional Memberships**

Memberships include the American Historical Association, the Ohio Council for the Social Studies, North American Society for Sport History, and Western Society for French History.

**Majors, Minors and Degrees Offered**

- History Major (BA)  
 Law 3+3 in History (BA)  
 Social Studies Major (BA)  
 History Minor  
 Public History and Museum Studies Minor

**Licensure Offered**

Adolescent Young Adult (7-12) Integrated Social Studies Licensure

**Special Programs**

*Archaeological Field School*

The programs conduct 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. Students are also offered the opportunity to participate in The Washington Center for Internships and Academic Seminars. A student may apply three credit hours of internship to selected majors and minors and as many as six total credit hours of internship to the Bachelor of Arts degree.

Students annually participate in Model United Nations competitions and the American Mock Trial program in cities such as Chicago and New York City. A student may apply three credit hours of Model United Nations to the political science major and up to six credit hours to the Bachelor of Arts degree. A student may apply three credit hours of Mock Trial to the political science major and up to six credit hours to the Bachelor of Arts degree.

*Honoraries*

The History programs have active chapters of Phi Alpha Theta, the national history honorary; Phi Beta Delta, the national honorary for international scholars; and Studia Socialia Americae, the national social studies honor society.

*Study Abroad*

The History programs participate 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 University of Debrecen, Hungary. Students 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.

*Pre-law Program*

Students majoring in History (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24

**Major Course Requirements**

Every course required for the major must be completed with a grade of "C" or higher. The capstone requirement 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.

**History Major**

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. Adding a minor in public history/museum studies offers students practical training for entry-level positions in museum curation and administration, as well as experience in educational and public programming.

- HIST 1101 Western Civilization 1 (3)  
 HIST 1111 Western Civilization 2 (3)  
 HIST 1131 United States to 1877 (3)  
 HIST 1141 United States since 1877 (3)

HIST 2041 Historiography (3)  
 HIST/HSPS 25x1-4xx1 US history elective (3)  
 HIST/HSPS 25x1-4xx1 European history elective (3)  
 HIST/HSPS 25x1-4xx1 Non-Western history elective (3)  
 HIST/HSPS 25x1-4xx1 History elective (3)  
 HIST/HSPS 25x1-4xx1 History elective (3)  
 HIST/HSPS 4981 Senior Thesis 1 (1)  
 HIST 4991 Senior Thesis 2 (1)  
 PLSC 1011 Introduction to American Politics (3)

Select one:

GEOG 2261 World Regional Geography (3)  
 HSPS 2611 Contemporary Europe (3)  
 HSPS 2621 Contemporary Asia (3)  
 HSPS 2631 Contemporary Africa (3)  
 HSPS 2641 Contemporary Middle East (3)  
 HSPS 2651 Contemporary Latin America (3)

### Social Studies Major

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 major advisors for teacher licensure.

Completion of the Social Studies major also completes the requirements for a second major in history.

HIST 0041 Teacher Licensure Orientation (0)  
 HIST 1101 Western Civilization 1 (3)  
 HIST 1111 Western Civilization 2 (3)  
 HIST 1131 U.S. History to 1877 (3)  
 HIST 1141 U.S. History Since (3)  
 HIST 2041 Historiography (3)  
 HIST 2771 Digital History (3)  
 HIST 3451 African American History (3)  
 HIST/HSPS 25x1-4xx1 US history elective (3)  
 HIST/HSPS 25x1-4xx1 European history elective (3)  
 HIST/HSPS 25x1-4xx1 Non-Western history elective (3)  
 HIST/HSPS 4981 Senior Thesis 1 (1)  
 HIST 4991 Senior Thesis 2 (1)  
 GEOG 2261 World Regional Geography (3)  
 GEOG 2481 Introduction to Geographical Information Systems (3)  
 PLSC 1011 Introduction to American Politics (3)  
 PLSC 2501 State and Local Politics (3)  
 PSYC 1001 Psychology (3)

Select one:

BIZ 2021 Principles of Microeconomics (3)  
 BIZ 2031 Principles of Macroeconomics (3)

Additional Education requirements:

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3401 Educational Psychology (3) (10 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4531\* Integrated Social Studies Methods (3) (20 field hours)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 PSYC 2171 Adolescent Psychology (3)

Notes:

<sup>1</sup> A student with a Social Studies primary major may substitute World Civilizations 1 and 2 (HIST 1151 and HIST 1161) for the Western Civilization 1 and 2 (HIST 1101 and 1111) requirement of the second major in history.

### Minor Course Requirements

Every course required for a minor must be completed with a grade of "C" or higher.

History Minor

HIST 1101 Western Civilization 1 (3)  
 HIST 1111 Western Civilization 2 (3)  
 HIST 1131 United States to 1877 (3)  
 HIST 1141 United States since 1877 (3)  
 HIST 2041 Historiography (3)  
 HIST/HSPS 25x1-4xx1 Non-Western elective (3)  
 HIST/HSPS 3xx1-4xx1 History elective (3)

### Public History and Museum Studies Minor

A minor in public history/museum studies encourages students to examine the many ways history engages the general public. In the course of creating high-impact projects, students collaborate with community-based organizations and develop marketable job skills. Public history projects can take many forms, from digital media and popular publications to museum exhibits and educational programs. For those seeking a career in public history, the minor will prepare students for entry-level positions in the field as well as advanced study in specialized programs.

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)

Select one:

HIST 4121 Archaeology Field School (3)  
 HIST 4711 Public Service Internship (3)

Select two:

GEOG 2481 Intro to GIS (3)  
 HIST 2701 American Architecture (3)  
 HIST 3071 Introduction to Family History and Genealogy (3)  
 PLSC 2661 Public Administration (3)  
 PR 1201 Introduction to Public Relations (3)  
 TAAD 2111 Introduction to Arts Administration (3)  
 TAAD 2411 Grant Writing/Arts Fundraising (3)  
 TECH 1421 Web Design (3)

## MODERN LANGUAGES

Professor Finn; Associate Professor Sen; Adjunct Instructor Jmiai

### Mission Statement

The mission 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 faculty 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 program in Spanish is approved by the state of Ohio. The Teacher Education Program is accredited by the Council for Accreditation of Educator Preparation (CAEP).

**Majors, Minors and Degrees Offered**

Spanish Major (BA)  
 Spanish Minor  
 Spanish for Healthcare Professionals Minor  
 Elementary courses offered in Arabic  
 Elementary courses offered in French

**Licensure Offered**

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 Center for Teacher 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. Spanish majors are required to complete a study abroad experience. 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 must demonstrate at least first-year proficiency in a foreign language. To do so, students must pass at least an Elementary 2 modern language course. However, all students, regardless of major or degree requirements, are eligible for retroactive credits for all modern language courses below the level of the first course satisfactorily completed at ONU (see chart). To determine entry into the appropriate course level, Spanish students should take the Spanish placement exam and consult with faculty in Modern Languages. French students may self-place and should consult with faculty in Modern Languages. It is strongly recommended that students begin foreign language study during their first year.

**Retroactive Credit Chart**

Courses taken	Credit hours	Start here and earn at least a 'C'
1011 Elementary 1	3	Receive credit for this course
1021 Elementary 2	3	Receive credit for this course, plus 3 more hours (for 1011)
2011 Intermediate 1	3	Receive credit for this course, plus 6 more hours (for 1011 and 1021)
2021 Intermediate 2	3	Receive credit for this course, plus 9 more hours (for 1011, 1021, and 2011)
3011 or 3021 Advanced	3	Receive credit for this course, plus 12 more hours (for 1011, 1021, 2011, and 2021)

**Major Course Requirements**

Students are encouraged to take a placement test to determine their language level, consult with the faculty in Modern Languages and enroll in the level at which they feel comfortable. Retroactive placement credit will be awarded for 1000- or 2000-level courses upon successful completion of Spanish coursework at Ohio Northern at a higher level. All required courses in the major subject area must be completed with a grade of 'C' or higher. Courses taken through study abroad may be substituted with program approval.

**Spanish Major**

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 Literature in Spanish (3)  
 SPAN 4501 Capstone (1)  
 OVRC xxx1 A study abroad experience is required

Select five courses (15 credit hours, typically 9-12 of these hours are met through study abroad):

SPAN 3101 Spanish Film (3)  
 SPAN 3111 Spanish Civilization (3)  
 SPAN 3121 Spanish Art, Music, Dance (3)  
 SPAN 3201 Latin American Film (3)  
 SPAN 3211 Latin American Civilization (3)  
 SPAN 3221 Latin American Art, Music, Dance (3)  
 SPAN 3301 Business Spanish (3)  
 SPAN 3311 Contemporary Hispanic Cultural Perspectives (3)  
 SPAN 4001 Special Topics (3)  
 SPAN 4101 Medical Spanish (3)  
 SPAN 4111 Medieval and Golden Age Spanish Literature (3)  
 SPAN 4121 18th and 19th Century Spanish Literature (3)  
 SPAN 4131 20th and 21st Century Spanish Literature (3)  
 SPAN 4211 Colonial and 19th Century Latin American Literature (3)  
 SPAN 4221 20th and 21st Century Latin American Literature (3)

**Spanish Major with Teacher Licensure** Study abroad is required. See the Center for Teacher Education for details about this licensure. Complete all requirements for the Spanish major

Complete three (3) three-credit Spanish electives (SPAN) at the 3000- or 4000-level (9 credits).

Additional Education requirements:

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3401 Educational Psychology (3) (10 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4561\* Integrated Modern Languages Methods (3)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 PSYC 2151 Development Across the Lifespan (3)

**Minor Course Requirements**

Students are encouraged to take a placement test and enroll in the level at which they feel comfortable. Retroactive placement credit will be awarded for 1000- or 2000-level courses upon successful completion of coursework at a higher level. All required courses in the minor subject area must be completed with a grade of 'C' or higher. Courses taken through study abroad may be substituted with program approval. A student may not receive credit for both a Spanish and Spanish for Healthcare Professionals minor.

**Spanish Minor**

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)

**Spanish for Healthcare Professionals Minor**

SPAN 1011 Elementary Spanish 1 (3)  
 SPAN 1021 Elementary Spanish 2 (3)  
 SPAN 2011 Intermediate Spanish 1 (3)  
 SPAN 3011 Spanish Conversation (3)  
 SPAN 3221 Latin American Culture and Arts (3)  
 SPAN 4101 Medical Spanish (3)

Select one Transcultural Health course:  
 CAMS 2331 Health Communication (3)  
 CAMS 3311 Cross-Cultural Communication (3)  
 NURS 3301 Transcultural Healthcare (2)  
 PBHE 2101 Introduction to Global Studies (3)

## PHILOSOPHY

**Professor** Katayama; **Associate Professor** Dixon; **Assistant Professor** Spelman; **Visiting Assistant Professor** Snyder Belousek

### Majors, Minors and Degrees Offered

Philosophy Major (BA)  
 Law 3+3 in Philosophy (BA)  
 Philosophy Minor

### Special Programs

#### Pre-law Program

Students majoring in Philosophy (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

#### Major Course Requirements

All required courses in the major must be completed with a grade of 'C' or higher.

### Philosophy Major

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 1xx1-4xx1 Philosophy elective (3)  
 PHIL 1xx1-4xx1 Philosophy elective (3)  
 PHIL 2xx1-4xx1 Philosophy elective (3)  
 PHIL 2xx1-4xx1 Philosophy elective (3)  
 PHIL 2xx1-4xx1 Philosophy elective (3)  
 PHIL 4811 Philosophy Senior Essay 1 (1)  
 PHIL 4911 Philosophy Senior Essay 2 (2)

Select one:

PHIL 3201 Political Philosophy (3)  
 PHIL 3441 Ethical Theory (3)

Select one:

PHIL 3401 Metaphysics (3)  
 PHIL 3551 Epistemology (3)

### Minor Course Requirements

All courses required for a minor must be completed with a grade of 'C' or higher.

### Philosophy Minor

PHIL 2021 Ancient Philosophy (3)  
 PHIL 2341 Logic (3)  
 PHIL 1xx1-4xx1 Philosophy elective (3)  
 PHIL 1xx1-4xx1 Philosophy elective (3)  
 PHIL 1xx1-4xx1 Philosophy elective (3)

Select one:

PHIL 3401 Metaphysics (3)  
 PHIL 3551 Epistemology (3)

## RELIGION AND YOUTH MINISTRY

**Professors** Clingerman, Person; **Assistant Professor** Wu; **Adjunct Instructors** MacDonald, Stauber

### Majors, Minors and Degrees Offered

Law 3+3 in Religion (BA)  
 MTSO 3+3 Program in Religion (BA)  
 MTSO 3+3 Program in Religion and Ecology (BA)  
 MTSO 3+3 Program in Youth Ministry (BA)  
 Religion Major (BA)  
 Youth Ministry Major (BA)  
 Religion Minor

### Special Programs

#### Pre-law Program

Students majoring in Religion (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

#### Pre-Seminary Program

The religion program participates in a 3+3 Seminary Admissions Program with the Methodist Theological School in Ohio (MTSO), so that qualified students majoring in religion, religion & ecology, and youth ministry may complete both their Bachelor of Arts degree and Master of Divinity degree in six years rather than the normally required seven years—that is, three years of undergraduate courses and three years of seminary.

For admission to the 3+3 program with MTSO, students must be accepted to ONU before applying to the program and meet the following requirements: (1) a minimum score of 25 on the ACT or 1150 on the SAT, (2) a written statement of 1,000-2,000 words explaining their vocational goals and rationale for seeking an MDiv degree, and (3) a letter requesting application to the program by the February 1 deadline in their senior year of high school or in their first year at ONU. For admission to MTSO, all participating students must have completed a minimum of 96 semester hours and a minimum of 2 ½ years of residency at ONU, including (1) all courses required for the BA and (2) all major requirements for the religion major or youth ministry major or all major requirements for the religion & ecology major, excluding the two required MTSO courses (for details, see below). Furthermore, they must meet the following requirements: (1) a cumulative GPA at ONU of 3.0 or above; (2) three letters of recommendation, one by an ONU faculty member, one by an ordained minister, and one by an employer; (3) a current resumé or curriculum vita, listing the applicant's work history, honors and awards, etc., and (4) the required background check. Participating students with a cumulative GPA of 3.2 or higher will qualify for a preferred full-tuition scholarship from MTSO during the fourth year and will be eligible to apply and compete for MTSO's premier student scholarships to cover the costs of their education for the remainder of their time at MTSO. Participating students will complete their BA at ONU when they meet the following requirements: (1) completion of 96 hours at ONU, including BA requirements and major requirements (see below) and (2) transfer of 24 hours earned in the first year at MTSO to ONU. For the religion major and youth ministry major, these hours will simply be electives towards the required number of hours for the BA (120). For the religion & ecology major, these hours must include two elective courses taught at MTSO as specified in the major (see below).

A faculty member in the Religion programs serves as advisor to pre-seminary students in planning a preprofessional program. The recommendations of the American Association of Theological Schools are followed in advising students. A major in philosophy, religion or appropriate major may be selected.

### Major Course Requirements

All required courses in the major must be completed with a grade of 'C' or higher.

### Religion Major

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.

RELG 1071	Religions East and West (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 2xx1-4xx1	Religion elective (3)
RELG 3xx1-4xx1	Religion elective (3)
RELG 3xx1-4xx1	Religion elective (3)
RELG 3xx1-4xx1	Religion elective (3)
PHIL 2251	Philosophy of Religion (3)
RELG 4901	Religion Senior Essay 1 (1)
RELG 4911	Religion Senior Essay 2 (2)

#### Youth Ministry Major

RELG 2001	Old Testament (3)
RELG 2011	New Testament (3)
RELG 1071	Religions East and West (3)
RELG 3001	Christian Thought to 1500 (3)
RELG 3011	Christian Thought 1500 to the Present (3)
RELG 1xx1-4xx1	Elective in Bible (3)
RELG 1xx1-4xx1	Elective in contemporary Christian thought (3)
RELG 1xx1-4xx1	Elective in a religious tradition other than Christianity (3)
RELG 4901	Religion Senior Essay 1 (1)
RELG 4911	Religion Senior Essay 2 (2)
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 hours x 4)
YMIN 2531	Youth Ministry Issues and Settings (3)
YMIN 4101	Youth Ministry Internship (1 hour x 4)
YMIN 4531	Principles of Christian Education (3)

#### Other required courses

PHIL 2251	Philosophy of Religion (3)
PSYC 1001	Psychology (3)
PSYC 2151	Development Across the Lifespan (3)
SOC 1001	Sociology (3)
SOC 3461	Social Stratification (3)

#### MTSO 3+3 Religion Major

RELG 1071	Religions East and West (3)
RELG 2001	Old Testament (3)
RELG 2011	New Testament (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 3001	Christian Thought to 1500 (3)
RELG 3011	Christian Thought from 1500 to Present (3)
RELG 3xx1-4xx1	Non-Christian Religion elective (3)
RELG 4901	Senior Essay 1 (1)
RELG 4911	Senior Essay 2 (2)
PHIL 2251	Philosophy of Religion (3)

#### MTSO 3+3 Religion & Ecology Major

RELG 1021	Christianity and the Natural World (3)
RELG 1071	Religions East and West (3)
RELG 1061	The Bible and the Environment (3)
RELG 2001	Old Testament (3)
RELG 2011	New Testament (3)
RELG 3001	Christian Thought to 1500 (3)
RELG 3011	Christian Thought from 1500 to the Present (3)
RELG 3xx1-4xx1	Non-Christian Religion elective (3)
RELG 4901	Senior Essay 1 (1)
RELG 4911	Senior Essay 2 (2)

#### Other required courses

BIOL 2011	Environmental Issues (3)
BIOL 2131	Natural History (3)
BIOL 2511	Ecology (3)
PHIL 2251	Philosophy of Religion (3)
PHIL 3101	Environmental Ethics (3)

#### Select one

BIZ 2031	Macroeconomic Principles (3)
GEOG 2371	Physical Geography (3)
PLSC 3061	Environmental Law (3)

#### Select two of the following electives during the first year at MTSO:

CE 620	Resisting Biocide: Environmental Ethics of Discipleship (3)
CT 750	Ecological Theology: God and Creation in Travail (3)
ED 640	Ecological Religious Education (3)
HB 781	Gender, Race, and Ecology in the Hebrew Bible (3)
PT 600	Food, Land and Faith Formation (3)
PT 605	Practical Theology and Ecology (3)
PT/WO 620	Worship, Ecology and Social Justice (3)
PT 640	Knowing Where We Dwell (3)
PT 700	Dialogues in Faith and Science (3)

#### MTSO 3+3 Youth Ministry Major

RELG 1071	Religions East and West (3)
RELG 2001	Old Testament (3)
RELG 2011	New Testament (3)
RELG 3001	Christian Thought to 1500 (3)
RELG 3011	Christian Thought 1500 to the Present (3)
RELG 3xx1-4xx1	Non-Christian Religion elective (3)
RELG 4901	Religion Senior Essay 1 (1)
RELG 4911	Religion Senior Essay 2 (2)
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 hours x 4)
YMIN 2531	Youth Ministry Issues and Settings (3)
YMIN 4101	Youth Ministry Internship (1 hour x 4)
YMIN 4531	Principles of Christian Education (3)

#### Other required courses

PHIL 2251	Philosophy of Religion (3)
PSYC 1001	Psychology (3)
PSYC 2151	Development Across the Lifespan (3)
SOC 1001	Sociology (3)

#### Minor Course Requirements

All courses required for a minor must be completed with a grade of 'C' or higher.

#### Religion Minor

RELG 1071	Religions East and West (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 1xx1-4xx1	Religion elective (3)
RELG 3xx1-4xx1	Religion elective (3)
RELG 3xx1-4xx1	Religion elective (3)

# THE SCHOOL OF SCIENCE, TECHNOLOGY, AND MATHEMATICS

**Bradley M. Wile, Director**  
**Linda Mull Young, Assistant Director**  
**Richard Miller, Assistant Director**

**Programs: Biochemistry, Biology, Chemistry, Construction Management, Environmental and Field Biology, Forensic Biology, Manufacturing Technology, Mathematics, Molecular Biology, Physics, Pre-professional Programs, Statistics, Technology Education**

## BIOLOGICAL SCIENCES

**Professors** Anderson, Aulthouse, Mager, Suniga, Verb, Young;  
**Associate Professors** De Luca, Motz, Riley, Sanford; **Assistant Professors** Bennett-Toomey, Connour, Koneval, Krynak, Oswald, Schueler; **Laboratory Instructor** Graytock; **Adjunct Instructor** Casey, Crowell, Haase, Molnar, Sherrick, Stockert

### Mission Statement

The Biological Sciences provide 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 Biological Sciences are 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 Biological Sciences offer four majors and two minors with student-centered instruction focused on high impact learning opportunities. Research, internship, study abroad and experiential opportunities appropriate to student's career goals are offered as well as special programs in the pre-medical sciences and teaching licensure.

### Accreditation

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

### Majors, Minors and Degrees Offered

Biology Major (BS)  
Environmental and Field Biology Major (BS)  
Forensic Biology Major (BS)  
Molecular Biology Major (BS)  
Criminal Justice (Forensics) Option  
Biology Minor  
Biomedical Sciences Minor

### Licensure Offered

Adolescent Young Adult (7-12) Integrated Science Licensure  
Adolescent Young Adult (7-12) Life Sciences Licensure

### 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 degree 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 Bachelor of Science in biology degree are awarded upon completion of the program of study. A more detailed description about this program is available from the School of Science, Technology, and Mathematics and from the College of Pharmacy. This program is available to pharmacy (PharmD) students.

### *Discipline-specific Internships*

BIOLOGY 4761, 4771, 4781, 4791

The 400-hour senior status internship provides an off-campus practical experience in areas of the biological sciences. Examples include state and federal forensic laboratories, hospital and technical health programs, laboratory research, toxic waste management, environmental consulting, zoo animal care and management, wildlife and fisheries management. 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 Biological Sciences Capstone Committee prior to registration. Internships credit hours are from 1 to 6, but only 4 credit hours will count towards the major.

### Off-campus Facilities

Two facilities are utilized for experiential learning and biological surveys. The 300-acre Tidd-Oakes Wetland Restoration Project bordering the Scioto River and Scioto Marsh is twelve miles from the campus. The glaciated, former farm land has an on-site field station and is used for laboratory courses and research in biology.

The ONU Metzger 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, classroom, laboratory and residence center. The hills, valleys, woods, fields, stream and pond provide an excellent opportunity for teaching, study and research in the non-glaciated region of Ohio.

### Major Course Requirements

All required courses in the major subject area must be completed with a grade of "C" or higher. Forensic Biology majors are required to show proof of membership in a professional organization each year. The ETS Major Field Test (MFT) in biology is required of Biology, ENFB, and MOBI majors during their senior year; FRBI majors take the Forensic Science Assessment Test (FSAT). Credit will not be granted for both BIOL 2331 and 3241 or 3311 or for BIOL 2341 and 3251 or 3321.

### Biology Major

Aside from the requirements below, each student's curriculum is open to meet the requirements of their goals, including graduate or professional school, and teacher licensure. Academic advisors guide students in meeting their goals. To receive a B.S. degree, a student must complete the following:

BIOL 1951	Biology Orientation (1)
BIOL 1301	Biology 1: Cells, Molecules, and Evolution - Majors (4)
BIOL 1401	Biology 2: Biodiversity, Organismal Biology and Ecology (4)
BIOL 4761	Internship in Biology Capstone (1-6)
BIOL 4861	Biology Capstone Seminar (1)

One Genetics/Cell Biology elective:

BIOL 2101	Genetics (4)
BIOL 3511	Cell Biology (3)

Select at least one course from two of the following three cohorts:

Organismal Biology cohort:

BIOL 2331	Anatomy & Physiology 1 (4)
BIOL 3011	Developmental Anatomy (3)
BIOL 3021	Human Anatomy (4)
BIOL 3031	Histology (4)
BIOL 3041	Comparative Vertebrate Anatomy (4)
BIOL 3091	Integrated Plant Anatomy and Physiology (4)
BIOL 3241	Medical Physiology 1 (4)

Ecology/Evolution cohort  
 BIOL 2011 Environmental Issues (3)  
 BIOL 2031 Evolution (3)  
 BIOL 2131 Natural History (3)  
 BIOL 2511 Ecology (4)

Biological Diversity/Systematics cohort  
 BIOL 2041 Systematic Plant Survey (3)  
 BIOL 2231 Invertebrate Zoology (3)  
 BIOL 3601 North American Mammals (3)  
 BIOL 3631 Ornithology (4)  
 BIOL 3641 Herpetology (3)  
 BIOL 3751 Mammalogy (3)

Students must also complete sufficient credit hours of biology electives from 2xx1-4xx1 to total 34 biology credit hours (at least 25 hours 2xx1-4xx1).

**Other required courses**

Two courses in chemistry totaling eight to ten (8-10) credit hours.  
 Two courses in mathematics and/or statistics totaling six (6) credit hours.

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

BIOL 1951 Biology Orientation (1)  
 BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
 BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)  
 BIOL 2101 Genetics (4)  
 BIOL 2331 Anatomy and Physiology 1 (4)  
 BIOL 2341 Anatomy and Physiology 2 (4)  
 BIOL 2511 Ecology (4)  
 BIOL 2xx1-4xx1 Biology electives (7)  
 BIOL 4761 Internship in Biology Capstone (1-6)  
 BIOL 4861 Biology Capstone Seminar (1)  
 CHEM 1711 General Chemistry 1 (5)  
 CHEM 1721 General Chemistry 2 (5)  
 GEOL 2801 Geology (3)  
 PHYS 1051 Planetary Astronomy (3)  
 MATH 1461 Calculus for Life Sciences (3)  
 STAT 1561 Statistics for Professionals (3)

**Additional Education requirements:**

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3401 Educational Psychology (3) (10 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4511\* Integrated Science Methods (3) (20 field hours)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 PSYC 1001 Psychology (3)  
 PSYC 2171 Adolescent Psychology (3)

**Adolescent Young Adult (7-12) Integrated Sciences Licensure**

This option is available to students majoring in biology, chemistry or physics and allows students to teach classes in Biology, Chemistry, Physics, and/or Earth Sciences. Students must complete additional hours in science courses outside the major for this licensure. All courses required for the licensure must be completed with a grade of "C" or higher.

BIOL 1951 Orientation (1)  
 BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
 BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)  
 BIOL 2011 Environmental Issues (3)  
 BIOL 2021 Environmental Issues Lab (1)  
 BIOL 2101 Genetics (4)  
 BIOL 2331 Anatomy and Physiology 1 (4)

BIOL 2341 Anatomy and Physiology 2 (4)  
 BIOL 2511 Ecology (4)  
 BIOL 2xx1-4xx1 Biology elective (3)  
 BIOL 4761 Internship in Biology Capstone (1-6)  
 BIOL 4861 Biology Capstone Seminar (1)  
 CHEM 1711 General Chemistry 1 (5)  
 CHEM 1721 General Chemistry 2 (5)  
 CHEM 2511 and 2521 Organic Chemistry 1, 2 (6)  
 CHEM 2551 and 2561 Organic Chemistry Labs 1, 2 (2)  
 GEOL 2801 Geology (3)  
 GEOL 2811 Geology Lab (1)  
 PHYS 1051 Planetary Astronomy (3)  
 PHYS 2111 General Physics 1 (3)  
 PHYS 2341 Physics Laboratory 1 (1)  
 PHYS 2121 General Physics 2 (3)  
 PHYS 2351 Physics Laboratory 2 (1)  
 PHYS 3011 Advanced Physics Research Lab (2)  
 PHYS 3051 Modern Physics (3)  
 MATH 1461 Calculus for Life Sciences (3)  
 STAT 1561 Statistics for Professionals 1 (3)

**Additional Education requirements:**

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3401 Educational Psychology (3) (10 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4511\* Integrated Science Methods (3) (20 field hours)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 PSYC 1001 Psychology (3)  
 PSYC 2171 Adolescent Psychology (3)

**Environmental and Field Biology Major**

The ENFB major provides students with intensive hands-on learning that results in an exceptional foundation in the fields of environmental science and ecology. Students will be well prepared to pursue graduate degrees or gain employment in the government or private sector. All required biology courses must be completed with a grade of "C" or higher.

BIOL 1951 Biology Orientation (1)  
 BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
 BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)  
 BIOL 2011 Environmental Issues (3)  
 BIOL 2021 Environmental Issues Laboratory (1)  
 BIOL 2131 Natural History (3)  
 BIOL 2511 Ecology (4)  
 BIOL 3661 Environmental Research Methods (3)  
 BIOL 4771 Internship in Environmental and Field Biology Capstone (1-6)  
 BIOL 4871 Environmental & Field Biology Capstone Seminar (1)

**The Field Semester**

The field semester consists of the following seven 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 additional substitute course(s) approved by the director.

BIOL 3581 Interpretive Methodology (1)  
 BIOL 3591 Wetland Delineation Practicum (1)  
 BIOL 3671 Field Botany (3)  
 BIOL 3681 Ichthyology (3)  
 BIOL 3691 Field Entomology (3)  
 BIOL 3701 Marine Biology (3)  
 BIOL 3731 Field Skills (1)  
 BIOL 3781 Behavioral Ecology (3)

**Specified General Education Classes**

PHIL 3101 Environmental Ethics (3)  
 PLSC 3061 Environmental Law (3)  
 GEOG 2481 Intro to G.I.S. (3)  
 GEOG 3481 Applied G.I.S. (3)



Two courses in chemistry totaling eight to ten (7-10) credit hours.  
Two courses in mathematics and/or statistics totaling six (6) credit hours.

One course in physics with a lab or complete the two following courses.

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

### Forensic Biology Major

The forensic biology major provides students with a solid foundation in the forensic sciences through a core of forensic biology courses and, through upper-level forensic courses, provides a focused and coherent study in the practice of the scientific techniques used to analyze physical evidence found at the scene of a crime. All required courses must be completed with a grade of "C" or higher.

BIOL 1951 Biology Orientation (1)  
BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
BIOL 2101 Genetics (4)  
BIOL 2171 Molecular Biology (3)  
BIOL 2181 Molecular Biology Laboratory (1)  
BIOL 2191 Forensic Biology 1 (4)  
BIOL 2291 Forensic Biology 2 (4)  
BIOL 2331 Anatomy and Physiology 1 (4)  
BIOL 2591 Crime Scene Investigation (4)  
BIOL 2691 Forensics Computer Analysis (4)  
BIOL 3191 Forensic Microscopy (3)  
BIOL 3291 Forensic Physical Methods (4)  
BIOL 3571 Forensics DNA Analysis (4)  
BIOL 3651 Forensic Entomology (3)  
BIOL 4571 Advanced Forensic DNA Analysis (3)  
BIOL 4781 Internship in Forensic Biology Capstone (1-6)  
BIOL 4881 Forensic Biology Capstone Seminar (1)

### 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)  
CAMS 1301 Presentational Speaking (3)  
MATH 1461 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)  
CJ 1211 Intro to Criminal Justice (3)  
SOC 2611 Criminology (3)  
STAT 156 Statistics for Professionals 1 (3)

### Molecular Biology Major

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

BIOL 1951 Biology Orientation (1)  
BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)  
BIOL 2101 Genetics (4)  
BIOL 2171 Molecular Biology (3)  
BIOL 2181 Molecular Biology Laboratory (1)  
BIOL 3461 Clinical Microbiology (4)  
BIOL 3511 Cell Biology (3)  
BIOL 4511 Advanced Topics in Cell Biology (2)  
BIOL 4791 Internship in Molecular Biology Capstone (1-6)  
BIOL 4891 Molecular Biology Capstone Seminar (1)

### 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 (1)

Two courses in physics with a lab totaling eight (8) credit hours.

Two courses in mathematics and/or statistics totaling six (6) credit hours.

### Criminal Justice (Forensics) Option

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 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

BIOL 2101 Genetics (4)  
BIOL 2171 Molecular Biology (3)  
BIOL 2181 Molecular Biology Laboratory (1)  
BIOL 2191 Forensic Biology 1 (4)  
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)  
CJ 1211 Introduction to Criminal Justice (3)

### Minor Course Requirements

Students majoring in biology who choose to add the biomedical sciences minor must take an additional 8 hours in BIOL courses at the 2xx1-4xx1 level beyond the requirements of the minor.

Students in majors outside of the Biological Sciences may complete the Biology and Biomedical Sciences minors by taking all required courses for each of the minors plus eight additional hours of BIOL courses at the 2xx1-4xx1 level.

### Biology Minor

The minor in biology is available only to students in majors outside of the Biological Sciences.

BIOL 1301 Biology 1: Cells, Molecules, and Evolution - Majors (4)  
BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)  
BIOL 3xx1-4xx1 Biology elective (3)  
Eleven (11) credit hours of biology electives from 2xx1-4xx1 level courses.

### Biomedical Sciences Minor

The Biomedical Sciences minor nicely complements students majoring in Pharmacy, Public Health or interested in Biomedical Engineering. The minor is also appropriate for Biology majors participating in our pre-professional programs.

Select one:

BIOL 1131 Principles and Concepts of Human Biology (4)  
BIOL 1201 Biology 1: Cells, Molecules, and Evolution (4)  
BIOL 1301 Biology 1: Cells, Molecules, and Evolution – Majors (4)

Select one of the following two-course sequences:

BIOL 2331 Anatomy and Physiology 1 (4)\*  
BIOL 2341 Anatomy and Physiology 2 (4)\*  
or  
BIOL 3241 Medical Physiology 1 (4)

BIOL 3251 Medical Physiology 2 (4)  
or  
BIOL 3311 Human Physiology 1 (4)  
BIOL 3321 Human Physiology 2 (4)

Select one:

BIOL 3011 Developmental Anatomy (3)  
BIOL 3021 Human Anatomy (4)\*  
BIOL 3031 Histology (4)

\*Credit cannot be received for both BIOL 2331/2341 and BIOL 3021

Select one:

BIOL 2101 Genetics (4)

or

BIOL 2171 Molecular Biology (3)

and

BIOL 2181 Molecular Biology Laboratory (1)

or

BIOL 3461 Clinical Microbiology (4)

Two courses in chemistry totaling at least eight (8) credit hours.

## DONALD J. BETTINGER DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

**Professors** Bowers, Celius, Gray, Myers, Perrine, Peterson, Zimmerman;  
**Associate Professors** Anderson-Wile, Bates, Broekemeier, Spiese, Wile; **Visiting Assistant Professor** Sturtevant; **Introductory Laboratory Coordinator** Duliba; **Director of Laboratories** Daws; **Chemistry Lab Instructor** Hall

### Mission Statement

The programs in the Donald J. Bettinger Department of Chemistry and Biochemistry prepare 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 programs also meet 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

Chemistry majors may choose a general education program leading to either the Bachelor of Arts degree or the Bachelor of Science degree. Students may choose to pursue an American Chemical Society (ACS) certification or licensure to teach at the secondary school level.

### Accreditation

The Biochemistry and Chemistry programs are 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)  
Law 3+3 in Chemistry (BA)  
Biochemistry Minor  
Chemistry Minor

### Certifications and Licensure

Biochemistry Major/ACS Certified (BS)  
Chemistry Major/ACS Certified (BA and BS)  
Adolescent Young Adult (7-12) Physical Sciences: Chemistry Licensure  
Adolescent Young Adult (7-12) Physical Sciences: Chemistry and Physics Licensure  
Adolescent Young Adult (7-12) Integrated Science Licensure

### Pre-Law Program

Students majoring in Chemistry (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### 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 in Chemistry (follow the Chemistry Licensure requirements) are available to students completing this major.

### BS Degree Requirements

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 4001 Capstone 3 (2)  
CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)  
CHEM 4121 Advanced Biochemistry: Information Transfer (3)  
CHEM 4161 Advanced Biochemistry Lab (2)  
BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)  
BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (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

CHEM 3711 Inorganic Chemistry 1 (3)

Select one:

BIOL 3001/4001 approved by the program  
CHEM 3201 Medicinal Chemistry (3)  
CHEM 3421 Physical Chemistry 2 (4)  
CHEM 3501 Polymer Chemistry (3)  
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 and teacher licensure (BS) are available to students completing this major.

### BA Degree Requirements

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 2621 Organic Chemistry 2 – Majors (3)  
CHEM 2661 Organic Chemistry 2 Lab – Majors (2)  
CHEM 3001 Capstone 2 (1)  
CHEM 4011 Capstone 3A (2)

Select one:

CHEM 2401 Elements of Physical Chemistry (3)  
CHEM 3411 Physical Chemistry 1 (4)  
CHEM 3711 Inorganic Chemistry 1 (3)

Select three upper level Chemistry electives (5-12 hours):

(CHEM 3801 can only count for 1 hour)  
CHEM 3xx1-4xx1 Chemistry elective (1-4)  
CHEM 3xx1-4xx1 Chemistry elective (1-4)  
CHEM 3xx1-4xx1 Chemistry elective (3-4)

Select one sequence:

PHYS 2111 General Physics 1 (3)  
PHYS 2341 Physics 1 Lab (1)  
PHYS 2121 General Physics 2 (3)  
PHYS 2351 Physics 2 Lab (1)

or

PHYS 2311 Physics 1 (3)  
PHYS 2341 Physics 1 Lab (1)  
PHYS 2321 Physics 2 (3)  
PHYS 2351 Physics 2 Lab (1)

Select one:

MATH 1461 Calculus for Life Sciences (3)  
MATH 1631 Calculus 1 (4)

Select one:

MATH 1641 Calculus 2 (4)  
STAT 1561 Statistics for Professionals 1 (3)  
STAT 1761 Statistics for Pharmacy (3)  
STAT 2501 Statistics for Scientists and Engineers (3)

Select one Science elective:

BIOL xxx1 Biology elective (3)  
GEOL xxx1 Geology elective (3)  
GEOG 2371 Physical Geography (3)  
CE 3211 Environmental Engineering (3)  
PHYS 1051 Planetary Astronomy (3)  
PHYS 1061 Stars and Galaxies (3)

#### **ACS Certified Chemistry**

Additional requirements

CHEM 2481 Chemical Applications of Math (3)  
CHEM 3111 Biochemistry (3)  
CHEM 3411 Physical Chemistry 1 (4)  
CHEM 3711 Inorganic Chemistry 1 (3)

Select three:

CHEM 3201 Medicinal Chemistry (3)  
CHEM 3421 Physical Chemistry 2 (4)  
CHEM 3501 Polymer Chemistry (3)  
CHEM 3601 Organic Synthesis (4)  
CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)  
CHEM 4121 Advanced Biochemistry: Information Transfer (3)  
CHEM 4321 Analytical Chemistry 2 (3)  
CHEM 4421 Advanced Physical Chemistry (3)  
CHEM 4601 Physical Organic Chemistry (3)  
CHEM 4721 Inorganic Chemistry 2 (3)

Select one:

CHEM 3151 Biochemistry Lab (1)  
CHEM 3751 Inorganic Chemistry 1 Lab (1)

Total of 135 lab hours from:

CHEM 3151 Biochemistry Lab (1)  
CHEM 3421 Physical Chemistry 2 (4)

CHEM 3601 Organic Synthesis (4)  
CHEM 3751 Inorganic Chemistry 1 Lab (1)  
CHEM 4161 Advanced Biochemistry Lab (2)  
CHEM 4321 Analytical Chemistry 2 (3)  
CHEM 4811 Senior Research 1 (2)  
and  
CHEM 4821 Senior Research 2 (2)

#### **BS Degree Requirements**

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 3411 Physical Chemistry 1 (4)  
CHEM 3421 Physical Chemistry 2 (4)  
CHEM 3711 Inorganic Chemistry 1 (3)  
CHEM 3751 Inorganic Chemistry 1 Lab (1)  
CHEM 4001 Capstone 3 (2)  
CHEM 3xx1-4xx1 Chemistry elective (1-4)  
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 Chemistry**

Additional requirements

CHEM 3111 Biochemistry (3)

Select two:

CHEM 3201 Medicinal Chemistry (3)  
CHEM 3501 Polymer Chemistry (3)  
CHEM 3601 Organic Synthesis (4)  
CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)  
CHEM 4121 Advanced Biochemistry: Information Transfer (3)  
CHEM 4321 Analytical Chemistry 2 (3)  
CHEM 4421 Advanced Physical Chemistry (3)  
CHEM 4601 Physical Organic Chemistry (3)  
CHEM 4721 Inorganic Chemistry 2 (3)

Total of 45 lab hours from:

CHEM 3151 Biochemistry Lab (1)  
CHEM 3601 Organic Synthesis (4)  
CHEM 4161 Advanced Biochemistry Lab (2)  
CHEM 4321 Analytical Chemistry 2 (3)  
CHEM 4811 Senior Research 1 (2)  
and  
CHEM 4821 Senior Research 2 (2)

#### **Teacher Licensure Offered in Chemistry (BS)**

This option is available to students majoring in chemistry. Students majoring in Chemistry (BA) or Biochemistry must meet all the requirements for Chemistry (BS) to receive this licensure.

#### **Adolescent Young Adult (7-12) Physical Sciences: Chemistry Licensure**

Complete all requirements for BS degree in Chemistry

Additional requirements

BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)

Select one:

GEOL 2801 Geology (3)  
PHYS 1051 Planetary Astronomy (3)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

**Adolescent Young Adult (7-12) Physical Sciences: Chemistry and Physics Licensure**

Complete all requirements for BS degree in Chemistry

Additional requirements

- BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)
- BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)
- GEOL 2801 Geology (3)
- GEOL 2811 Geology Lab (1)
- PHYS 1051 Planetary Astronomy (3)
- PHYS 1061 Stellar and Galactic Astronomy (3)
- PHYS 3051 Modern Physics (3)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

**Adolescent Young Adult (7-12) Integrated Science Licensure**

Complete all requirements for BS degree in Chemistry

Additional requirements

- BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)
- BIOL 1401 Biology 2: Biodiversity, Organismal Biology and Ecology (4)
- BIOL 2511 Ecology (4)
- BIOL 2631 Biogeography (4)
- BIOL 3511 Cell Biology (3)
- GEOG 2371 Physical Geography (3)
- GEOL 2801 Geology (3)
- GEOL 2811 Geology Lab (1)
- PHYS 1051 Planetary Astronomy (3)
- PHYS 1061 Stellar and Galactic Astronomy (3)
- PHYS 3011 Advanced Physics Research Lab (2)
- PHYS 3051 Modern Physics (3)
- PHYS 3411 Optics (3)

Select one:

- BIOL 2331 Anatomy and Physiology 1 (4)
- BIOL 3011 Developmental Anatomy (3)
- BIOL 3021 Human Anatomy (4)
- BIOL 3241 Medical Physiology 1 (4)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)

- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

**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**

- CHEM 1711 General Chemistry 1 (5)
- CHEM 1721 General Chemistry 2 (5)
- CHEM 2511 Organic Chemistry 1 (3)
- CHEM 2551 Organic Chemistry 1 Lab (1)
- CHEM 2521 Organic Chemistry 2 (3)
- CHEM 2561 Organic Chemistry 2 Lab (1)
- CHEM 3111 Biochemistry (3)
- CHEM 3151 Biochemistry Lab (1)

Select one:

- CHEM 4111 Advanced Biochemistry: Proteins and Metabolism (3)
- CHEM 4121 Advanced Biochemistry: Information Transfer (3)

**Chemistry Minor**

- CHEM 1711 General Chemistry 1 (5)
- CHEM 1721 General Chemistry 2 (5)

Select three (at least one at the 3000 or 4000 level):

- CHEM 2311 Analytical Chemistry 1 (4)
- CHEM 2321 Environmental Analysis (4)
- CHEM 2401 Elements of Physical Chemistry (3)
- CHEM 2511 Organic Chemistry 1 (3)  
and  
CHEM 2551 Organic Chemistry 1 Lab (1)
- CHEM 2521 Organic Chemistry 2 (3)  
and  
CHEM 2561 Organic Chemistry 2 Lab (1)
- CHEM 3xx1/4xx1 Chemistry elective (3)

**MATHEMATICS**

**Professors** Boyadzhiev, Mi. Caragiu, Roepke; **Associate Professors** Chowdhury, S. Schroeder; **Assistant Professors** Lamichhane; **Visiting Associate Professor** Raiti; **Visiting Assistant Professor** Carolus; **Adjunct Instructor** Roll; **Director of Mathematics Resource Center** Rader

**Mission Statement**

The mission of the Mathematics programs is to provide an environment in which students grow intellectually and which encourages the continued professional growth of the faculty. To achieve this, the faculty are committed to introducing students to the concepts used in mathematics, to giving them experiences in the development and application of mathematical theory, to helping them develop their critical and analytical reasoning skills, to exposing them to the relationships between mathematics and other fields of endeavor and to preparing them for their career choices.

**Overview Statement**

Courses are offered in mathematics to complement almost all disciplines in the university. In addition, the major works 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 Council for the Accreditation of Educator Preparation (CAEP).

## Majors, Minors and Degrees Offered

### Mathematics Major

- Advanced Mathematical Studies Concentration (BA, BS)
- Applied Mathematics Concentration (BA, BS)
- Teacher Licensure Concentration (BA, BS)

### Applied Mathematics Minor

### Mathematics Minor

## Licensure Offered

### Adolescent Young Adult (7-12) Mathematics Licensure

Faculty are active in several professional organizations, providing students with opportunities for research, presentations, and professional experience.

## 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.

## Mathematics Major

Students majoring in mathematics must complete one of three concentrations: applied mathematics, advanced mathematical studies, or teacher licensure.

### Common Core:

- MATH 1951 Freshman Seminar (1)
- MATH 1631 Calculus 1 (4)
- MATH 1641 Calculus 2 (4)
- MATH 2631 Calculus 3 (4)
- MATH 2651 Differential Equations (4)
- MATH 2951 Sophomore Seminar (1)
- MATH 3061 Discrete Mathematics (3)
- MATH 3261 Linear Algebra (3)
- MATH 3951 Junior Seminar (1)
- MATH 4951 Senior Seminar (1)

### Applied Mathematics Concentration

Applied mathematics is an interdisciplinary concentration. A student in this major must design a program of study in consultation with his/her Mathematics advisor. Such a program of study must explicitly list the mathematics and the application area electives the student will take.

- MATH 3651 Partial Differential Equations (3)
- ECCS 1611 Programming 1 (4)

### Select one:

- ECCS 3431 Theory of Computation (3)
- PHYS 2311 Physics 1 (3)

### Select three:

- MATH 3251 Optimization (3)
- MATH 3631 Complex Variables (3)
- MATH 3701 MATLAB Computing and Fractals (2)
- MATH 4411 Number Theory and Cryptography (3)
- MATH 4611 Numerical Analysis (3)
- MATH 4671 Probability and Graphs (3)
- STAT 2501 Statistics for Scientists and Engineers (3)
- STAT 4561 Intro to Stochastic Processes (3)

Three advisor approved major-appropriate courses (9 credit hours) in a specific application area outside of the program.

### Advanced Mathematical Studies Concentration

Students planning on graduate study in mathematics should fulfill the requirements in this concentration.

- MATH 3411 Abstract Algebra 1 (3)
- MATH 3611 Real Analysis 1 (3)
- MATH 3631 Complex Variables (3)
- ECCS 1611 Programming 1 (4)

### Select four:

- MATH 3421 Abstract Algebra 2 (3)
- MATH 3621 Real Analysis 2 (3)
- MATH 3651 Partial Differential Equations (3)
- MATH 3701 MATLAB Computing and Fractals (2)
- MATH 4211 Foundations of Geometry (3)
- MATH 4411 Number Theory and Cryptography (3)
- MATH 4671 Probability and Graphs (3)
- STAT 2501 Statistics for Scientists and Engineers (3)
- STAT 4561 Intro to Stochastic Processes (3)
- ECCS 3431 Theory of Computation (3)

### Teacher Licensure Concentration

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 Center for Teacher Education for details on this concentration.

- MATH 2011 History of Mathematics (3)
- MATH 3021\* Mathematics and Pedagogy (4)
- MATH 3411 Abstract Algebra 1 (3)
- MATH 3611 Real Analysis 1 (3)
- MATH 3701 MATLAB Computing and Fractals (2)
- MATH 4211 Foundations of Geometry (3)
- STAT 2501 Statistics for Scientists and Engineers (3)

### Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

## Minor Course Requirements

Within the Mathematics and Statistics programs, the allowable Major-Minor combinations are a Mathematics major with an Applied Statistics minor or a Statistics major with a Math minor or Applied Math minor. All courses required for a minor must be completed with a grade of 'C' or higher.

## Applied Mathematics Minor

- MATH 1631 Calculus 1 (4)
- MATH 1641 Calculus 2 (4)
- MATH 2631 Calculus 3 (4)
- MATH 2651 Differential Equations (4)

### Select at least two electives:

- MATH 3041 Theory of Interest (3)
- MATH 3061 Discrete Mathematics (3)
- MATH 3251 Optimization (3)
- MATH 3261 Linear Algebra (3)
- MATH 3631 Complex Variables (3)
- MATH 3651 Partial Differential Equations (3)
- MATH 3701 MATLAB Computing and Fractals (2)
- MATH 4411 Number Theory and Cryptography (3)
- MATH 4611 Numerical Analysis (3)
- MATH 4651 Probability Theory (3)
- MATH 4671 Probability and Graphs (3)
- CHEM 2481 Chemical Applications of Mathematics (3)
- PHYS 3451 Math Methods (3)
- STAT 4561 Intro to Stochastic Processes (3)
- ECCS 3131 Signals and Systems (4) or
- ECCS 3431 Theory of Computation (3)

## Mathematics Minor

- MATH 1631 Calculus 1 (4)
- MATH 1641 Calculus 2 (4)

MATH 2631 Calculus 3 (4)  
MATH 3061 Discrete Mathematics (3)

Select at least two electives:

MATH 2651 Differential Equations (4)  
MATH 3041 Theory of Interest (3)  
MATH 3251 Optimization (3)  
MATH 3261 Linear Algebra (3)  
MATH 3411 Abstract Algebra 1 (3)  
MATH 3611 Real Analysis 1 (3)  
MATH 3631 Complex Variables (3)  
MATH 3651 Partial Differential Equations (3)  
MATH 3701 MATLAB Computing and Fractals (2)  
MATH 4211 Foundations of Geometry (3)  
MATH 4411 Number Theory and Cryptography (3)  
MATH 4611 Numerical Analysis (3)  
MATH 4651 Probability Theory (3)  
MATH 4671 Probability and Graphs (3)

## PHYSICS AND ASTRONOMY

**Professors** Me. Caragiu, Pinkney, Theisen; **Visiting Assistant Professor** Bhandari

### Mission Statement

Physics and Astronomy programs offer a strong, in-depth education through courses and extra-curricular activities that stimulate the process of reasoning from fundamental experimental facts. Students are prepared to participate in active undergraduate research with physics faculty, culminating with conference presentations or publications. The programs aim to give training with a sufficiently broad perspective to enable students to pursue graduate work in physics and related disciplines; to apply physics in engineering, medicine, and other sciences; and to teach physics in the public schools.

### Accreditation

The secondary education program for licensure to teach physics is approved by the Ohio Department of Education and nationally accredited by the Council for the Accreditation of Educator Preparation (CAEP).

### Majors, Minors and Degrees Offered

Physics Major  
    Physics Concentration (BS)  
    Astronomy Concentration (BS)  
    Applied Physics Concentration (BS)  
Astronomy Minor  
Physics Minor

### Licensure Offered

Adolescent Young Adult (7-12) Physical Sciences: Physics Licensure  
Adolescent Young Adult (7-12) Physical Sciences: Chemistry & Physics Licensure  
Adolescent Young Adult (7-12) Integrated Science Licensure

### Admission Requirements

Students pursuing teacher licensure must request acceptance into the Center for Teacher Education.

### Research Opportunities

The programs offer a variety of research opportunities for interested students including research in astronomy, plasma physics, solid state, astrophysics, atomic physics and optics.

### 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

Students majoring in physics are required to complete one of three concentrations: physics, astronomy, or applied physics.

### Required major courses

PHYS 2311 Physics 1 (3)  
PHYS 2321 Physics 2 (3)  
PHYS 2341 Physics Laboratory 1 (1)  
PHYS 2351 Physics Laboratory 2 (1)  
PHYS 3051 Modern Physics (3)  
PHYS 3451 Math Methods (3)  
PHYS 4951 Capstone II (2)  
MATH 1631 Calculus 1 (4)  
MATH 1641 Calculus 2 (4)

### Select one:

PHYS 3731 Analytical Mechanics (3)  
ENGR 2131 Statics (3)

### Select one:

PHYS 4111 Electricity and Magnetism 1 (3)  
ECCS 3111 Applied Electromagnetics (3)

### Physics Concentration

PHYS 3011 Advanced Physics Research Lab (2)  
PHYS 3751 Quantum Mechanics (3)  
PHYS 3951 Capstone I (1)  
PHYS 3xx1 Physics elective (3)  
PHYS 3xx1 Physics elective (3)  
PHYS 4121 Electricity and Magnetism 2 (3)  
ECCS 1611 Programming 1 (4)  
MATH 2631 Calculus 3 (4)  
MATH 2651 Differential Equations (4)

### Astronomy Concentration

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 3xx1 Physics elective (3)  
PHYS 3011 Advanced Physics Research Lab (2)  
PHYS 3471 Introductory Astrophysics (3)  
PHYS 3751 Quantum Mechanics (3)  
PHYS 3951 Capstone I (1)  
PHYS 4121 Electricity and Magnetism 2 (3)  
ECCS 1611 Programming 1 (4)  
MATH 2631 Calculus 3 (4)  
MATH 2651 Differential Equations (4)

### Applied Physics Concentration

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, a minor, or a program of courses leading to licensure for public school teaching.

### Select one:

PHYS 1051 Planetary Astronomy (3)  
PHYS 1061 Stars and Galaxies (3)

### Additional Requirements

PHYS 3xx1 Physics elective (3)  
PHYS 3xx1 Physics elective (3)

Adolescent Young Adult (7-12) Physical Sciences: Physics Licensure  
Complete all required courses for Physics major and Applied Physics Concentration

### Additional requirements

PHYS 1051 Planetary Astronomy (3)  
PHYS 1061 Stars and Galaxies (3)  
PHYS 3011 Advanced Physics Research Lab (2)  
BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)  
CHEM 1711 General Chemistry 1 (5)  
CHEM 1721 General Chemistry 2 (5)  
GEOL 2801 Geology (3)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

Adolescent Young Adult (7-12) Physical Sciences: Chemistry & Physics Licensure

Complete all required courses for Physics major and Applied Physics Concentration

Additional requirements

- PHYS 1051 Planetary Astronomy (3)
- PHYS 1061 Stars and Galaxies (3)
- PHYS 3011 Advanced Physics Research Lab (2)
- BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)
- BIOL 1401 Biology 2: Biodiversity, Organismal Biology, and Ecology (4)
- CHEM 1711 General Chemistry 1 (5)
- CHEM 1721 General Chemistry 2 (5)

- CHEM 2611 Organic Chemistry 1 – Majors (3)
- CHEM 2621 Organic Chemistry 2 – Majors (3)
- CHEM 2651 Organic Chemistry Lab 1 – Majors (1)
- CHEM 2661 Organic Chemistry Lab 2 – Majors (2)
- GEOL 2801 Geology (3)
- GEOL 2811 Geology Lab (1)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

Adolescent Young Adult (7-12) Integrated Science Licensure

Complete all required courses for Physics major and Applied Physics Concentration

Additional requirements

- PHYS 1051 Planetary Astronomy (3)
- PHYS 1061 Stars and Galaxies (3)
- PHYS 3011 Advanced Physics Research Lab (2)
- BIOL 1301 Biology 1: Cells, Molecules, and Evolution (4)
- BIOL 1401 Biology 2: Biodiversity, Organismal Biology, and Ecology (4)
- BIOL 2511 Ecology (4)
- BIOL 2631 Biogeography (4)
- BIOL 3511 Cell Biology (3)
- CHEM 1711 General Chemistry 1 (5)
- CHEM 1721 General Chemistry 2 (5)
- CHEM 2611 Organic Chemistry 1 – Majors (3)
- CHEM 2621 Organic Chemistry 2 – Majors (3)
- CHEM 2651 Organic Chemistry Lab 1 – Majors (1)
- CHEM 2661 Organic Chemistry Lab 2 – Majors (2)
- GEOL 2801 Geology (3)
- GEOL 2811 Geology Lab (1)
- GEOG 2371 Physical Geography (3)

Select one: (Anatomy/Physiology Requirement)

- BIOL 2331 Anatomy and Physiology 1 (4)
- BIOL 3011 Developmental Anatomy (3)
- BIOL 3021 Human Anatomy (4)
- BIOL 3241 Medical Physiology 1 (4)

Additional Education requirements:

- CAMS 1311 Communication in the Classroom (3)
- EDUC 1151 Culture and Schooling (3) (20 field hours)
- EDUC 2101 Exceptional Learners (3) (20 field hours)
- EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)
- EDUC 3401 Educational Psychology (3) (10 field hours)
- EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)
- EDUC 4201\* The Teaching Profession (1)
- EDUC 4511\* Integrated Science Methods (3) (20 field hours)
- EDUC 4901\* Student Teaching (12)
- EDUC 4951\* Student Teaching Seminar (2)
- PSYC 1001 Psychology (3)
- PSYC 2171 Adolescent Psychology (3)

Minor Course Requirements

All courses required for a minor must be completed with a grade of 'C' or higher.

Astronomy Minor

- 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 Physics 1 (3)
- PHYS 2321 Physics 2 (3)
- PHYS 2341 Physics Laboratory 1 (1)
- PHYS 2351 Physics Laboratory 2 (1)
- PHYS 3051 Modern Physics (3)
- PHYS 3471 Introductory Astrophysics (3)

Physics Minor

- PHYS 2311 Physics 1 (3)
- PHYS 2321 Physics 2 (3)
- PHYS 2341 Physics Laboratory 1 (1)
- PHYS 2351 Physics Laboratory 2 (1)
- PHYS 3051 Modern Physics (3)
- PHYS 3xx1 Physics elective (3)
- PHYS 3xx1 Physics elective (3)
- PHYS 3xx1 Physics elective (3)

Substitution of courses may be made with the approval from Physics advisors. Substituted courses may be either internal to the Physics programs 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 ENGR 2131 for PHYS 3731, ECCS 3111 for PHYS 4111, or CHEM 3421 for PHYS 3531.

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.

STATISTICS

Associate Professors Rahrig, Robinson, Wang; Adjunct Instructor Roll; Director of Mathematics Resource Center Rader

Majors, Minors and Degrees Offered

- Statistics Major
  - Actuarial Science Concentration (BA, BS)
  - Applied Statistics Concentration (BA, BS)
- Applied Statistics Minor

## 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.

## Statistics Major

Students majoring in statistics must complete one of two concentrations: actuarial science or applied statistics.

MATH 1951	Freshman Seminar (1)
MATH 1631	Calculus 1 (4)
MATH 1641	Calculus 2 (4)
MATH 2631	Calculus 3 (4)
MATH 2951	Sophomore Seminar (1)
MATH 3061	Discrete Mathematics (3)
MATH 3951	Junior Seminar (1)
MATH 4651	Probability Theory (3)
STAT 1561	Statistics for Professionals 1 (3)
STAT 2561	Statistics for Professionals 2 (3)
STAT 3361	Linear Algebra with Statistical Applications (3)
STAT 3501*	Applied Regression and Correlation Analysis (3)
STAT 4661*	Mathematical Statistics (3)

Select one:

MATH 4951	Senior Seminar (1)
STAT 4701	Statistics Internship (1)

### Actuarial Science Concentration

Students completing this concentration will have taken the necessary coursework to prepare for SOA/CAS professional actuary exams P/1 and FM/2. Elective coursework is available to prepare students for additional exams. Courses marked with an asterisk (\*) have been approved as VEE courses by the Society of Actuaries. To obtain VEE credit, students must earn a grade of 'B' or better in those courses.

MATH 3041	Theory of Interest (3)
BIZ 2021*	Principles of Microeconomics (3)
BIZ 2031*	Principles of Macroeconomics (3)
BIZ 3621*	Principles of Finance (3)
FINC 3691*	Intermediate Finance (3)

Select three:

MATH 3611	Real Analysis 1 (3)
MATH 3621	Real Analysis 2 (3)
STAT 3511	Categorical Data Analysis (3)
STAT 3521	Analysis of Variance with Experimental Design (3)
STAT 3531	Survey Sampling Methods (3)
STAT 3541	Nonparametric Statistical Methods (3)
STAT 3551	Applied Probability (3)
STAT 3571	Introduction to Statistical Computing with SAS (3)
STAT 3581	Introduction to Statistical Computing with R (3)
STAT 3591	Selected Topics of Statistical Methodology (3)
STAT 3901	Special Topics in Statistics (3)
STAT 4401	Models for Pricing of Financial Derivatives (3)
STAT 4561	Introduction to Stochastic Processes (3)
STAT 4571	Linear Statistical Models (3)
STAT 4901	Special Topics in Statistics (3)

### Applied Statistics Concentration

STAT 3511	Categorical Data Analysis (3)
STAT 3521	Analysis of Variance with Experimental Design (3)

Select four:

MATH 3041	Theory of Interest (3)
MATH 3611	Real Analysis 1 (3)
MATH 3621	Real Analysis 2 (3)
STAT 3531	Survey Sampling Methods (3)
STAT 3541	Nonparametric Statistical Methods (3)
STAT 3551	Applied Probability (3)
STAT 3571	Introduction to Statistical Computing with SAS (3)
STAT 3581	Introduction to Statistical Computing with R (3)

STAT 3591	Selected Topics of Statistical Methodology (3)
STAT 3901	Special Topics in Statistics (3)
STAT 4561	Introduction to Stochastic Processes (3)
STAT 4571	Linear Statistical Models (3)
STAT 4901	Special Topics in Statistics (3)
ECCS 1611	Programming 1 (4)

## Minor Course Requirements

Within the Mathematics and Statistics programs, the allowable Major-Minor combinations are a Mathematics major with an Applied Statistics minor or a Statistics major with a Math minor or Applied Math minor. All courses required for a minor must be completed with a grade of 'C' or higher.

### Applied Statistics Minor

Select one of the following sequences (6 credit hours):

STAT 1561	Statistics for Professionals 1 (3) and
STAT 2561	Statistics for Professionals 2 (3)
or	
PSYC 2401	Statistics for the Behavioral Sciences (3) and
STAT 2561	Statistics for Professionals 2 (3)
or	
MATH 1461	Calculus for Life Sciences (3) or
MATH 1631	Calculus 1 (4) and
STAT 1761	Statistics for Pharmacy (3)

Select three:

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)
STAT 3541	Nonparametric Statistical Methods (3)
STAT 3551	Applied Probability (3)
STAT 3571	Introduction to Statistical Computing with SAS (3)
STAT 3581	Introduction to Statistical Computing with R (3)
STAT 3591	Selected Topics of Statistical Methodology (3)
STAT 3901	Special Topics in Statistics (3)
STAT 4561	Introduction to Stochastic Processes (3)

Select one additional advisor approved quantitative course (3 credit hours)

## TECHNOLOGICAL STUDIES

**Professors** Jao, Rouch; **Associate Professor** Miller; **Assistant Professor** Baumgartner; **Instructor** Degen; **Visiting Instructor** Pallikonda

### Mission Statement

The mission of the Technological Studies program is to graduate leaders that pursue life-long learning, and possess a high degree of technological literacy and the ability to implement and manage applied engineering technologies to benefit the world.

### Overview Statement

The course work comprising the curriculum in the programs are designed to prepare students for careers in professional and technical fields throughout industry and education. Classroom activities feature application-oriented experiences that reinforce the theory presented in lecture and readings to provide broad, foundational experiences in cutting edge technologies and applied sciences. Course work and associated laboratory assignments place emphasis on researching, designing, experimenting, fabricating, and managing.

### Accreditation

The Construction Management and Manufacturing Technology programs are accredited by the Association for Technology, Management, and Applied Engineering (ATMAE).

The Technology Education major and teacher licensure program is accredited by the Council for the Accreditation for Educator Preparation (CAEP).



## Majors, Minors and Degrees Offered

Construction Management Major (BS)  
Manufacturing Technology Major  
    Applied Robotics Concentration (BS)  
    Manufacturing Management Concentration (BS)  
Technology Education Major (BS)  
Technology Systems Minor

## Certification and Licensure Offered

The programs provide opportunities for students to gain certifications in the following: ATMAE Manufacturing Specialist, Construction, MS Office software related, and other software related certifications, as appropriate.

Students majoring in technology education pursue the following teaching licensure: Career-Technical Technology Education Licensure (grades 4-12).

## Admission Requirements

Students desiring teacher licensure must meet the requirements for admission into the Center for Teacher Education. See page 70 for details.

In addition, the programs have established articulation plans with several area community and technical colleges. All transfer students must complete a minimum of 18 hours of 3000-level or above TECH courses at Ohio Northern University. Consult Technological Studies for more details.

## Special Programs

### *Tours of Industries*

The faculty in the Technological Studies programs have 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 programs will periodically take the tour of industries to study abroad locations.

### *Cooperative and Internships Experiential Learning*

Technological Studies offers two different work experience programs. The first is a 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, Technological Studies, the university, or the employer for any reason. Co-op employers must meet the requirements of Technological Studies and the university. Requirements of the co-op program are provided in the TECH 3801 course description and details are available in the Technological Studies office.

The other experiential learning opportunity is a one-semester internship (TECH 4841) designed to give the student a 15 week (or equivalent) real-world experience, which is completed during the normal four-year program.

### *Organized Professional Activities*

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); the International Technology and Engineering Educator's Association (ITEEA); Association of Technology, Management, and Applied Engineering (ATMAE); ONU Construction Management Association (ONUCMA); and Associated Schools of Construction (ASC).

## Major Course Requirements

All required courses in the 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**

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 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 (3)  
TECH 3521 Construction Specifications and Methods (3)  
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)  
BIZ 2131 Legal Environment (3)  
BIZ 2331 Principles of Management (3)  
CE 2711 Surveying (3)  
MATH/STAT Two courses of math or statistics at MATH 1251 or higher (6)  
MGMT 3631 Human Resource Management (3)

Select one:

MGMT 4571 Project Management (3)  
MGMT 4741 Small Business Management (3)

Select one (capstone experience):

TECH 3801 Professional Practice in Technological Studies (1)  
(Must complete two semesters to satisfy Capstone)  
TECH 4841 Internship (3)

One additional Math, Statistics or Natural Science course (3)

ATMAE Accreditation requirement:

Physical Science: Two courses in PHYS, CHEM, or GEOL (6)

### **Manufacturing Technology Major**

TECH 1001 Technology and Society (3)  
TECH 1201 Introduction to CAD (3)  
TECH 1301 Materials Science (3)  
TECH 1601 Fundamentals of Electronics (3)  
TECH 1621 Visual Basic (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 4961 Tour of Industries (1)  
TECH 4991 Senior Capstone (1)  
TECH xxx1 Technical elective (3)  
TECH xxx1 Technical elective (3)  
TECH xxx1 Technical elective (1)

### *Applied Robotics Concentration*

TECH 4121 Manufacturing Management (3)  
TECH 4341 Advanced Robotics 1 (capstone) (2)  
TECH 4351 Advanced Robotics 2 (capstone) (2)  
TECH 4621 Programming in Embedded Systems (4)  
ENGR 2131 Statics (3)  
ENGR 2231 Strength of Materials (3)  
MATH 1631 Calculus 1 (4)  
MATH 1641 Calculus 2 (4)  
STAT 1311 Intro to Statistics (3)  
PHYS 2311 Physics 1 (3)

ATMAE Accreditation requirement:

Physical Science: One course in PHYS, CHEM, or GEOL (3)

### *Manufacturing Management Concentration*

TECH 3111 Product Manufacturing (3)  
TECH 3211 Digital Manufacturing (3)

TECH 3221 Manufacturing Simulation (3)  
 TECH 4121 Manufacturing Management (3)  
 TECH 4341 Advanced Robotics 1 (capstone) (2)  
 TECH 4351 Advanced Robotics 2 (capstone) (2)  
 MATH/STAT Two courses of math or statistics at MATH 1251 or higher (6)  
 One additional Math, Statistics or Natural Science course (3)  
 ATMAE Accreditation requirement:  
 Physical Science: Two courses in PHYS, CHEM, or GEOL (6)

#### Technology Education Major

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 3111 Product Manufacturing (3)  
 TECH 3611 Applied Controls 1 (4)  
 TECH 4961 Tour of Industries (1)  
 TECH 4991 Senior Capstone (1)  
 TECH xxx1 Technical elective (3)  
 TECH xxx1 Technical elective (3)

Additional Education requirements:

CAMS 1311 Communication in the Classroom (3)  
 EDUC 1151 Culture and Schooling (3) (20 field hours)  
 EDUC 2101 Exceptional Learners (3) (20 field hours)  
 EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
 EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
 EDUC 4041 Strategies for Technology Education (3)  
 EDUC 4201\* The Teaching Profession (1)  
 EDUC 4901\* Student Teaching (12)  
 EDUC 4951\* Student Teaching Seminar (2)  
 ENGR 3201\* Technology and Engineering Education Methods (3)  
 PSYC 2151 Development Across the Lifespan (3)

Notes:

Students must have 120 hours of course related field experience.  
 Graduates of the program must attain a passing score on OAE Content and Pedagogy 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

Students from all disciplines are encouraged to use courses from 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 Technological Studies 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 1xx1-4xx1 Technology elective<sup>1</sup> (3)  
 TECH 1xx1-4xx1 Technology elective<sup>1</sup> (3)  
 TECH 1xx1-4xx1 Technology elective<sup>1</sup> (3)  
 TECH 1xx1-4xx1 Technology elective<sup>1</sup> (3)  
 TECH 3xx1-4xx1 Technology elective<sup>1</sup> (3)

Notes:

<sup>1</sup>Technical electives taken for the minor may not be part of a student's major program of study and require approval from Technological Studies. Specific courses used to fulfill the requirements of the minor must be proposed to Technological Studies prior to declaring the minor.

## THE SCHOOL OF SOCIAL SCIENCES AND HUMAN INTERACTION

**Mark D. Cruea, Director**  
**Katy Rossiter, Assistant Director**

**Programs: Communication and Media Studies, Criminal Justice, Geography, Political Science, Sociology, Writing and Multimedia Studies**

#### Mission:

The division of Social Sciences and Human Interaction, incorporating Communication and Media Studies, Criminal Justice, Geography, Political Science, and Sociology, emphasizes scientific and critical investigation of social life. Students are encouraged to become lifelong learners, critical thinkers, and ethical engaged citizens. Upon graduating from ONU, students are prepared for a variety of pursuits, including meaningful work, graduate education, and public service.

## COMMUNICATION AND MEDIA STUDIES

**Professors** North, Walton; **Associate Professors** Cruea, Tilton;  
**Assistant Professor** St. Onge; **Instructor** Phipps

#### Mission

Communication and Media Studies 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, the development of 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 program course offerings promote understanding of the theory, practice and aesthetics of human communication. Students pursue a major and/or emphasis particular to their professional education goals.

#### Majors, Minors and Degrees Offered

Communication Studies Major (BA)  
 Writing and Multimedia Studies Major (BA)  
 Communication Studies Minor  
 Digital Composition in Journalism Minor  
 Multimedia Production Minor

#### Honoraries and Organization

Lambda Pi Eta (LPH) is the National Communication Association's official honor society at four-year colleges and universities. LPH represents what Aristotle described in Rhetoric as three ingredients of persuasion: logos (Lambda), meaning logic; pathos (Pi), relating to emotion; and ethos (Eta), defined as character, credibility, and ethics. Membership in the honorary society recognizes academic excellence of undergraduate students in Communication Studies.

Students are also encouraged to become involved in a variety of program activities. ONU3-TV, ONU's Local Access Cable Channel, allows students to gain experience in broadcast programming and production. WONB, ONU's digital streaming radio station, provides opportunities in music programming, news and sports announcing and audio production. The Northern Review (ONU's campus newspaper) provides an opportunity for students to gain experience in both print and online publishing. The National Communication Association Student Communication and Media Club allows students an opportunity to interact with professionals and provide service to the campus community and is open to all students regardless of major. Credit toward graduation may be received for participation in some activities.

## Internships and Research

Students majoring in Communication Studies have the opportunity to pursue internships and research. A Communication Studies internship is optional and can provide further opportunities to apply one's knowledge and skills. All Communication Studies students are required to complete a senior thesis project, and students might also gain research experience by working independently with a specific faculty member to conduct research in various areas of communication.

## 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 relationships between effective communication, successful personal and professional relationships, and public engagement. The major prepares students for graduate study and for careers in fields such as human resources, law, business, education, entrepreneurship and politics.

Students majoring in Communication Studies will choose one of four emphases: Communication Studies General, Health Communication, Media and Culture, or Political Communication. At the beginning of their freshman year, students will be automatically enrolled in the Communication Studies General Emphasis, while at the end of their freshman year, students will then work with their advisor to choose a more specific emphasis if so desired.

## BA Degree Requirements

- CAMS 1301 Presentational Speaking (3)
- CAMS 2311 Interpersonal Communication (3)
- CAMS 2321 Group Dynamics and Team Interaction (3)
- CAMS 4331 Communication Theory (3)
- CAMS 4381 Communication Studies Senior Thesis (3)

Select one of the following Emphases:

- Communication Studies General Emphasis
- CAMS/WAMS 1xx1-4xx1 (3)
- CAMS/WAMS 1xx1-4xx1 (3)
- CAMS/WAMS 1xx1-4xx1 (3)

Select nine additional hours:

- CAMS 1xx1-4xx1 elective (3)
- CAMS 1xx1-4xx1 elective (3)
- CAMS 1xx1-4xx1 elective (3)
- ENGL 3271 Literature and Medicine (3)
- ENGL 3521 Rhetorical Theory (3)
- HIST 2721 US Popular Culture (3)
- MEDH 201 Perspectives in Medical Humanities (3)
- PBHE 1201 Introduction to Public Health (3)
- PHIL 1041 Philosophy and Film (3)
- PHIL 3101 Environmental Ethics (3)
- PLSC 1011 Introduction to American Politics (3)
- PLSC 3241 Film and Politics (3)
- PLSC 3601 Introduction to Health Policy (3)
- PSYC 1001 Psychology (3)
- PSYC 2201 Health Psychology (3)
- TAMT 2101 Musical Theatre History & Literature (3)

Health Communication Emphasis (select 18 hours)

- CAMS 2011 Ethics of International Aid (3)
- CAMS 2331 Health Communication (3)
- CAMS 3311 Cross-cultural Communication (3)
- ENGL 3271 Literature and Medicine (3)
- MEDH 2011 Perspectives in Medical Humanities (3)
- PBHE 1201 Introduction to Public Health (3)
- PHIL 3101 Environmental Ethics (3)
- PLSC 3601 Introduction to Health Policy (3)
- PSYC 1001 Psychology (3)
- PSYC 2201 Health Psychology (3)

- Media and Culture Emphasis (select 18 hours)
- WAMS 1201 Adaptive Media Production (3)
- CAMS 2371 Video Games Ind/Soc Impact Video Games (3)
- CAMS 4301 Film Study and Analysis (3)
- PHIL 1041 Philosophy and Film (3)
- HIST 2721 US Popular Culture (3)
- PLSC 3241 Film and Politics (3)
- TAMT 2101 Musical Theatre History & Literature (3)
- WAMS 3001 Cultural Studies and Media Analysis (3)
- WAMS 3211 Memes and Society (3)

Political Communication Emphasis (select 18 hours)

- CAMS 2301 Persuasion (3)
- CAMS 3311 Cross-cultural Communication (3)
- CAMS 4001 Free Speech and Democracy (3)
- CAMS 4311 Political Communication and Campaigns (3)
- ENGL 3521 Rhetorical Theory (3)
- PLSC 1011 Introduction to American Politics (3)
- PLSC 3241 Film and Politics (3)
- WAMS 3001 Cultural Studies and Media Analysis (3)

## Writing and Multimedia Studies Major

Students selecting this major must declare a second major or a minor.

- WAMS 1001 Introduction to Writing and Multimedia Studies (3)
- WAMS 1201 Adaptive Media Production (3)
- WAMS 2101 Writing for Action (3)
- WAMS 2201 The Digital Newsroom (3)
- WAMS 2301 Layout and Design (3)
- WAMS 3001 Culture Studies and Media Analysis (3)
- WAMS 3501 Internship (1)
- ENGL 3521 Rhetorical Theory (3)
- WAMS 4501 Capstone Project (3)

Practica Component – Select three:

- CAMS 2161 Northern Review Practicum (1-3)
- CAMS 2171 A/V Practicum (1-3)
- ENGL 2511 Magazine Publishing Practicum (1-3)
- ENGL 2531 Web Publishing Practicum (1-3)
- ENGL 2551 Creative Writing Workshop (1-3)

Content Production Component – Select 3 from one category to provide depth in one area or select any 3 courses from any category:

- Writing and Business, Science, and Technical Fields:
- ENGL 2021 Business Writing (3)
- ENGL 2031 Technical and Science Writing (3)
- TAAD 2411 Grant Writing (3)
- WAMS 4101 Advanced Professional Writing (3)

Digital Composition in Journalism:

- WAMS 3201 Writing for Advocacy and Activism (3)
- WAMS 3211 Memes and Society (3)
- WAMS 3221 Freelance Journalism (3)
- WAMS 4211 Data Journalism and Infographics (3)

Multimedia Production:

- CAMS 2151 Multimedia Writing (3)
- CAMS 3141 Video Storytelling (3)
- CAMS 3151 Podcasting (3)
- WAMS 3301 Narrative Photography (3)

## Minors

All courses required for a minor must be completed with a grade of "C" or higher.

## Communication Studies Minor

- CAMS 1301 Presentational Speaking (3)
- CAMS 2311 Interpersonal Communication (3)
- CAMS 4331 Communication Theory (3)
- CAMS 1xx1-4xx1 elective (3)
- CAMS 1xx1-4xx1 elective (3)
- CAMS 1xx1-4xx1 elective (3)

### Digital Composition in Journalism Minor

- WAMS 1001 Introduction to Writing and Multimedia Studies (3)  
WAMS 2201 The Digital Newsroom (3)

Select one:

- WAMS 1201 Adaptive Media Production (3)  
ENGL 3521 Rhetorical Theory (3)  
WAMS 3001 Culture Studies and Media Analysis (3)

Select three:

- WAMS 3201 Writing for Advocacy and Activism (3)  
WAMS 3211 Memes and Society (3)  
WAMS 3221 Freelance Journalism (3)  
WAMS 4211 Data Journalism and Infographics (3)

### Multimedia Production Minor

- WAMS 1001 Introduction to Writing and Multimedia Studies (3)  
WAMS 3001 Culture Studies and Media Analysis (3)

Select one:

- WAMS 1201 Adaptive Media Production (3)  
ENGL 3521 Rhetorical Theory (3)  
WAMS 3001 Culture Studies and Media Analysis (3)

Select three:

- CAMS 2151 Multimedia Writing (3)  
CAMS. 3141 Video Storytelling (3)  
CAMS 3151 Podcasting (3)  
WAMS 3301 Narrative Photography (3)

## CRIMINAL JUSTICE

**Associate Professor** Kilgallon; **Assistant Professor** DeLeeuw;  
**Instructor** Dule

### Mission Statement

The criminal justice major provides students with a foundational knowledge of the criminal justice system in the United States, its major components, the impact the system can have on individuals and communities, and the issues and challenges facing the system today. Students are mentored closely by faculty and encouraged to engage in research as well as service to the community. The experiences and knowledge gained from this program will prepare students for success in the field of criminal justice or advanced study.

### Majors, Minors and Degrees Offered

- Criminal Justice Major (BA)  
Forensic Science Option (BA)  
Investigative Accounting Option (BA)  
Law 3+3 in Criminal Justice (BA)  
Criminal Justice Minor

### Pre-Law Program

Students majoring in Criminal Justice (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### Honoraries and Organizations

Alpha Phi Sigma is the national criminal justice honorary. The goals of Alpha Phi Sigma are to honor and promote academic excellence, community service; educational leadership and unity. Alpha Phi Sigma is the only criminal justice honor society which is a certified member of The Association of College Honor Societies and affiliated with The Academy of Criminal Justice Sciences. Membership in the honorary recognizes academic excellence of undergraduate and graduate students of criminal justice, as well as Juris Doctorate students. The Psychology, Sociology, and Criminal Justice Student Association is a student run organization that focuses on public service as preparation for careers in the field.

### Internships and Research

Students majoring in criminal justice have the opportunity to pursue internships and research. Criminal Justice students have a required public service internship that can be served in a variety of agencies related to the field. Students might also gain research experience by working closely with a specific faculty member to conduct empirical investigations in various areas of criminological 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.

### Criminal Justice Major

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. Students may also pursue course work in forensic science offered in cooperation with Biological Sciences or in investigative accounting offered in cooperation with Dicke College of Business Administration. All criminal justice majors must complete an internship.

- |              |                                      |
|--------------|--------------------------------------|
| 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 2951      | Sophomore Seminar: Internship (1)    |
| CJ 2xx1/4xx1 | CJ elective (3)                      |
| CJ 3xx1/4xx1 | CJ elective (3)                      |
| CJ 3xx1/4xx1 | CJ elective (3)                      |
| CJ 3xx1/4xx1 | CJ elective (3)                      |
| CJ 3951      | Junior Seminar: Capstone Dev (1)     |
| CJ 4711      | Public Service Internship (1)        |
| CJ 4951      | Senior Capstone (1)                  |

### Other required courses

- |           |                                    |
|-----------|------------------------------------|
| SOC 1001  | Sociology (3)                      |
| SOC 2531  | Research Methods (3)               |
| SOC 2541  | Data Analysis (4)                  |
| SOC 2611  | Criminology (3)                    |
| STAT 1561 | Statistics for Professionals 1 (3) |

Select one CJ program approved course:

- |               |                  |
|---------------|------------------|
| CJ 3xx1/4xx1  | CJ elective (3)  |
| SOC 2xx1/4xx1 | SOC elective (3) |

Note: The criminal justice major requires a total of 480 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 experience. The student may apply exactly 3 credit hours of CJ 4711 to CJ elective credit upon the approval of the Internship Committee.

### Forensic Science Option

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.

### Additional required courses:

- |           |  |
|-----------|--|
| BIOL 1131 | Principles and Concepts of Human Biology (4) |
| BIOL 2191 | Forensic Biology 1 (4)                       |
| BIOL 2291 | Forensic Biology 2 (4)                       |
| BIOL 2331 | Anatomy and Physiology 1 (4)                 |
| BIOL 2591 | Forensic Crime Scene Investigation (4)       |
| CHEM 1201 | Chemistry - Health Sciences (5)              |

### Investigative Accounting Option

Only criminal justice majors may declare the forensic accounting option. Every course required for this option must be completed with a grade of "C" or higher.

Additional required courses:

BIZ 2101	Principles of Accounting (3)
ACCT 2201	AIS and the Accounting Cycle (3)
ACCT 3011	Intermediate Financial Accounting 1 (3)
ACCT 3021	Intermediate Financial Accounting 2 (3)
ACCT 3871	Taxation 1 (3)
ACCT 4011	Auditing 1 (3)

**Minor Course Requirements**

All courses required for a minor must be completed with a grade of 'C' or higher.

**Criminal Justice Minor**

CJ 1211	Introduction to Criminal Justice (3)
SOC 1001	Introduction to Sociology (3)
SOC 2611	Criminology (3)
CJ 2xx1-4xx1	CJ elective (3)
CJ 3xx1-4xx1	CJ elective (3)

Select two (6 hours)

CJ 2001	CJ Systems: The Police (3)
CJ 2101	CJ Systems: The Courts (3)
CJ 2201	CJ Systems: Corrections (3)

**GEOGRAPHY**

**Assistant Professor** Rossiter

**Professional Memberships**

Memberships include the American Association of Geographers and the American Geographical Society.

**Majors, Minors and Degrees Offered**

Geography Minor

**Special Programs**

*Internships and Other Experiential Education*

Public service and private sector internships are available. The program also offers students the opportunity to participate in The Washington Center for Internships and Academic Seminars. A student may apply three credit hours of internship to selected majors and minors and as many as six total credit hours of internship to the Bachelor of Arts degree.

*Honoraries*

The program has an active chapter of Gamma Theta Upsilon, the international geographic honor society.

*Study Abroad*

The program participates in numerous study-abroad programs. Students 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.

**Minor Course Requirements**

Every course required for a minor must be completed with a grade of "C" or higher.

**Geography Minor**

GEOG 1001	Introduction to Geography: Methods and Materials (3)
GEOG 2261	World Regional Geography <sup>1</sup> (3)
GEOG 2371	Physical Geography <sup>1</sup> (3)
GEOG 2481	Introduction to GIS (3)
GEOG 2551	Spatial Methods 1 (3)

Select two from ONE of the three categories<sup>2</sup>:

HSPS 2611	Contemporary Europe (3)
HSPS 2621	Contemporary Asia (3)
HSPS 2631	Contemporary Africa (3)
HSPS 2641	Contemporary Middle East (3)
HSPS 2651	Contemporary Latin America (3)

HSPS 4161	Russia and the Near Abroad (3)
-----------	--------------------------------

or

Select two:

GEOG 2401	Political Geography (3)
GEOG 2421	Population Geography (3)
GEOG 3041	Historical Geography (3)
PLSC 4751	Model UN <sup>3</sup> (3)

or

Select two:

GEOG 2681	Cartography (3)
GEOG 3481	Applied GIS (3)
GEOG 4001	Introduction to Remote Sensing (3)
GEOG 4711	Public Service Internship (3)
MRKT 3541	Geo Analytics (3)

Notes:

<sup>1</sup> With 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).

<sup>2</sup> One of the electives must be at the 3xx1-4xx1 level.

<sup>3</sup>You may need to take more than one section of this course to fulfill the credit requirement.

**POLITICAL SCIENCE**

**Professors** R. Alexander, Nsia-Pepira; **Visiting Assistant Professor** Schroeder Hageman

**Mission**

The mission of the Political Science program is to graduate students who have the knowledge, skills, and critical thinking ability to achieve success in their post-graduate endeavors. Our graduates, and others who take our courses, will leave ONU equipped to be valuable employees' successful graduate students; and will be effective and active citizens. To ensure this, the major is interdisciplinary, offering students political tools that enable them to critically analyze the world around them and act on their conclusions, whether that be locally, nationally, or internationally.

**Professional Memberships**

Memberships include the American Political Science Association, Ohio Association of Economists and Political Scientists, Midwest Political Science Association.

**Major, Minors and Degrees Offered**

Law 3+3 in Political Science (BA)
Political Science Major (BA)
International Studies Minor
Political Science Minor
Public Policy Minor

**Special Programs**

*Internships and Other Experiential Education*

Public service internships are available at all levels of government, including the Ohio and federal legislatures. 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. A student may apply three credit hours of internship to the major and as many as six total credit hours of internship to the Bachelor of Arts degree.

Students annually participate in Model United Nations competitions and the American Mock Trial program in cities such as Chicago and New York City. A student may apply three credit hours of Model United Nations to the political science major and up to six credit hours to the Bachelor of Arts degree. A student may apply three credit hours of Mock Trial to the political science major and up to six credit hours to the Bachelor of Arts degree.

*Honoraries*

The program has active chapters of Phi Beta Delta, the national honorary for international scholars and Pi Sigma Alpha, the national political science honorary.

### Study Abroad

The Political Science program participates in numerous study-abroad programs. Political science students are directed toward Glasgow Caledonian University, University of Debrecen, or the University of Joensuu. Students 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.

### Pre-law Program

Students majoring in Political Science (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### Major Course Requirements

Every course required for the major must be completed with a grade of "C" or higher. The capstone requirement for majors in Political Science is met by successful completion of Senior Thesis 1 and 2. To pursue a dual major or a major and a minor, students must complete all requirements for each separate major and minor.

### Political Science Major

A major in political science prepares students for careers in law, government service, public affairs, business, journalism, and information management.

PLSC 1011	Introduction to American Politics (3)
PLSC 1021	Introduction to International Relations (3)
PLSC 1031	Introduction to Comparative Politics (3)
SOC 2531	Research Methods (3)
PLSC/HSPS 25x1-4xx1	American Politics elective (3)
PLSC/HSPS 25x1-4xx1	American Politics elective (3)
PLSC/HSPS 25x1-4xx1	International Politics elective (3)
PLSC/HSPS 25x1-4xx1	International Politics elective (3)
PLSC/HSPS 25x1-4xx1	Elective (3)
PLSC/HSPS 25x1-4xx1	Elective (3)
PLSC/HSPS 4981	Senior Thesis 1 (1)
PLSC 4991h	Senior Thesis 2(1)

#### Select one:

PLSC 4581	Western Political Thought 1 (3)
PLSC 4591	Western Political Thought 2 (3)

#### Research/Experiential Component – Select one:

GEOG 2481	Introduction to Geographic Information Systems (3)
PLSC 4711	Public Service Internship <sup>1</sup> (3)

#### Intermediate Modern Language 2xx1-4xx1 (3)

PLSC 4731	Washington Center Internship <sup>1</sup> (3)
STAT 1561	Statistics for Professionals (3)
OVRC 3xx1-4xx1	Study Abroad <sup>2</sup> (3)

#### Notes:

<sup>1</sup> Students receive 1 credit hour for every 100 on-site hours they work at their internship site. Students must complete 3 credit hours to fulfill the internship requirement (300 total on-site hours) for the experiential elective.

<sup>2</sup> A Political Science advisor must approve 3 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 elective.

### Minor Course Requirements

Every course required for a minor must be completed with a grade of "C" or higher.

### International Studies Minor

The International Studies minor allows students to complement their major program through interdisciplinary coursework examining the complex global relationships between nations that shape the world today. The minor provides significant contextual knowledge for students given the growing global interconnectedness across occupations including government, business, health, and engineering.

GEOG 2261	World Regional Geography (3)
PLSC 1021	Introduction to International Relations (3)
PLSC 1031	Introduction to Comparative Politics (3)
HSPS/PLSC/HIST/GEOG 3xx1-4xx1	(with International Studies attribute)

#### Select two:

HSPS 2611	Contemporary Europe (3)
HSPS 2621	Contemporary Asia (3)
HSPS 2631	Contemporary Africa (3)
HSPS 2641	Contemporary Middle East (3)
HSPS 2651	Contemporary Latin America (3)
HSPS 4161	Russia and the Near Abroad (3)

#### Select one:

HSPS/PLSC/HIST/GEOG 2xx1-4xx1	(with International Studies attribute)
GEOG 2481	Introduction to GIS (3)

#### Courses with the International Studies attribute:

GEOG 2401	Political Geography (3)
GEOG 2421	Population Geography (3)
HIST 2861	East Asia (3)
HIST 3511	The Crusades (3)
HIST 3551	World War I (3)
HIST 3561	World War II (3)
HIST 3571	Cold War (3)
HIST 3581	Vietnam War (3)
HIST 3701	The Ancient World (3)
HIST 3711	Medieval Europe (3)
HIST 3731	The Age of Revolutions (3)
HIST 3741	Russia to 1905 (3)
HIST 3791	Topics in Modern Europe (3)
HIST 4211	Fascism (3)
HIST 4221	Hitler and Nazism (3)
HIST 4231	The Holocaust (3)
HSPS 2611	Contemporary Europe (3)
HSPS 2621	Contemporary Asia (3)
HSPS 2631	Contemporary Africa (3)
HSPS 2641	Contemporary Middle East (3)
HSPS 2651	Contemporary Latin America (3)
HSPS 3901	Special Topics in History and Politics (3)
HSPS 4161	Russia and the Near Abroad (3)
HSPS 4521	American Foreign Relations (3)
PLSC 3301	Comparative Politics of Democracies (3)
PLSC 3311	Comparative Politics in the Developing World (3)
PLSC 3411	Human Rights (3)
PLSC 3421	Conflict Analysis and Resolution (3)
PLSC 3431	Terrorism (3)
PLSC 3441	Wars in Africa (3)
PLSC 3881	International Law and Organizations (3)
PLSC 4921	Special Topics in International Relations (3)
PLSC 4931	Special Topics in Comparative Politics (3)

### Political Science Minor

PLSC 1011	Introduction to American Politics (3)
PLSC/HSPS 25x1-4xx1	Elective (3)
PLSC/HSPS 25x1-4xx1	Elective (3)
PLSC/HSPS 25x1-4xx1	Elective (3)
PLSC/HSPS 25x1-4xx1	Elective (3)

#### Select one:

PLSC 1021	Introduction to International Relations (3)
PLSC 1031	Introduction to Comparative Politics (3)

#### Select one:

PLSC 4581	Western Political Thought 1 (3)
PLSC 4591	Western Political Thought 2 (3)

### Public Policy Minor

A minor in Public Policy develops skills that are needed for strategic decision-making in business and technical professions, including health, education, and engineering. Public Policy is the product of choices made by governments that drive public investments, create rules, establish services and security, guide and regulate markets and businesses, or

allocate benefits and costs to citizens. Students pursuing a Public Policy minor will learn to formulate, evaluate, and promote policy options that can make a difference in their communities. The minor is an excellent complement to students from programs across the university, including business, health, engineering, education, and pre-law.

PLSC 1011 Introduction to American Politics (3)  
PLSC 2661 Public Administration (3)  
PLSC 3671 Policy Analysis (3)

Select one:

BIZ 2021 Principles of Microeconomics (3)  
BIZ 2031 Principles of Macroeconomics (3)

Select one:

PHIL 1051 Ethics, Justice, and Law (3)  
PHIL 2401 Professional Ethics (3)  
PHIL 3101 Environmental Ethics (3)  
PHIL 3441 Ethical Theory (3)

Select one: (approved course satisfying Public Policy elective)

PLSC 2701 Gender and Politics (3)  
PLSC 3211 Political Parties and Interest Groups (3)  
PLSC 3231 Mass Media and Politics (3)  
PLSC 3411 Human Rights (3)  
PLSC 3421 Conflict Analysis and Resolution (3)  
PLSC 3431 Terrorism (3)  
PLSC 3541 Judicial Process, Behavior, and Impact (3)  
PLSC 3601 Introduction to Health Policy (3)  
PLSC 3881 International Law and Organizations (3)  
PLSC 4091 The Presidency (3)  
PLSC 4111 Congress (3)  
GEOG 2481 Introduction to Geographic Information Systems (3)  
HIST 1201 Public History (3)  
HIST 2301 Introduction to Museums and Archives (3)  
HIST 3201 Advanced Public History (3)  
HSPS 4521 American Foreign Relations (3)

## SOCIOLOGY

**Professor** Durkin; **Associate Professor** Carrothers

### Majors, Minors and Degrees Offered

Law 3+3 in Sociology (BA)

Sociology Major

General Sociology Concentration (BA)

Social Services Administration Concentration (BA)

Sociology Minor

### Pre-Law Program

Students majoring in Sociology (BA) may participate in the 3+3 Law Admissions Program. For more information, see the description on page 24.

### 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."

PSCJ club is a student organization open to all students with an interest in either psychology, sociology, or criminal justice. The club sponsors speakers and fundraisers for community organizations.

### Internships and Research

Students majoring in sociology have the opportunity to pursue internships and research. Sociology majors may pursue internship opportunities at various social service agencies, at sites that relate to career goals, or as part of internships with second majors or other courses of study. Students might also gain research experience by

working closely with a specific faculty member to conduct empirical investigations in various areas of sociological, social psychological, or criminological 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.

### Sociology Major

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.

Sociology majors will enroll in either the general sociology concentration or the social services administration concentration.

SOC 1001 Introduction to Sociology (3)  
SOC 2531 Research Methods (3)  
SOC 2541 Data Analysis (4)  
SOC 4461 Classical Sociological Theory (3)  
SOC 4881 Senior Capstone Research 1 (1)  
SOC 4891 Senior Capstone Research 2 (2)

Other required course

STAT 1561 Statistics for Professionals 1 (3)

### General Sociology Concentration

The general sociology concentration is designed to prepare students for immediate entry into the workforce or graduate study by providing a broad survey of the discipline.

SOC 2xx1-4xx1 Sociology elective (3)  
SOC 2xx1-4xx1 Sociology elective (3)  
SOC 2xx1-4xx1 Sociology elective (3)  
SOC 2xx1-4xx1 Sociology elective (3)  
SOC 2xx1-4xx1 Sociology elective (3)  
SOC 2xx1-4xx1 Sociology elective (3)  
SOC 4471 Contemporary Sociological Theory (3)

### Social Service Administration Concentration

Students in the Social Services Administration concentration will complete the equivalent of three years of study at ONU.

At the completion of the three years of study at ONU the student may transition into the Masters of Science in Social Administration program at Case Western Reserve University assuming they have met the requirements set forth by CWRU and are accepted into the program. The fourth and fifth years of study are completed at CWRU.

PSYC 1001 Introduction to Psychology (3)  
SOC 1111 Introduction to Social Work (3)

If a student declares the SSA later in the academic career, no adjustments will be made to the SSA curriculum.

If a student decides, upon completion of the SSA requirements at ONU, that they do not wish to complete the MSSA, do not want to continue their graduate work at CWRU, or is not accepted by CWRU for graduate study, the student will transition to the general sociology concentration and complete the degree requirements as established.

If a student is unable to complete the MSSA program at CWRU, a review of the coursework finished at CWRU will be completed to determine if the student has completed appropriate requirements for an ONU degree. The student may be required to return to ONU to complete degree requirements for the general sociology concentration.

Students will take four (4) of the following sociology courses

SOC 2401 Sociology of the Family (3)  
SOC 2431 Deviant Behavior (3)  
SOC 2501 Cultural Anthropology (3)  
SOC 2601 Social Problems (3)  
SOC 2611 Criminology (3)

SOC 2631	Victimology (3)
SOC 3461	Social Stratification (3)
SOC 3471	Race, Class, Gender (3)
SOC 3481	Sociology of Health and Health Care (3)
SOC 3491	Sociology of Mental Health and Illness (3)
SOC 3551	Advanced Data Analysis (3)
SOC 3611	Delinquency and Juvenile Justice (3)
SOC 3631	Sociology of Substance Abuse (3)

Students will select two (2) of the following psychology courses  
 PSYC 2161/2171 Child Psychology or Adolescent Psychology (3)  
 PSYC 2201 Health Psychology (3)  
 PSYC 3011 Social Psychology (3)  
 PSYC 3131 Introduction to Clinical Psych (3)

#### Minor Course Requirements

All courses required for a minor must be completed with a grade of 'C' or higher.

#### Sociology Minor

SOC 1001	Introduction to Sociology (3)
SOC 2531	Research Methods (3)
SOC 2541	Data Analysis (4)

SOC 2xx1-4xx1 <sup>1</sup>	Sociology electives (3)
SOC 2xx1-4xx1 <sup>1</sup>	Sociology electives (3)
SOC 2xx1-4xx1 <sup>1</sup>	Sociology electives (3)
SOC 2xx1-4xx1 <sup>1</sup>	Sociology electives (3)
SOC 4461	Classical Sociological Theory (3)

Other required course

STAT 1561	Statistics for Professionals 1 (3)
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Notes:

<sup>1</sup>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.

## THE SCHOOL OF VISUAL AND PERFORMING ARTS

**Brian P. Sage, Director**  
**Kirsten Osburn-Manley, Assistant Director**

**Programs: Art Education, Graphic Design, International Theatre Production, Music, Music Education, Musical Theatre, Studio Arts, Theatre**

### ART AND DESIGN

**Professor Rowe; Associate Professors Eddings, Sheets; Assistant Professor Mancuso**

#### Mission Statement

The visual arts programs integrate traditional and contemporary approaches to the creation of art and design. The primary goal is to develop students as creative and productive 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 the past and present; and develop competence in the use of tools, materials and processes in their profession.

#### Vision Statement

To be leading programs 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.

#### Accreditation

The art education licensure program to teach PK-12 is approved by the Ohio Department of Education. The Teacher Education Program is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

#### Majors, Minors and Degrees Offered

Art Education Major (BA)  
 Graphic Design Major (BA, BFA)  
 Studio Arts Major (BA)  
 Art Minor  
 Design Minor

#### Admission Requirements

Candidates seeking admission are required to meet the general requirements for admission to the University. Although not required during the admission process, each prospective student is encouraged to submit a portfolio demonstrating ability in compositional, conceptual and technical skills. Portfolio reviews are required for Talent Awards (scholarships) that are renewable for four years. 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 419-772-2160.

Transfer applicants must comply with all university requirements and procedures. In addition, a portfolio review is required for all work completed in studio courses for which the applicant wishes to receive 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 Graphic Design BFA degree program are required to participate in the internship program. For art education majors, student teaching is required for graduation and licensure. In special situations, 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 program 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 Salford, Manchester, England. 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 Asia, 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

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 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 include submitting entries for the juried Student Exhibition and the Senior BA/BFA Exhibit (capstone). Majors with junior standing are responsible for the organization and preparation of the juried student show. As part of the senior capstone experience, all majors are required to submit work to a professional (external) juried exhibit, competition or scholarship.

### Art Education Major

The art education major is an intensive full-time teacher preparation program that enables students to earn Multi-Age (PK-12) Visual Arts Licensure.

#### BA Degree Requirements

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)
ART 1501	3D Design (3)
ART 1651	Visual Literacy (3)
ART 22x1	Painting 1 or Watercolor (3)
ART 2401	Ceramics 1 (3)
ART 2601	Art History 1 (3)
ART 2611	Art History 2 (3)
ART 2801	Book Arts (3)
ART 33x1	Print & Paper 1 or 2 (3)
ART 4901	Senior Capstone 1 (3)
DSGN 1101	Photography & Communication (3)
DSGN 1201	Introductory Visual Communication Design (3)

#### Sculpture (select one):

ART 2501	Sculpture: Additive & Subtractive (3)
ART 2551	Sculpture: Small Metals (3)
ART 3501	Sculpture: Model Making & Casting (3)
ART 3511	Sculpture: Installation (3)

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. (See page 70)

#### Additional Education requirements:

CAMS 1311	Communication in the Classroom (3)
EDUC 1151	Culture and Schooling (3) (20 field hours)
EDUC 2101	Exceptional Learners (3) (20 field hours)
EDUC 2421*	Reading Across the Content Areas (3) (20 field hours)
EDUC 3401	Educational Psychology (3) (10 field hours)
EDUC 3681*	Curriculum, Assessment, and Instruction (3) (30 field hours)
EDUC 4201*	The Teaching Profession (1)
EDUC 4571*	Integrated Art Methods (3)
EDUC 4901*	Student Teaching (12)
EDUC 4951*	Student Teaching Seminar (2)
PSYC 2151	Development Across the Lifespan (3)

### 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

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)
ART 1501	3D Design Foundations (3)
ART 1651	Visual Literacy (3)
ART 22x1	Painting 1 or Watercolor (3)
ART 2601	Art History 1 (3)
ART 2611	Art History 2 (3)
ART 2801	Book Arts (3)
ART 33x1	Print & Paper 1 or 2 (3)
DSGN 1101	Photography & Communication (3)
DSGN 1201	Intro Visual Communication (3)
DSGN 1301	Typography (3)
DSGN 2401	Narrative Structures (3)
DSGN 2601	Design Research Methods (3)
DSGN 3401	Identity & Packaging Design (3)
DSGN 3501	Persuasive Design (3)
DSGN 4601	Professional Practices in Design (3)
DSGN 4901	Senior Capstone 1 (3)
DSGN 4911	Senior Capstone 2 (3)

#### Other required courses

CAMS 1301	Presentational Speaking (3)
TECH 1421	Web Design (3)

#### BFA Degree Requirements

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)
ART 1501	3D Design Foundations (3)
ART 1651	Visual Literacy (3)
ART 22x1	Painting 1 or Watercolor (3)
ART 2601	Art History 1 (3)
ART 2611	Art History 2 (3)
ART 2801	Book Arts (3)
ART 33x1	Print & Paper 1 or 2 (3)
DSGN 1101	Photography & Communication (3)
DSGN 1201	Intro Visual Communication Design (3)
DSGN 1301	Typography (3)
DSGN 2401	Narrative Structures Design (3)
DSGN 2601	Design Research Methods (3)
DSGN 2651	History of Graphic Design (3)
DSGN 3401	Identity & Packaging Design (3)
DSGN 3501	Persuasive Design (3)
DSGN 4201	Advanced Visual Comm. Design (3)
DSGN 4601	Professional Practice in Design (3)
DSGN 4901	Senior Capstone in Design 1 (3)
DSGN 4911	Senior Capstone in Design 2 (3)
DSGN 4921	Internship (1-3)

#### Other required courses

CAMS 1301	Presentational Speaking (3)
TECH 1421	Web Design (3)

### Studio Arts Major

The studio arts major integrates art and design courses with liberal arts studies. The BA degree program is designed for intense study with the option of a major or minor in another discipline.

#### BA Degree Requirements

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)

ART 1501	3D Design (3)
ART 1651	Visual Literacy (3)
ART 2111	Life Drawing (3)
ART 22x1	Painting 1 or Watercolor (3)
ART 2401	Ceramics 1 (3)
ART 2601	Art History 1 (3)
ART 2611	Art History 2 (3)
ART 2801	Book Arts (3)
ART 33x1	Print & Paper 1 or 2 (3)
ART 4901	Senior Capstone 1 (3)
ART 4911	Senior Capstone 2 (3)
DSGN 1101	Photography & Communication (3)
DSGN 1201	Intro Visual Communication Design (3)

**Sculpture (select one):**

ART 2501	Sculpture: Additive & Subtractive (3)
ART 2551	Sculpture: Small Metals (3)
ART 3501	Sculpture: Mold Making & Casting (3)
ART 3511	Sculpture: Installation (3)

**Advance Studio (select one):**

ART 4101	Advanced Illustration (3)
ART 4111	Advanced Life Drawing (3)
ART 4201	Advanced Painting (3)
ART 4301	Advanced Print and Paper (3)
ART 4401	Advanced Ceramics (3)
ART 4501	Advanced Sculpture (3)
ART 4801	Advanced Book Arts (3)
DSGN 2101	Advanced Photo & Communication (3)

**Minors**

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

**Art Minor**

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)
ART 1501	3D Design (3)
ART 1651	Visual Literacy (3)
ART 2xx1-4xx1	Art elective (3)
ART 3xx1-4xx1	Art elective (3)

**Design Minor**

ART 1101	Drawing 1 (3)
ART 1111	Drawing 2 (3)
DSGN 1201	Introductory Visual Communication Design (3)
DSGN 1301	Typography (3)
DSGN 2601	Design Research Methods (3)
DSGN 2xx1-4xx1	Design elective (3)
DSGN 3xx1-4xx1	Design elective (3)

**MUSIC**

**Professors** C. Bates, D. Kosmyrna; **Associate Professors** R. Casey, S. Waters; **Assistant Professors** Larsen, Lenzo, Torres; **Resident Artists** Osburn-Manley; **Adjunct Instructors** Aebker, P. Ashmore, Damschroeder, Eichelberger, Graber, Green, Klaas, Laukhuf, Lozano, Mills, Simioanca, Smith

**Mission Statement**

The music programs at Ohio Northern University are dedicated to the promotion of the higher values of beauty and goodness through the art of music. We train highly skilled, talented and versatile musicians to be leaders in tomorrow's cultural landscape and music industry – as music educators, artists, scholars, professionals and advocates. At the same time, we take great pride in serving the greater whole of the university by providing its general student body with significant applied and academic opportunities, on campus and throughout the world.

We foster an environment that values both tradition and innovation. Our excellent faculty consists of premier artists and scholars of international acclaim in a variety of music related fields, enabling us to offer conservatory quality applied instruction as well as opportunities

for intense scholarship and fieldwork in the areas of education and pedagogy, musicology, ethnomusicology, music theory, and music technology. In doing so, we actively engage in global and cultural dialogues - our campus and the rural region as a whole greatly benefit from our stimulating programs and our understanding and perspectives on culture.

**Vision Statement:**

The Vision of Music at Ohio Northern University is to be among the best private and comprehensive music programs in the nation that offer programs of excellence in professional development; teacher training; high-impact learning; and civic engagement in a student-centered environment.

To achieve these goals, the Music programs will continue to build on its strengths and pursue these key opportunities:

- We will recruit and retain an effective faculty and staff who possess diverse skill sets.
- We will aggressively market music students to our academic programs, while fostering our tradition of robust non-major participation in our ensembles.
- We will ensure flourishing and innovative academic programming.
- We will pursue the improvement and growth of facilities essential to the mission and long-term vision of the Music programs.
- We will cultivate wide-spread awareness of Music program events and activities as well as promote faculty and student accomplishments.

**Accreditation**

Music is accredited by the National Association of Schools of Music.

**Majors, Minors and Degrees Offered**

**Music Major**

- Applied Studies Concentration (BA)
- Music History and Literature Concentration (BA)
- Music Theory and Composition Concentration (BA)
- Sound Recording Technology Concentration (BA)

**Music Education Major (BM)**

**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 determines 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 University of Salford in Manchester, England.

**Major Course Requirements**

All required courses in a 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 Arts: Music Major**

The Bachelor of Arts in music is designed for the student who has a deep passion for music and wants to study music from a broader perspective, including knowledge and understanding of music, its history, its cultural impact and its performance practices. Students pursuing the Bachelor of Arts with a major in music must complete core requirements plus one of these concentrations: applied studies in vocal, instrumental, or piano; music history and literature; music theory and composition; or sound recording technology. An academic minor, such as a minor in arts administration offered through the theatre arts, is strongly encouraged.

- Core
- MUSC 0011 Concert and Recital Observation (0 hours x 6)
  - MUSC 1011 Introduction to the Study of Music (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)
  - MUSC 2271 Technology for Musicians and Educators (3)
  - MUSL 1211 Applied Lessons (2)
  - MUSL 1221 Applied Lessons (2)
  - MUSL 2211 Applied Lessons (2)
  - MUSL 2221 Applied Lessons (2)
- 
- MUSC 3211 Music History and Literature I (3)
  - MUSC 3221 Music History and Literature II (3)
  - MUSE 1011-1261 Major Ensembles (4)

*Applied Studies Concentration*

The Bachelor of Arts in Music Applied Studies Concentration is intended for students who wish to continue applied music studies while double majoring in another field, or students who wish to develop performance skills for other music-related careers that do not require a Music Performance degree. Literature level and expectations are designed to allow flexibility. The minor in Arts Administration can open up additional career opportunities.

*Applied Studies Concentration –instrumental*

- MUSL 1081, 2071, 2081, and 2091 Piano Class II-V are strongly recommended.
- MUSL 1071 Piano Class I for Music Majors (1)
  - MUSL 2041 Piano Proficiency Exam (0) (Strongly recommended)
  - MUSL 2391 2nd Year Applied Proficiency Exam (0)
  - MUSL 3211 Applied Lessons (2)
  - MUSL 3221 Applied Lessons (2)
  - MUSL 4211 Applied Lessons (2)
  - MUSL 4221 Applied Lessons (2)
  - MUSC 4291 Applied Field Literature and Pedagogy of Instrumentalists (2)
  - MUSC xxx1 Electives (3)
  - MUSC 4601 Senior Research Project (3)
  - MUSE xxx1 Ensembles (4)

*Applied Studies Concentration –vocal*

- MUSL 1071 Piano Class I for Music Majors (1)
- MUSL 1081 Piano Class II for Music Majors (1)
- MUSL 2041 Piano Proficiency Exam (0)
- MUSL 2071 Piano Class III for Music Majors (1)
- MUSL 2081 Piano Class IV for Music Majors (1)
- MUSL 2091 Piano Class V for Music Majors (1)
- MUSL 2391 2nd Year Applied Proficiency Exam (0)
- MUSL 3211 Applied Lessons (2)
- MUSL 3221 Applied Lessons (2)
- MUSL 4211 Applied Lessons (2)
- MUSL 4221 Applied Lessons (2)
- MUSE xxx1 Ensembles (4)
- MUSC 1331 Singers Diction 1 (1)
- MUSC 3271 Survey of Vocal Literature I (1)
- MUSC 3281 Survey of Vocal Literature II (1)
- MUSC 4601 Senior Research Project (3)

*Applied Studies Concentration –piano*

- MUSL 2041 Piano Proficiency Exam (0)
- MUSL 2391 2nd Year Applied Proficiency Exam (0)
- MUSL 3211 Applied Lessons (2)
- MUSL 3221 Applied Lessons (2)
- MUSL 4211 Applied Lessons (2)
- MUSL 4221 Applied Lessons (2)
- MUSE xxx1 Ensembles (2)
- MUSC xxx1 Electives (2-3)
- MUSC 2341 Survey of Piano Literature (2)
- MUSC 2351 Piano Pedagogy (2)
- MUSC 4601 Senior Research Project (3)

*Music History and Literature Concentration*

The Bachelor of Arts in Music History and Literature Concentration is intended for students who wish to develop skills for future careers in fields including, but not limited to, musicology and ethnomusicology. This degree program can be combined with a second major. The minor in Arts Administration can open up additional career opportunities.

- MUSL 1081, 2071, 2081, and 2091 Piano Class II-V are strongly recommended.
- MUSL 1071 Piano Class I for Music Majors (1)
  - MUSL 2041 Piano Proficiency Exam (0) (Strongly Recommended)
  - MUSC 2111 Music Theory III (3)
  - MUSC 2131 Aural Skills III (1)
  - MUSC 2201 Non-Western Music (3)
  - MUSL 2381 2nd Year Applied Proficiency Exam (0)
  - MUSC 3231 Jazz History and Literature (3)
  - MUSC 3241 American Music (3)
  - MUSC 3251 African Music (3)
  - MUSC 4601 Senior Research Project (3)

*Music Theory and Composition Concentration*

The Bachelor of Arts in Music Theory and Composition Concentration is intended for students who wish to develop skills for future careers in fields including, but not limited to, arranging, composing, film scoring, engraving, and video game music. This degree program can be combined with a second major. The minor in Arts Administration can open up additional career opportunities.

MUSL 2071, 2081, and 2091 Piano Class III-V are strongly recommended until the piano proficiency exam is passed.

- MUSL 1071 Piano Class I for Music Majors(1)
- MUSL 1081 Piano Class II for Music Majors (1)
- 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 2381 2nd Year Applied Proficiency Exam (0)
- MUSC 3151 Composition (6)
- MUSC 4111 Analytical Techniques (2)
- MUSL 2041 Piano Proficiency Exam (0)
- MUSC 4171 Instrumentation and Arranging (2)
- MUSC 4601 Senior Research Project (3)

*Sound Recording Technology Concentration*

The Bachelor of Arts in Music Sound Recording Technology Concentration is intended for students who wish to develop a unique and high-impact introduction and development of skills related to a career in the music recording industry. It involves a semester of overseas study at the University of Salford in Manchester, England, which often includes working with professionals in Media City from the BBC. This concentration offers a solid introduction for successful future study and entry level work in traditional recording studio settings, on site location recordings, in mixing, mastering and producing albums, running live sound in a theater or concert venue, and/or composing soundscapes for theater, media, or studio work, including radio, TV, or film studio environments. This degree program can be combined with a second major. The minor in Arts Administration can open up additional career opportunities.

MUSL 1081, 2071, and 2081 Piano Class II-IV are strongly recommended until the piano proficiency exam is passed.

- MUSL 1071 Piano Class I for Music Majors (1)
- MUSC 2131 Aural Skills III (1)
- MUSC 2141 Aural Skills IV (1)
- MUSC 1301 Introduction to Sound Recording and Technology (3)
- MUSC 2301 Recording Studio Performance and Practice (3)
- MUSL 2381 2nd Year Applied Proficiency Exam (0)
- Studio Recording and Production (Univ. of Salford) (4)
- Studio Composition (Salford) (4)
- MUSC 4601 Senior Research Project (3)

Select one (Salford):  
Professional Practice (4)  
Audio for Media (4)  
Lighting Sound and Digital Performance (4)

Recommended elective courses at ONU:  
TADP 2121 – Fundamentals of Lighting and Sound (3 hrs.)  
TADP 2761 – Production Practicum (1-3 credits; 6 credits maximum)  
TADP 3751 – Sound Design (3 hrs.)  
TADP 3761 – Advanced Production Practicum (1-3 credits; 6 credits maximum)

### Bachelor of Music: Major in Music Education

The Bachelor of Music in Music Education is intended for students who have the ability, desire and determination to become an outstanding music teacher. Completion of the program allows the ONU graduate to obtain licensure to teach band, choir, and/or general music in grades Pre-K through 12 in schools in the state of OH, and opens the door to pursue graduate studies leading to higher education teaching or school administrative positions.

Successful completion of Praxis Core Academic Skills for Educators, or Act composite score of 25 or higher, or SAT-I total of 1200 or higher and a 2.50 GPA are required for study beyond the fourth semester. The Pearson OAE Music Content Assessment and the Piano Proficiency Exam (MUSL 2041) must be passed prior to student teaching. The Pearson OAE Assessment of Professional Knowledge Multi-Age (PK-12) must be passed before being recommended for the teaching license.

MUSL 1071, 1081, 2071, 2081, and 2091 Piano Class I-V are strongly recommended until the piano proficiency exam is passed.

MUSC 0011 Concert and Recital Observation (0 hours x 6)  
MUSC 1011 Introduction to the Study of Music (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)  
MUSC 1401 Foundations of Music Education (1)  
MUSL 2041 Piano Proficiency Exam (0)  
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 2201 Non-Western Music (3)  
MUSC 2271 Technology for Musicians and Educators (3)  
MUSC 2311 Basic Conducting (2)  
MUSL 2391 Second Year Applied Proficiency Exam (0)  
MUSC 2411 Woodwind Methods (1)  
MUSC 2421 Brass Methods (1)  
MUSC 2431 String Methods (1)  
MUSC 2441 Percussion Methods (1)  
MUSC 3211 Music History and Literature I (3)  
MUSC 3221 Music History and Literature II (3)  
MUSL 3301 Half Recital (0)  
MUSC 4171 Instrumentation and Arranging (2)  
MUSC 4481 Instrumental Music Methods (3)  
MUSC 4491 Choral Music Methods (3)

Complete 7 credit hours in a major ensemble in the area of applied specialization:

MUSE 1011 University Singers (1) (Vocal majors must audition for this group)  
MUSE 1021 Symphony Orchestra (1)  
MUSE 1041 Symphonic Band (1)  
MUSE 1051 Marching Band (1)  
MUSE 1261 Chamber Winds (1)

Complete 3 credit hours in a minor ensemble:

MUSE 1131 Chamber Singers  
MUSE 1171 Jazz Ensemble  
MUSE 1181 Steel Drum Band  
MUSE 1201 Percussion Ensemble  
MUSE 1241 Composer's Workshop Ensemble  
MUSE 1251 Chamber Music

Complete 14 credit hours:  
MUSL 1211 Applied Lessons (2)  
MUSL 1221 Applied Lessons (2)  
MUSL 2211 Applied Lessons (2)  
MUSL 2221 Applied Lessons (2)  
MUSL 3211 Applied Lessons (2)  
MUSL 3221 Applied Lessons (2)  
MUSL 4211 Applied Lessons (2)

Complete one:  
MUSC 1331 Singer's Diction I (1) (for vocal majors)  
MUSL 0401 Voice Class for Non-Voice Majors (1) (for instrumental majors)

Complete one:  
MUSC 3311 Choral Conducting (2) (for vocal majors)  
MUSC 3321 Instrumental Conducting (2) (for instrumental majors)

Complete 2 credit hours:  
MUSC 3461 Methods of Marching and Jazz Bands (2) (for instrumental majors)  
MUSC 2331 Singer's Diction II (1) (for vocal majors)  
MUSC 3331 Singer's Diction III (1) (for vocal majors)

Additional Education requirements:

CAMS 1311 Communication in the Classroom (3)  
EDUC 1151 Culture and Schooling (3) (20 field hours)  
EDUC 2101 Exceptional Learners (3) (20 field hours)  
EDUC 2421\* Reading Across the Content Areas (3) (20 field hours)  
EDUC 3401 Educational Psychology (3) (10 field hours)  
EDUC 3681\* Curriculum, Assessment, and Instruction (3) (30 field hours)  
EDUC 4201\* The Teaching Profession (1)  
EDUC 4591\* Integrated Music Methods (3)  
EDUC 4901\* Student Teaching (12)  
EDUC 4951\* Student Teaching Seminar (2)  
PSYC 2151 Development Across the Lifespan (3)

### Music Minor

The music minor is designed for the student who is inspired by music and wishes to further that inspiration with practical experience and knowledge. The minor allows for flexibility in course work and ensemble participation.

All courses required for a minor must be completed with a grade of 'C' or higher.

Select one:  
MUSC 1001 Music Appreciation (3)  
MUSC 1011 Introduction to the Study of Music (2)

Select twelve credits of any MUSC course (12)  
(at least 1 credit hour must be 3xx1-4xx1)  
Select four credits of MUSE xxx1 (4)  
Select two credits MUSL 0011 (2)

## THEATRE ARTS

**Associate Professors** Robbins, Sage; **Assistant Professors** Cozad, Kattengell, Savage; **Resident Artists** Jordan, Osburn-Manley; **Instructor/Resident Lighting Designer** DeVault; **Instructor/Resident Technical Director** Phillips; **Lecturer of Arts Administration** Wood; **Stage Management Mentor** Kazle; **Costumer** Ansari

### Mission

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

Course offerings promote understanding of the theory, practice and aesthetics of human communication and theatre arts. Students pursue majors particular to their professional education goals.

#### Majors, Minors and Degrees Offered

International Theatre Production (BFA)  
Musical Theatre Major (BFA)  
Theatre Major (BA)  
Arts Administration Minor  
Dance Minor  
Theatre Minor  
Theatre, Technology and Design Minor

#### 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. Study abroad programs and internships are encouraged and facilitated by the Theatre faculty.

##### *Theatre Program Activities*

All ONU students are encouraged to become involved in a variety of activities. 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. Theatre Arts students are encouraged to participate in the theatre honorary Theta Alpha Phi.

#### Major Course Requirements

All required courses in the major subject area must be completed with a grade of "C" or higher. Must receive an "S" in 6 of 8 required semesters of TATH 3001.

#### International Theatre Production

The international theatre production major graduates students with a comprehensive knowledge of the aspects of theatre technology and design. Students are exposed to the different methodologies employed by theatre artists from across the nation and around the globe, providing students with a broad understanding 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 each year 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*

TATA 1001 Orientation (0)  
TAAD 2111 Introduction to Arts Admin. (3)  
TADP 2001 Portfolio review I (0 hours x 2)  
TADP 2111 Fundamentals of Stagecraft (3)  
TADP 2121 Fundamentals of Lighting and Sound (3)  
TADP 2131 Fundamentals of Costuming (3)  
TADP 2151 Make-up (2)  
TADP 2551 Technical Direction (3)  
TADP 2601 Stage Management (3)  
TADP 2651 Stage Management Practicum (1)  
TADP 2751 Introduction to Design (3)  
TADP 3501 Advanced Stagecraft (3)  
TADP 3761 Advanced Production Practicum (1)  
TADP 3781 Design Practicum (1)  
TADP 4001 Portfolio Review II (0 hours x 2)

TADP 4951 Capstone (2)  
TATH 2591 Acting for Non-Majors (2)  
TATH 2751 Play Analysis (3)  
TATH 2911 World Theatre History I (3)  
TATH 2921 World Theatre History II (3)  
TATH 3001 Symposium (0), 6 courses required  
TATH 4451 Business of Theatre (1)  
TECH 1201 Introduction to CAD (3)  
TECH 1601 Fundamentals of Electronics (3)

One-year competency of a foreign language (6)

Select two:

TADP 3751 Topics in Theatre Design: Scenic Design (3)  
TADP 3751 Topics in Theatre Design: Lighting Design (3)  
TADP 3751 Topics in Theatre Design: Sound Design (3)  
TADP 3751 Topics in Theatre Design: Costume Design (3)  
TADP 3551 Topics in Theatre Technology: Elegant Solutions (3)

History/Literature (select one):

TATH 3731 Contemporary Multicultural Theatre (3)  
TATH 3801 Topics in Theatre History/Dramatic Literature (3)  
TATH 3821 Playwriting (3)  
TATH 3911 American Theatre History (3)  
TAMT 2101 Musical Theatre History and Literature (3)  
TADN 3601 Dance History (3)

Practicum (select three (3) hours):

TADP 2571 Shop Practicum (1)  
TADP 2651 Stage Management Practicum (1)  
TADP 2761 Production Practicum (1)  
TADP 3761 Advanced Production Practicum (1)  
TADP 3781 Design Practicum (1)

Select one:

GEOG 2261 World Regional Geography (3)  
PLSC 1021 Introduction to International Relations (3)

Select one (1) hour:

TADP 3351 Internship (1-6)  
OVRC xxx1 Study Abroad

#### 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. It is a policy that a student not be able to earn a BFA as a theatre arts major in musical theatre or international theatre production while concurrently earning a BM in music education.

##### *BFA Degree Requirements*

TATA 1001 Orientation (0)  
TADN 3611 Musical Theatre Dance Styles I (2)  
TADN 4611 Musical Theatre Dance Styles II (2)  
TADN 1201 Ballet I (2)  
or  
TADN 1301 Modern Dance I (2)  
TADP 2151 Make-up (2)  
TADP 2651 Stage Management Practicum (1)  
TAMT 2101 Musical Theatre History and Literature (3)  
TAMT 2951 MT Sophomore Hearing (0)  
TAMT 4501 Acting Styles for Musical Theatre (3)  
TAMT 4601 Musical Theatre Audition Techniques (2)  
TAMT 4951 Senior Capstone (2)  
TATH 1411 Voice and Movement I (2)  
TATH 2411 Voice and Movement II (2)  
TATH 2751 Play Analysis (3)  
TATH 3001 Symposium (0), 6 courses required  
TATH 2601 Introduction to Acting (2)  
TATH 3601 Acting II: Scene Study Intensive (3)

TATH 4451 Business of Theatre (1)  
 MUSC 1041 Fundamentals of Music for MT (3)  
 MUSC 1051 Advanced Musicianship for MT (3)  
 MUSL 0431 Piano Class I for MT (1)  
 MUSL 0441 Piano Class II for MT (1)  
 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)

Theatre/Dance Electives (select twelve (12) hours):

MUSL 4111 Applied Lessons for Musical Theatre majors (1)  
 MUSL 4121 Applied Lessons for Musical Theatre majors (1)  
 TAAD xxx1 Arts Administration Electives  
 TADN xxx1 Dance Electives  
 TADP xxx1 International Theatre Production Electives  
 TATH xxx1 Theatre Arts Electives

A maximum of six of these hours may be in dance, and a maximum of 3 of these hours may be practicum credit.

Practicum (select four (4) hours):

TADN 2601 Dance Practicum (1)  
 TAMT 2601 MT Performance Practicum (1)  
 TATH 2611 Theatre Performance Practicum (1)

Select one:

TADP 2111 Fundamentals of Stagecraft (3)  
 TADP 2121 Fundamentals Lighting and Sound (3)  
 TADP 2131 Fundamentals of Costuming (3)

Dance Elective (select six (6) hours):

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)

\*No more than 1 class from a 1000 level will count toward this requirement

Select one:

TATH 2911 World Theatre History I (3)  
 TATH 2921 World Theatre History II (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

TATA 1001 Orientation (0)  
 TADP 2111 Fundamentals of Stagecraft (3)  
 or  
 TADP 2121 Fundamentals of Lighting and Sound (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 Symposium (0), 6 courses required  
 TATH 4951 Senior Capstone (2)

Practicum (select two (2) hours):

TAAD 2611 Arts Administration Practicum (1)  
 TADN 2601 Dance Practicum (1)

TADP 2571 Shop Practicum (1)  
 TADP 2651 Stage Management Practicum (1)  
 TADP 2761 Production Practicum (1)  
 TADP 3781 Design Practicum (1)  
 TAMT 2601 MT Performance Practicum (1)  
 TATH 2611 Theatre Performance Practicum (1)  
 TATH 3521 Dramaturgy Practicum (1)  
 TATH 3621 Directing Practicum (1)

History/Literature (select one):

TADN 2121 Dance and Culture (3)  
 TADN 3601 Dance History (3)  
 TAMT 2101 Musical Theatre History and Literature (3)  
 TATH 3731 Contemporary Multicultural Theatre (3)  
 TATH 3801 Topics in Theatre History/Dramatic Literature (3)  
 TATH 3821 Playwriting (3)  
 TATH 3911 American Theatre History (3)  
 TATH 4851 Dramatic Criticism and Production Analysis (3)  
 ENGL 2081 Topics in Drama (3)  
 ENGL 2601 Introduction to Shakespeare (3)  
 ENGL 4121 Shakespeare Studies (3)  
 FREN 4031 French Theatre (3)

Theatre Production (select three (3) hours):

TADP 2111 Fundamentals of Stagecraft (3)  
 TADP 2121 Fundamentals of Lighting and Sound (3)  
 TADP 2131 Fundamentals of Costuming (3)  
 TADP 2571 Shop Practicum (1)  
 TADP 2601 Stage Management (3)  
 TADP 2651 Stage Management Practicum (1)  
 TADP 2751 Introduction to Design (3)  
 TADP 2761 Production Practicum (1)  
 TADP 3501 Advanced Stagecraft (3)  
 TADP 3761 Advanced Production Practicum (1)  
 TADP 3781 Design Practicum (1)

Theatre Electives (select fifteen (15) hours):

In addition to the courses listed above, the student must complete 15 credit hours in TAAD, TATA, TADP, 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.

### Minors

All courses required for a minor must be completed with a grade of "C" or higher.

### Arts Administration Minor

MGMT 4771 Nonprofit Management (3)  
 TAAD 2111 Introduction to Arts Admin. (3)  
 TAAD 2311 Arts Marketing/Audience Development (3)  
 TAAD 2411 Grant Writing/Arts Fundraising (3)  
 TAAD 2611 Arts Administration Practicum (1)  
 TATH 3001 Symposium (0)  
 TAAD 3351 Arts Administration Internship (2)  
 TATH 4451 Business of Theatre (1)

Select three (3) hours:

BIZ 2101 Principles of Accounting (3)  
 WAMS 2301 Layout and Design (3)  
 CAMS 3321 Organizational Communication (3)  
 PR 1401 Principles of Social Media (3)  
 TECH 1421 Web Design (3)

### Dance Minor

TADN 1201 Ballet I (2)  
 TADN 1301 Modern I (2)  
 TADN 2121 Dance and Culture (3)  
 or  
 TADN 3601 Dance History (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 4601 Dance Composition (3)

Select four (4) hours:

TADN 1221 International Folk Dance (1)  
 TADN 1401 Jazz I (2)  
 TADN 1501 Tap I (2)  
 TADN 2111 Social Dance (1)  
 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)

### Theatre Minor

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 2751 Play Analysis (3)  
 TATH 2911 World Theatre History I (3)  
 or  
 TATH 2921 World Theatre History II (3)

Select one two-hour course (2) from a performance-based area: A practicum and skill driven course.

Select one three-hour course (3) from a production-based area: A practicum and skill driven course.

Select at least three other three-hour courses (for a total of nine (9) hours from the theatre discipline (at least one of these courses must be at the 3000 or 4000 level)).

### Theatre Technology and Design Minor

A maximum of four (4) credit hours in practicum courses may count toward the theatre minor. Students may not receive credit for courses in the minor that count for credit with any other Theatre discipline major.

Select two (2):

TADP 2111 Fundamentals of Stagecraft (3)  
 TADP 2121 Fundamentals of Lighting and Sound (3)  
 TADP 2131 Fundamentals of Costuming (3)  
 TADP2601 Stage Management (3)

Select one (1):

TADP 2651 Stage Management Practicum (1)  
 TADP 2761 Production Practicum (1)

Select thirteen (13) hours (no more than 3 practicum hours)

TADP 2151 Make-up (2)  
 TADP 2551 Technical Direction (3)  
 TADP 2571 Shop Practicum (1)  
 TADP 2651 Stage Management Practicum (1)  
 TADP 2751 Introduction to Design (3)  
 TADP 2761 Production Practicum (1)  
 TADP 3501 Advanced Stagecraft (3)  
 TADP 3551 Topics of Theatre Technology – AutoCAD (3)  
 TADP 3551 Topics of Theatre Technology – Elegant Solutions (3)  
 TADP 3751 Topics of Theatre Design – Costume Design (3)  
 TADP 3751 Topics of Theatre Design – Lighting Design (3)  
 TADP 3751 Topics of Theatre Design – Scenic Design (3)  
 TADP 3751 Topics of Theatre Design – Sound Design (3)

TADP 3761 Advanced Production Practicum (1)  
 TADP 3781 Design Practicum (1)

Other courses NOT taken in core classes:

TADP 2111 Fundamentals of Stagecraft (3)  
 TADP 2121 Fundamentals of Lighting and Sound (3)  
 TADP 2131 Fundamentals of Costuming (3)  
 TADP 2601 Stage Management (3)

## COLLEGE OF ARTS & SCIENCES COURSES

### Subject- General Arts & Sciences (AASG)

#### AASG 961 Study Skills

##### 1 Credit Normal Grading Mode

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. Course Attributes: Requires Instructor Approval.

#### AASG 971 Introduction to College Reading

##### 2 Credits Normal Grading Mode

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 is required. CREDIT EARNED DOES NOT SATISFY GRADUATION REQUIREMENTS FOR ANY PROGRAM OFFERED AT THE UNIVERSITY. Must be enrolled in one of the following Classifications: Freshman.

#### AASG 1101 Pre-Law Orientation

##### 1 Credit Grading mode is S/U

How to prepare for admission to law school. Introduction to legal education and the legal profession. This course may be repeated 1 time.

#### AASG 1111 Introduction to Legal Reasoning

##### 1 Credit Normal Grading Mode

Introduction to how to think like a lawyer. Includes rules and the rule of law, the use of precedent and authority, the interpretation of precedent and statutes, law making versus rule making. This course is repeatable for a total of 1 hour.

#### AASG 1121 Analytical Reasoning

##### 1 Credit Normal Grading Mode

Explore analytical reasoning in the various branches of the law. Develop and improve analytical reasoning abilities. Appreciate the role of future coursework in developing analytical reasoning ability. Assess analytical reasoning abilities as measured by the LSAT.

#### AASG 1131 Pre-Law Seminar

##### 1 Credit Normal Grading Mode

Preparation for applying to law school and a career in the legal profession. Includes writing the application essay, constructing a resume, LSAT preparation, choosing the right law school, introduction to the legal profession. This course is repeatable for a total of 1 hour.

#### AASG 1951 Publication Activities Practicum

##### 1 Credit Grading mode is S/U

Participation in design, photography, writing, and producing the Ohio Northern University yearbook. This course is repeatable for a total of 11 hours.

#### AASG 2001 Career Exploration and Preparation

##### 1 Credit Normal Grading Mode

This is a one-credit course that will prepare students to explore the career development process, identify their own strengths, values and interest and offer guidance on their career decision-making process. Students will develop and utilize internship/job search skills and become familiar with graduate school admissions procedures.

**AASG 2111 Discovering Vocation, Purpose, & Meaning: Reflecting on Your Life 1**

*1 Credit Normal Grading Mode*

Facilitates students' exploration of calling and careers and nurtures a sense of purpose and meaning through in-depth reading, writing, reflection, discussion, research, and activities. Minimum of 2.0 GPA, application process including a letter of recommendation and interview, and residence in the Affinity Village living-learning community required. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Sophomore.

**AASG 2121 Discovering Vocation, Purpose, and Meaning: Reflecting on Your Life 2**

*1 Credit Normal Grading Mode*

Facilitates students' exploration of calling and careers and nurtures a sense of purpose and meaning through in-depth reading, writing, reflection, discussion, research and activities. Minimum 2.0 GPA, application process including a letter of recommendation and interview, and residence in the Affinity Village living-learning community required. Prerequisite(s):AASG 2111 Minimum Grade of D. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Sophomore.

**AASG 2511 Critical Perspectives in Information**

*2 Credits Normal Grading Mode*

This course will cover all aspects of information literacy. Topics covered will include how information is created, who creates information and why, how to find sources and determination if they are authoritative, the basics of copyright, the ethical use of information, and how scholars communicate information to each other. Prerequisite(s):ENGL 1221 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Senior, Junior.

**Subject- Arabic (ARAB)**

**ARAB 1011 Elementary Arabic 1**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS -Foreign Language, AS -Non Western Cultural.

**ARAB 1021 Elementary Arabic 2**

*3 Credits Normal Grading Mode*

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 Minimum Grade of D. Course Attributes: AS -Foreign Language, AS -Non Western Cultural.

**ARAB 2011 Intermediate Arabic 1**

*3 Credits Normal Grading Mode*

Continued development of Arabic language skills. Prerequisite(s):ARAB 1021 Minimum Grade of C. Course Attributes: AS -Foreign Language.

**ARAB 2021 Intermediate Arabic 2**

*3 Credits Normal Grading Mode*

Continuation of ARAB 2011. Prerequisite(s):ARAB 2011 Minimum Grade of C. Course Attributes: AS -Foreign Language.

**Subject- Art (ART)**

**ART 1101 Drawing 1**

*3 Credits Normal Grading Mode*

An introduction to drawing concepts, methods, tools and materials. Composition and visual analysis are emphasized through drawing from observation, including perspective theories as they relate to objects and environments. An emphasis on the development of a strong drawing practice. Offered fall semester. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture

**ART 1111 Drawing 2**

*3 Credits Normal Grading Mode*

Drawing as a means of expression, invention and communication through the continued exploration of drawing concepts, methods, and materials with an emphasis on color theory. Projects emphasize the development of creative attitudes and solutions to illustration problems through practical studios procedures and diverse areas of illustration. Offered spring semester. Prerequisite(s):ART 1101 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**ART 1501 3-D Design**

*3 Credits Normal Grading Mode*

The visual language, methods and techniques of three-dimensional design. Emphasis on conceptual thinking skills. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture

**ART 1651 Visual Literacy**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2111 Life Drawing**

*3 Credits Normal Grading Mode*

Composition, proportion, structure and form from direct observation of the human figure. Offered alternate spring semester. Prerequisite(s):ART 1111 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**ART 2201 Painting 1**

*3 Credits Normal Grading Mode*

Concepts and competencies of painting through direct observation. Offered fall semester. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2251 Watercolor**

*3 Credits Normal Grading Mode*

Concepts, competencies and techniques of aqueous media through composition. Offered alternate spring semesters. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times.

**ART 2401 Ceramics 1**

*3 Credits Normal Grading Mode*

Composition and methods of forming clay objects using various hand building and wheel throwing techniques, including decorating, glazing and firing. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2501 Sculpture: Additive & Subtractive**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.



**ART 2551 Sculpture: Small Metals**

3 Credits Normal Grading Mode

The visual language, concepts, materials and technical skills of small-scale sculpture. Offered alternate spring semesters. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2601 Art History 1**

3 Credits Normal Grading Mode

Western tradition of painting, sculpture and architecture from the Prehistoric era through the Renaissance. Offered fall semester. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2611 Art History 2**

3 Credits Normal Grading Mode

Western tradition of painting, sculpture and architecture from the 16th century to contemporary. Offered spring semester. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 2651 Non-Western Art**

3 Credits Normal Grading Mode

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. Course Attributes: AS-Non Western Cultural, AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture, This course may be repeated 2 times.

**ART 2801 Book Arts**

3 Credits Normal Grading Mode

An introduction to the book arts as a medium of creative expression, communication, design, and innovation. Drawing upon both the historic and contemporary western bookbinding tradition, this course is an initiation into fundamental binding forms, techniques, and materials. Offered spring semester. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times.

**ART 2991 Special Topics in Art and Design**

1 to 3 Credits Normal Grading Mode

May repeat as topic varies. This course may be repeated 2 times.

**ART 3101 Biological Illustration**

3 Credits Normal Grading Mode

An introductory course to biological illustration utilizing the skills of observation while illustrating a wide range of representative biological taxa. Focusing on form, proportions and accurate representation. Line, tone, and texture are explored through work in pencil, pen, ink, and colored pencil. Design and composition are emphasized. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 3301 Print and Paper 1**

3 Credits Normal Grading Mode

Fundamentals of screen printing. Emphasis on developing the technical and conceptual skills to be able to produce a more individual image and personal aesthetic. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 3311 Print and Paper 2**

3 Credits Normal Grading Mode

Fundamentals of letterpress and relief printing. Emphasis on the technical and aesthetic aspects of both processes. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 3401 Ceramics 2**

3 Credits Normal Grading Mode

Advanced methods and techniques of forming clay objects; hand building, wheel throwing, placing and firing. Prerequisite(s):ART 2401 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**ART 3501 Sculpture: Mold Making & Casting**

3 Credits Normal Grading Mode

The composition and methods of plaster molds for reproduction and altering of direct cast ceramics. Emphasis on organizational problems of form and space. Offered alternate spring semesters. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**ART 4101 Advanced Illustration**

3 Credits Normal Grading Mode

Innovative visual solutions in illustration and the mastery of advanced techniques through creative and professional work habits. Offered spring semester. Prerequisite(s):ART 1111 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4111 Advanced Life Drawing**

3 Credits Normal Grading Mode

Structure of the human body with the aim of producing drawings of greater structural and visual integrity. Offered spring semester. Prerequisite(s):ART 2111 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4201 Advanced Painting**

3 Credits Normal Grading Mode

Creating and controlling pictorial space and form and their relationship to concept and composition. Offered spring semester. Prerequisite(s):ART 2211 Minimum Grade of D or ART 2251 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4301 Advanced Print and Paper**

3 Credits Normal Grading Mode

Self-directed study in printmaking and papermaking processes. Offered spring semester. Prerequisite(s):ART 3301 Minimum Grade of D or ART 3311 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4401 Advanced Ceramics**

3 Credits Normal Grading Mode

Directed study. Offered fall and spring semesters. Prerequisite(s):ART 3401 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4501 Advanced Sculpture**

3 Credits Normal Grading Mode

Directed study. Offered fall and spring semesters. Prerequisite(s):ART 3501 Minimum Grade of D or ART 3511 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4801 Advanced Book Arts**

3 Credits Normal Grading Mode

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 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**ART 4901 Senior Capstone in Art 1**

3 Credits Normal Grading Mode

Yearlong investigative project that synthesizes liberal arts and major learning objectives. Offered fall semester. Course Attributes: AS-FINRT Fine Arts.

**ART 4911 Senior Capstone in Art 2**

3 Credits Normal Grading Mode

Culmination and presentation of demonstrated knowledge of practices, methods, theories, concepts, and issues. Offered spring semester. Prerequisite(s):ART 4901 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**ART 4981 Independent Study in Art**

1 to 3 Credits Normal Grading Mode

May repeat as topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

## **Subject- Athletic Training (ATTR)**

### **ATTR 1001 Basic Athletic Training**

#### *3 Credits Normal Grading Mode*

The prevention, recognition and care of athletic injuries as well as common principles associated with the athletic training profession. Offered fall and spring semesters.

### **ATTR 1011 Basic Athletic Training Lab**

#### *1 Credit Normal Grading Mode*

Lab focusing on skills associated with athletic training including but not limited to: taping, ice and heat application, referral procedures, examination and screening procedures, wound care, etc. Offered fall and spring semesters. Corequisite(s): ATTR 1001. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 1101 Professional Emergency Care**

#### *2 Credits Normal Grading Mode*

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 of adults, children, and infants including AEDs, BVM, stabilization, transportation, and special resuscitation techniques. American Heart Association Basic Life Support (BLS) for Healthcare Providers and Heartsaver First Aid 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. Offered fall and spring semesters. There is an additional fee for this course. Must be enrolled in one of the following Major fields of study: Athletic Training, Exercise Physiology. This course is repeatable for a total of 4 hours.

### **ATTR 1201 Advanced Weight Control/Sports Nutrition**

#### *2 Credits Normal Grading Mode*

The 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. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 2101 Advanced Strength & Conditioning w/ Lab**

#### *3 Credits Normal Grading Mode*

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. Offered spring semester. Prerequisite(s): BIOL 2311 Minimum Grade of D or BIOL 2331 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training, Exercise Physiology.

### **ATTR 2301 Pre-Season Athletic Training Clinical**

#### *1 Credit Normal Grading Mode*

Optional, on-campus clinical field experience in pre-season football prior to the start of the academic year. Must have valid First Aid and BLS or CPR PR certifications. Offered fall semester. Prerequisite(s): (ATTR 1001 Minimum Grade of C and ATTR 1011 Minimum Grade of C and ATTR 1101 Minimum Grade of C and ATTR 1201 Minimum Grade of C). Must be enrolled in one of the following Departments: Human Performance&Sport Sci S. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

### **ATTR 2401 Athletic Training Clinical Level 1**

#### *1 to 2 Credits Normal Grading Mode*

On-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s): (ATTR 1001 Minimum Grade of C and ATTR 1011 Minimum Grade of C and ATTR 1101 Minimum Grade of C and ATTR 1201 Minimum Grade of C). Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

### **ATTR 2451 Athletic Training Clinical Level 2**

#### *1 to 2 Credits Normal Grading Mode*

On-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 2401 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

### **ATTR 2601 Evaluation Techniques of Athletic Training 1**

#### *3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 2651 Evaluation Techniques of Athletic Training 2**

#### *3 Credits Normal Grading Mode*

Practical application of upper extremity/head and spine anatomy, neurovascular, pathology, injury evaluation and diagnosis. Offered spring semester. Prerequisite(s):ATTR 2601 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 2801 Athletic Taping and Bracing**

#### *1 Credit Grading mode is S/U*

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. Offered fall semester. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 2901 Independent Study**

#### *1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Sophomore, Freshman. Unlimited repeats permitted.

### **ATTR 3101 Therapeutic Modalities in Athletic Training**

#### *4 Credits Normal Grading Mode*

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 Minimum Grade of D and EXPH 2301 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

### **ATTR 3201 Exercise Rehab in Athletic Training**

#### *4 Credits Normal Grading Mode*

Basic components of a comprehensive rehabilitation program. To concentrate 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 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 3301 Psychosocial Factors of Athletic Training***2 Credits Normal Grading Mode*

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 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 3401 Athletic Training Clinical Level 3***1 to 2 Credits Normal Grading Mode*

On or off-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 2451 Minimum Grade of C and ATTR 2651 Minimum Grade of C and ATTR 2101 Minimum Grade of D and (BIOL 2321 Minimum Grade of D or BIOL 2341 Minimum Grade of D) and EXPH 2301 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

**ATTR 3451 Athletic Training Clinical Level 4***1 to 2 Credits Normal Grading Mode*

On or off-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 3401 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

**ATTR 3501 Off Campus Athletic Training Clinical Experience***0 Credits Grading mode is S/U*

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 BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 2451 Minimum Grade of C and ATTR 2651 Minimum Grade of D and ATTR 2101 Minimum Grade of D and (BIOL 2321 Minimum Grade of D or BIOL 2341 Minimum Grade of D) and EXPH 2301 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 4101 Medical Considerations***3 Credits Normal Grading Mode*

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 Minimum Grade of D and ATTR 2651 Minimum Grade of D and EXPH 2301 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 4201 Trends in Athletic Training***3 Credits Normal Grading Mode*

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 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 4401 Athletic Training Clinical Level 5***1 to 2 Credits Normal Grading Mode*

On or off-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 3451 Minimum Grade of C and ATTR 3201 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

**ATTR 4451 Athletic Training Clinical Level 6***1 to 2 Credits Normal Grading Mode*

On or off-campus clinical experience rotation as assigned by the Clinical Education Coordinator. Under the supervision of a preceptor, specific clinical proficiencies and skills will be completed. Must have valid First Aid and BLS or CPR PR certifications. Offered fall and spring semesters. Prerequisite(s):ATTR 4401 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training. This course may be repeated 2 times. This course is repeatable for a total of 2 hours.

**ATTR 4601 Senior Seminar in Athletic Training***2 Credits Normal Grading Mode*

First part of the two-course departmental capstone sequence for Athletic Training majors focusing on professional preparation for athletic training students taking the BOC exam (review of athletic training domains, exam simulations, exam application/registration) and professional career preparation (mock interviews, resume/cover letter, career counseling). Students will select their senior research topic for ATTR 4651. Offered fall semester. Prerequisite(s):ATTR 3451 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 4651 Senior Research in Athletic Training***1 Credit Normal Grading Mode*

Second part of the two-course departmental capstone sequence for Athletic Training majors focusing on the senior research project (written research proposal, review of literature, data collection/analysis, discussion and conclusion). Students will develop a poster for presentation at the ONU Student Colloquium and will submit their research proposal to the Ohio Athletic Trainers Association for consideration of a poster presentation at the annual meeting. Offered spring semester. Prerequisite(s):ATTR 4601 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training.

**ATTR 4901 Independent Study***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**Subject- Biology (BIOL)****BIOL 1021 The Genetics of Human Diversity***3 Credits Normal Grading Mode*

The Genetics of Human Diversity is a unique course designed to attract students who may not be interested in science by capturing their curiosity about their own family and genetic background, the evolutionary history of man, and interesting topics such as how racial groups developed and the impact of someone's genetic background versus environment on intelligence. There is an additional fee for this course. Course Attributes: AS-Natural Sciences.

**BIOL 1031 Life and Earth Sciences***4 Credits Normal Grading Mode*

Survey of fundamental principles in life and earth sciences, including cell biology, genetics and inheritance, earth science, evolution, and ecology, as they affect and have affected life on earth. DOES NOT SATISFY ANY REQUIREMENTS FOR THE MAJOR IN BIOLOGY, MEDICAL LABORATORY SCIENCE, ENVIRONMENTAL AND FIELD BIOLOGY, FORENSIC BIOLOGY, OR MOLECULAR BIOLOGY. There is an additional fee for this course. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World. May not be enrolled in one of the following Major fields of study: Biology, Environmental and Field Bio, Forensic Biology, Medical Laboratory Science, Molecular Biology.

**BIOL 1131 Principles and Concepts of Human Biology***4 Credits Normal Grading Mode*

This course is designed to take the basic principles of cell structure and function and incorporate them into a working knowledge of organ systems of the human body. This course does provide a good foundation for students going on to take BIOL 2331, but it also provides a broad overview that is useful on its own. This class would be appropriate for nursing, exercise physiology, public health, and pharmacy business majors, or for any student who plans to take BIOL 2331. There is an additional fee for this course. Course Attributes: AS-Natural Sciences.

**BIOL 1151 Medical Terminology***1 Credit Normal Grading Mode*

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, obstetrics, physical therapy, occupational therapy, rehabilitation services, surgery, psychiatry, alternative medicine, and pediatrics.

**BIOL 1211 Introductory Biology***4 Credits Normal Grading Mode*

Fundamental biological topics including evolution, biochemistry, genetics, respiration and metabolism, mitosis and meiosis, gene expression, basic tissues, and mammalian body organ systems will be covered in this course. The laboratory will provide an active learning opportunity to acquire basic laboratory skills and understand the concepts covered in lecture. A course fee is charged. Course Attributes: GE\_Knowledge of Physical/Natural World. Must be enrolled in one of the following Major fields of study: Pharmacy.

**BIOL 1301 Biology 1: Cells, Molecules and Evolution - Majors***4 Credits Normal Grading Mode*

An introduction to the concepts underlying the structure and function of cells including their organization, chemical foundations, metabolism, the principles and mechanisms of heredity and gene expression, viruses, biotechnology, and evolutionary theory. Laboratory activities emphasize the scientific method in exploring these topics. There is an additional fee for this course. No Prerequisite. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World. Must be enrolled in one of the following Major fields of study: Biochemistry, Biology, Chemistry, Civil Engineering, Computer Engineering, Electrical Engineering, Engineering Education, Environmental and Field Bio, Forensic Biology, Mechanical Engineering

**BIOL 1401 Biology II: Biodiversity, Organismal Biology & Ecology***4 Credits Normal Grading Mode*

A comprehensive integrated study of plant and animal anatomy and physiology focusing on the major systems coupled with investigations of ecological and evolutionary processes, biodiversity, phylogenetic relationships, and paleogeography. There is an additional fee for this course. Prerequisite(s):BIOL 1301 Minimum Grade of C or BIOL 1311 Minimum Grade of C. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Major fields of study: Biochemistry, Biology, Chemistry, Computer Engineering, Electrical Engineering, Engineering Education, Environmental and Field Bio, Forensic Biology, Mechanical Engineering, Medical Laboratory Science.

**BIOL 1951 Biology Orientation***1 Credit Grading mode is S/U*

Presentations and discussions that address adjusting to academic life and reviewing requirements majoring in Biology, Environmental and Field Biology, Forensic Biology, or Molecular Biology.

**BIOL 2011 Environmental Issues***3 Credits Normal Grading Mode*

The interaction of humans and their environment with an emphasis on the problems arising from increasing human population, pollution, and resource use. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**BIOL 2021 Environmental Issues Laboratory***1 Credit Normal Grading Mode*

This course provides hands-on experiences to complement the concepts covered in Environmental Issues (BIOL 2011). As an inherently interdisciplinary field, activities and trips are designed to explore the physical, chemical, biological and earth sciences to further understand how the environment works, how humans interact with the environment, and how possible solutions are implemented to address environmental problems. There is an additional fee for this course. Corequisite(s): BIOL 2011.

**BIOL 2031 Evolution***3 Credits Normal Grading Mode*

This course covers fundamental evolutionary topics including: the history of evolution, natural selection, fitness, genetic drift, phylogenetics, sexual selection, population genetics, biodiversity and conservation, and human evolution. Through lectures, in-class activities, presentations of peer-reviewed evolutionary literature, and exams, students will master these principles. A field trip to Cleveland Metroparks (Rocky River Nature Center) and the Cleveland Museum of Natural History will reinforce in-class materials with a study on the evolution of fishes during the Devonian period. There is an additional fee for this course. Prerequisite(s):BIOL 1301 Minimum Grade of D or BIOL 1401 Minimum Grade of D or BIOL 2001 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2041 Systematic Plant Survey***3 Credits Normal Grading Mode*

The phylogeny, classification, morphology, and development of selected plant and algal taxa. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2101 Genetics***4 Credits Normal Grading Mode*

This course covers Mendelian, Molecular and Population Genetics, with a focus on genotype to phenotype correlations at the biochemical and cellular levels. Emphasis on human genetics. Sub-Topics covered include: Meiosis, Mendel's Laws, Pedigrees and Probability, Recombination, Gene Mapping, Gene Interactions and Mutations. Labs are project-based utilizing prokaryotic and eukaryotic model organisms. There is an additional fee for this course. Prerequisite(s): (BIOL 1301 Minimum Grade of D or BIOL 1311 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**BIOL 2131 Natural History***3 Credits Normal Grading Mode*

The recognition, identification, and understanding of local biotic communities and their inhabitants. Field study is emphasized. There is an additional fee for this course. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**BIOL 2151 Microbiology for Nurses***3 Credits Normal Grading Mode*

The characteristics and control of microorganisms related to human infectious disease. Prerequisite(s):BIOL 2311 Minimum Grade of D or BIOL 2331 Minimum Grade of D. Corequisite(s): BIOL 2341. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Fields of Study: Nursing, Pharmaceutical/Healthcare Bus, Public Health.

**BIOL 2171 Molecular Biology***3 Credits Normal Grading Mode*

This course covers the structure and function of DNA, RNA and Proteins and is divided into three primary modules: 1.) Molecular Biotechnology 2.) DNA Structure, Organization and Replication 3.) Control of Gene Expression. Primary literature is utilized to connect lecture content with breakthroughs in molecular biology and the biomedical sciences. Current techniques, data analysis and experimental design are also stressed. Ethical considerations associated with biotechnology are discussed. Prerequisite(s):BIOL 2101 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2181 Molecular Biology Lab***1 Credit Normal Grading Mode*

Execution of advanced research techniques in molecular biology, including standard DNA and protein isolation, quantitation and analysis. Standard molecular techniques associated with traditional DNA cloning are also performed. Emphasis on data analysis and interpretation. There is an additional fee for this course. Prerequisite(s):BIOL 2101 Minimum Grade of D. Corequisite(s): BIOL 2171.

**BIOL 2191 Forensic Biology 1***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. High school biology, chemistry and physics are required. Prerequisite(s):BIOL 1301 Minimum Grade of C or BIOL 1311 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 2231 Invertebrate Zoology***3 Credits Normal Grading Mode*

The diversity, ecology, evolution, morphology, physiology and developmental biology of invertebrate animals. Emphasis on major phyla. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D or BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2291 Forensic Biology 2***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 2191 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 2331 Anatomy and Physiology I***4 Credits Normal Grading Mode*

This course builds on material learned in BIOL 1131 and goes into greater depth on the anatomy, physiology, and interrelationships of cells, tissues, special sense organs, and the integumentary, skeletal, muscular, and nervous systems of humans. The course is appropriate for Athletic Training, Exercise Physiology, Nursing, and Pharmacy majors. Pre-med students should take Human Anatomy (BIOL 3021) and Medical Physiology (BIOL 3241, 3251). CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 2331 and BIOL 3241. There is an additional fee for this course. Prerequisite(s):BIOL 1131 Minimum Grade of C or BIOL 1101 Minimum Grade of C or BIOL 1401 Minimum Grade of C or BIOL 1211 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 2341 Anatomy and Physiology II***4 Credits Normal Grading Mode*

This course is an in depth study of anatomy, physiology, and interrelationships of the cardiovascular, lymphatic, immune, respiratory, urinary, digestive, endocrine, and reproductive systems of humans. The sequence is appropriate for Nursing and Exercise Physiology majors. It may also be appropriate for anyone interested in anatomy and physiology but not planning to apply to medical school. Pre-med students should take Human Anatomy (BIOL 3021) and Medical Physiology (BIOL 3241, 3251). CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 2341 AND BIOL 3251. There is an additional fee for this course. Prerequisite(s):BIOL 2331 Minimum Grade of C or BIOL 2311 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 2351 Forensic Applications in Anatomy and Histology***4 Credits Normal Grading Mode*

Using a traditional systems approach, lectures cover basic human gross anatomy and histology. The laboratory serves to give the student a practical experience recognizing and working with tissues and organs of the body. Students will study the human skeleton and radiographs and learn key anthropologic methods. Student will learn histologic techniques to prepare paraffin embedded, sectioned and stained specimens, as well as DNA extraction from histology slides. In addition, models and the histology of tissues and body systems relevant to field of forensics will be studied. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 2381 Emergency Medical Technician Training***1 Credit Normal Grading Mode*

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. DOES NOT COUNT TOWARD THE MAJOR IN BIOLOGY. Course Attributes: Requires Instructor Approval.

**BIOL 2401 OSHA 40 Hour Safety Training***2 Credits Normal Grading Mode*

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.

**BIOL 2511 Ecology***4 Credits Normal Grading Mode*

Study of the theory and application of how organisms interact with their biotic and abiotic environment. Considers organismal-, population-, community-, and ecosystem-level ecology. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D or BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2531 Nutrition for Nurses***3 Credits Normal Grading Mode*

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. Prerequisite(s):BIOL 1131 Minimum Grade of C or NURS 1101 Minimum Grade of C. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Fields of Study: Nursing.

**BIOL 2551 Epidemiology***3 Credits Normal Grading Mode*

A broad overview of the field of epidemiology, with 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. Prerequisite(s):BIOL 1131 Minimum Grade of D or BIOL 1201 Minimum Grade of D or BIOL 1301 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2591 Forensic Crime Scene Investigation***4 Credits Normal Grading Mode*

The techniques of crime scene investigation and reconstruction emphasize recognition and search, collection and preservation of physical evidence. Exercises require acquisition of skills to sketch, note take and photograph crime scenes and evidence. Emphasis is on the goal of crime scene reconstruction. Practical techniques for fingerprint evidence recovery, cast and impressions along with bloodstain evidence and crime scene photography are practiced. There is an additional fee for this course. Prerequisite(s):BIOL 2291 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2601 Tropical Biodiversity Conservation***3 Credits Normal Grading Mode*

Explore the Andean cloud forests in this course-based undergraduate research experience which includes a 2-week summer trip to Reserva Las Gralarias nature preserve in Ecuador. Ideal for STEM students. Intensive research and cultural immersion with focus on tropical ecology, management and preservation. There is an additional fee for this course. Course Attributes: AS-Natural Sciences, Requires Instructor Approval. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**BIOL 2631 Biogeography***4 Credits Normal Grading Mode*

Current and historic distribution of plants and animals related to major geological and evolutionary concepts. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2691 Forensic Computer Analysis***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 2191 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 2751 Principles of Herbal Medicine: Ethnobotanical Pharmacognosy***1 Credit Normal Grading Mode*

This class explores medicinal plants used by various indigenous groups throughout the world; current and historical medicinal uses for herbs and practice hands-on techniques for preparation of herbal remedies. Students learn the active compounds and their mechanisms of action for plants where this is known. Students will also participate in a Service Learning Project to maintain/modify existing campus herb gardens and update the associated educational pamphlet to serve as a self-guided tour of gardens. A final examination includes a presentation on one herb. There is an additional fee for this course. Prerequisite(s):CHEM 1201 Minimum Grade of D or CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore.

**BIOL 2901 Special Topics in Biological Sciences***1 to 3 Credits Normal Grading Mode*

Grading system at the discretion of the instructor. May be repeated for credit as the topic varies. Maximum of 6 hours can be counted toward the major. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D. Course Attributes: Requires Instructor Approval. This course may be repeated 7 times. This course is repeatable for a total of 7 hours.

**BIOL 2961 Independent Study in Biology***1 to 4 Credits Normal Grading Mode*

Individual study of topics in Biology. This course is repeatable for a total of 8 hours.

**BIOL 3011 Developmental Anatomy***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3021 Human Anatomy***4 Credits Normal Grading Mode*

Human body systems using x-rays, MRIs, skeletal material, and cadaver dissection. There is an additional fee for this course. Prerequisite(s):BIOL 2331 Minimum Grade of D or BIOL 2341 Minimum Grade of D or BIOL 1401 Minimum Grade of D or BIOL 2001 Minimum Grade of D. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Classifications: Senior.

**BIOL 3031 Histology***4 Credits Normal Grading Mode*

Human cells, tissues, organs, and systems studied at the microscopic level. There is an additional fee for this course. Prerequisite(s):BIOL 1201 Minimum Grade of D or BIOL 1301 Minimum Grade of D or BIOL 1311 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3041 Comparative Vertebrate Anatomy***4 Credits Normal Grading Mode*

This course explores the evolution, anatomy, and development of vertebrate animals by focusing on differences and similarities among them. Topics include vertebrate prehistory, major vertebrate groups, embryology, evolutionary theory, the structure and evolution of organ systems, and research methods in paleontology. The laboratory uses skeletal and dissection materials, as well as data collected and analysis. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D or BIOL 1401 Minimum Grade of D.

**BIOL 3051 Environmental Toxicology***3 Credits Normal Grading Mode*

Effects of both man-made and natural toxic agents in plant and animal systems. Prerequisite(s): (BIOL 1201 Minimum Grade of D or BIOL 1301 Minimum Grade of D or BIOL 1311 Minimum Grade of D) and (CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**BIOL 3131 Medical Microbiology***3 Credits Normal Grading Mode*

Microbial cell biology, antimicrobial chemotherapy, interactions of microorganisms with humans and other organisms, microbial diversity. Prerequisite(s):BIOL 1351 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 3191 Forensic Microscopy***3 Credits Normal Grading Mode*

Introduction to fundamentals of light and optics, to advanced microscopic 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. There is an additional fee for this course. Prerequisite(s):BIOL 2291 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 3201 Immunology Laboratory***1 Credit Normal Grading Mode*

Laboratory coverage of serological assays currently employed in clinical laboratories to facilitate diagnosis of infectious diseases and immunopathies. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of C and CHEM 1721 Minimum Grade of C. Corequisite(s): BIOL 3211. Course Attributes: AS-Natural Sciences.

**BIOL 3211 Introduction to Immunology***3 Credits Normal Grading Mode*

Examination of the cells and structures involved in host protection due to innate and adaptive immune responses. Immune dysfunction, transplantation, malignancy, and vaccination are also addressed. Prerequisite(s):BIOL 1401 Minimum Grade of C.

**BIOL 3221 Bioscience Laboratory***1 Credit Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 3131 Minimum Grade of D.

**BIOL 3231 Introduction to Virology***3 Credits Normal Grading Mode*

Viral morphology, classification, replication strategies, emergence, transmission, and immune evasion are examined. Viral infections are reviewed as the topics of vaccination, antiviral drugs, and diagnostic procedures are addressed. Gene therapy, cancer prevention, integrated pest management, phage therapy and viral genomics are highlighted. Prerequisite(s):BIOL 2151 Minimum Grade of C or BIOL 3111 Minimum Grade of C or BIOL 3131 Minimum Grade of C or BIOL 3461 Minimum Grade of C.

**BIOL 3241 Medical Physiology 1***4 Credits Normal Grading Mode*

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, blood, immunity, and cardiovascular physiology. Students also work in teams to conduct literature reviews, design research proposals, and present these designs in podium presentations. This is the preferred physiology sequence for students planning on medical studies. There is an additional fee for those course. CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 3241 AND BIOL 2331. Prerequisite(s): (BIOL 1401 Minimum Grade of D and CHEM 1721 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**BIOL 3251 Medical Physiology 2***4 Credits Normal Grading Mode*

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 work in teams to collect, analyze and interpret data pertaining to the approved research protocols submitted in Medical Physiology I, and present their findings in oral (poster) and written formats. This is the preferred physiology sequence for students planning on medical studies. There is an additional fee for this course. CREDIT CANNOT BE RECEIVED FOR BOTH BIOL 3251 AND BIOL 2341. Prerequisite(s):BIOL 3241 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3291 Forensic Physical Methods***4 Credits Normal Grading Mode*

Introduction to advanced examination of firearms evidence, gunshot residue analysis, tool mark identification, vehicle lamp examination, serial number restoration, forensic shooting reconstruction, 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. There is an additional fee for this course. Prerequisite(s):BIOL 2291 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 3311 Human Physiology 1***4 Credits Normal Grading Mode*

The first course in a two semester sequence (continued in Physiology II) that provides an in-depth survey of the physiology of human systems. Emphasis is placed on the integration and practical application of function from cellular through organ system level. Topics covered in this course include: homeostasis, plasma membrane and transport across the plasma membrane, neurons and synaptic transmission, functional organization of the autonomic, central, peripheral branches of the nervous system including sensory and motor pathways, skeletal, smooth and cardiac muscle, cardiovascular and immune systems. (4 credit hours) Prerequisite(s): (BIOL 1201 Minimum Grade of D or BIOL 1211 Minimum Grade of D) and BIOL 1351 Minimum Grade of D and (CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D). Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Fields of Study: Pharmacy.

**BIOL 3321 Human Physiology 2***4 Credits Normal Grading Mode*

The second in a sequence of two courses that provides an in-depth survey of the physiology of human systems. Emphasis is placed on integration and practical application of function, from cellular through organ system level, of systems to maintain homeostasis of parameters, such as oxygen, pH and glucose levels. Topics covered in this course include gastrointestinal respiratory, excretory (renal), endocrine and reproductive systems. Prerequisite(s):BIOL 3311 Minimum Grade of D. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Fields of Study: Pharmacy.

**BIOL 3431 Histological Techniques***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences. This course is repeatable for a total of 4 hours.

**BIOL 3451 Pharmacology***3 Credits Normal Grading Mode*

The pharmacological basis of therapeutics covering essential pharmacology topics including pharmacokinetics, pharmacodynamics, pharmacogenetics, drug-drug interactions, and specific drugs and drug classifications targeting neurological, cardiovascular, circulatory, immunological, gastrointestinal, pulmonary and urinary tract systems. Prerequisite(s): (BIOL 1321 Minimum Grade of C or BIOL 1401 Minimum Grade of C) and (CHEM 1721 Minimum Grade of C or CHEM 1821 Minimum Grade of C). Course Attributes: Requires Instructor Approval.

**BIOL 3461 Clinical Microbiology***4 Credits Normal Grading Mode*

Lecture and 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 diseases. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of C and (CHEM 1721 Minimum Grade of C or CHEM 1821 Minimum Grade of C).

**BIOL 3511 Cell Biology***3 Credits Normal Grading Mode*

Students are expected to integrate concepts regarding cell structure and function to develop an understanding of eukaryotic cells as dynamic entities. Prerequisite(s): (BIOL 1301 Minimum Grade of C or BIOL 1311 Minimum Grade of C) and CHEM 1721 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3571 Forensics DNA Analysis***4 Credits Normal Grading Mode*

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 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. There is an additional fee for this course. Prerequisite(s):CHEM 3111 Minimum Grade of D and CHEM 3151 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3581 Interpretive Methodology***1 Credit Normal Grading Mode*

The National Association for Interpretation (NAI) defines interpretation as a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource. This course will provide you with the skills necessary to be a successful interpreter such as audience assessment and thematic program creation. This course culminates with an official certification by NAI\*. Must be enrolled in one of the following Major fields of study: Biology.

**BIOL 3591 Wetland Delineation Practicum***1 Credit Normal Grading Mode*

Introduction to the pertinent wetland identification variables, wetland data form completion and wetland boundary delineation process. Prerequisite(s):BIOL 1321 Minimum Grade of D or BIOL 1401 Minimum Grade of D.

**BIOL 3601 North American Mammals***3 Credits Normal Grading Mode*

Natural history, behavior, ecology and systematics of North American orders and most North American families. A weekend field trip is required. There is an additional fee for this course. Offered on demand. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3621 Parasitology***3 Credits Normal Grading Mode*

Taxonomy, pathology, ecology, and evolution of major human and veterinary protozoan and metazoan parasites, including their distribution, life cycles, prevention and control. There is an additional fee for this course. BIOL 2231 recommended. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3631 Ornithology***4 Credits Normal Grading Mode*

Study of taxonomy, ecology, natural history, and behavior of birds, with emphasis on North American taxa. A weekend field trip is required. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3641 Herpetology***3 Credits Normal Grading Mode*

Amphibians and reptiles emphasizing species native and introduced to Ohio and neighboring states. A weekend field trip is required. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3651 Forensic Entomology***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of C or BIOL 2291 Minimum Grade of C. Course Attributes: AS-Natural Sciences.

**BIOL 3661 Environmental Research Methods***3 Credits Normal Grading Mode*

The study of the design, execution, analysis, and communication of original research in environmentally-oriented fields. Prerequisite(s):BIOL 1401 Minimum Grade of D or BIOL 1321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3671 Field Botany***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3681 Ichthyology***3 Credits Normal Grading Mode*

Fish biology, particularly Ohio freshwater teleosts, emphasizing field exercises, techniques and systematics. University defensive driving certification required. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3691 Field Entomology***3 Credits Normal Grading Mode*

Field investigations of aquatic and terrestrial invertebrates of Ohio emphasizing diversity, ecology, conservation, and methods of study. University defensive driving certification required. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3701 Marine Biology***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of D. Corequisite(s): BIOL 3661, BIOL 3671, BIOL 3681, BIOL 3691. Course Attributes: AS-Natural Sciences, Requires Instructor Approval.

**BIOL 3731 Field Skills for Biologists***1 Credit Grading mode is S/U*

An immersion course teaching the basics of backcountry travel and camping that will introduce students to the skills and equipment needed to live comfortably and safely in the backcountry while performing their jobs, research and recreating. There is an additional fee for this course.

**BIOL 3741 Freshwater Ecology***4 Credits Normal Grading Mode*

The study of inland waters, including lakes, streams, rivers, wetlands, and freshwater estuaries. A multidisciplinary approach examines topics including, but not limited to, lake, stream, and wetland formation, light and heat, hydrology, water chemistry, and biological interactions. The major focus of this course is the diversity of freshwater habitats and an understanding of how freshwater ecosystems operate and their controlling mechanisms. In addition, students develop a comprehension of the interrelationships among biological, physical, and chemical factors in aquatic ecosystems. Consideration is also be given to the importance of the surrounding watershed in terms of aquatic-terrestrial ecotones. There is an additional fee for this course. Prerequisite(s):BIOL 2511 Minimum Grade of D.

**BIOL 3751 Mammalogy***4 Credits Normal Grading Mode*

Study of the anatomy, natural history, diversity, and systematics of mammals of the world. Included in natural history is the ecology, behavior, and biogeography of the animals. There will be a special focus on mammals of Ohio and of North America. A weekend field trip is required. There is an additional fee for this course. Prerequisite(s):BIOL 1401 Minimum Grade of C. Course Attributes: AS-Natural Sciences.



**BIOL 3781 Behavioral Ecology***3 Credits Normal Grading Mode*

Study of an organism's behavior in relation to its biotic and abiotic environment at proximate and functional levels of explanation  
Prerequisite(s):BIOL 1401 Minimum Grade of D or BIOL 2001 Minimum Grade of D. Course Attributes: AS - Math/Natural Sciences.

**BIOL 3831 Animal Behavior***4 Credits Normal Grading Mode*

Invertebrates and vertebrates, stressing observational and descriptive techniques. The laboratory provides overview of design, completion, analysis and communication of results from observational and experimental behavioral research. There is an additional fee for this course. Prerequisite(s):BIOL 2001 Minimum Grade of D or BIOL 1401 Minimum Grade of D or BIOL 1421 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**BIOL 3911 Pathophysiology***3 Credits Normal Grading Mode*

This course explores the pathophysiology of various organ systems during disease. Pathological alterations and their effects on physiological and anatomical functions are analyzed. Emphasis on selected clinical manifestations that are most often encountered by health professionals including the disease processes, manifestations, and in some instances, treatment. Prerequisite(s):BIOL 2341 Minimum Grade of D or BIOL 3251 Minimum Grade of D or BIOL 3321 Minimum Grade of D.

**BIOL 3921 Practical Toxicology***2 Credits Normal Grading Mode*

Lecture and laboratory instruction of analytical toxicology principles including federal confidentiality laws, specimen evaluation, immunoassay methodologies, drug class, drug metabolites, drug cross-reactivity, and instrument operation and validation. There will be an additional laboratory fee assessed in this course. Course Attributes: Requires Instructor Approval.

**BIOL 3971 Self-Directed Studies in the Biological Sciences***1 to 3 Credits Normal Grading Mode*

Investigation of specialty fields within the biological sciences by utilizing interactive and/or multimedia programs. A maximum of 3 hours may be counted toward the major. Cannot be used as a general education class. Graded S/U. Prerequisite(s):BIOL 1401 Minimum Grade of D.

**BIOL 4511 Advanced Topics in Cell Biology***2 Credits Normal Grading Mode*

Current literature on selected cell biology. May be repeated for credit as the topics vary. Prerequisite(s): (BIOL 3511 Minimum Grade of D and CHEM 3111 Minimum Grade of D) or PHBS 3411 Minimum Grade of D. Course Attributes: AS-Natural Sciences. This course is repeatable for a total of 6 hours.

**BIOL 4571 Advanced Forensic DNA Analysis***3 Credits Normal Grading Mode*

The course expands on the practical aspects of DNA genotyping found in Forensic DNA BIOL 3571. The course emphasizes traditional DNA genotyping using fluorescent detection. The course also utilizes the ABI 310 Genetic analyzer, qPCR Technology and the supporting software. The course emphasizes a list of special research projects that include research topics covering sequence analysis of mitochondrial DNA and STR genotyping of nuclear DNA from sources including "touch DNA", bone extraction and profiling of porcine sources and Next Generation sequencing. There is an additional fee for this course. Prerequisite(s):BIOL 3571 Minimum Grade of D.

**BIOL 4761 Internship in Biology Capstone***1 to 6 Credits Normal Grading Mode*

A research program, internship, study abroad or other approved experience in biological field of study. Student must be approved the semester prior to enrollment by the department. Only 4 credit hours can be used in the major. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Biology.

**BIOL 4771 Internship in Environmental and Field Biology Capstone***1 to 6 Credits Normal Grading Mode*

A research program, internship, study abroad or other approved experience in Environmental and Field Biology field of study. Student must be approved the semester prior to enrollment by the department. Only 4 credit hours can be used in the major. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Environmental and Field Bio.

**BIOL 4781 Internship in Forensic Biology Capstone***1 to 6 Credits Normal Grading Mode*

A research program, internship, study abroad or other approved experience in Forensic Biology field of study. Student must be approved the semester prior to enrollment by the department. Only 4 credit hours can be used in the major. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Forensic Biology.

**BIOL 4791 Internship in Molecular Biology Capstone***1 to 6 Credits Normal Grading Mode*

A research program, internship, study abroad, or other approved experience in Molecular Biology field of study. Student must be approved the semester prior to enrollment by the department. Only 4 credit hours can be used in the major. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Molecular Biology.

**BIOL 4861 Biology Capstone Seminar***1 Credit Normal Grading Mode*

Senior capstone oral presentation and comprehensive paper outlining the capstone experience. The ETS Major Field Test in Biology is required. There is an additional fee for this course. Prerequisite(s):BIOL 4761 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Biology.

**BIOL 4871 Environmental and Field Biology Capstone Seminar***1 Credit Normal Grading Mode*

Senior capstone oral and poster presentations outlining the capstone experience. The ETS Major Field Test in Biology is required. There is an additional fee for this course. Prerequisite(s):BIOL 4771 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Environmental and Field Bio.

**BIOL 4881 Forensic Biology Capstone Seminar***1 Credit Normal Grading Mode*

Senior capstone oral and poster presentations plus comprehensive paper outlining the capstone experience. The Forensic Science Assessment Test (FSAT) is required. There is an additional fee for this course. Prerequisite(s):BIOL 4781 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Forensic Biology.

**BIOL 4891 Molecular Biology Capstone Seminar***1 Credit Normal Grading Mode*

Senior capstone oral and poster presentations plus comprehensive paper outlining the capstone experience. The ETS Major Field Test in Biology is required. There is an additional fee for this course. Prerequisite(s):BIOL 4971 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Molecular Biology.

**BIOL 4901 Special Topics in Biological Sciences***1 to 4 Credits Normal Grading Mode*

Disciplines such as mammalogy and plant taxonomy. May be repeated for credit as topic varies. A lab fee is charged. This course is repeatable for a total of 7 hours.

**BIOL 4961 Independent Study in Biology***1 to 4 Credits Normal Grading Mode*

Individual study of topics in Biology. Prerequisite(s):BIOL 2291 Minimum Grade of C. This course is repeatable for a total of 8 hours.

**BIOL 4971 Independent Research in Biology**

*1 to 3 Credits Normal Grading Mode*

For students interested in mentored research projects with the proposed topic approved by the department and chair. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**Subject- Communication (CAMS)****CAMS 1301 Presentational Speaking**

*3 Credits Normal Grading Mode*

Basic principles of preparation, organization, and delivery of original informative and persuasive speeches. Offered fall and spring semesters. Course Attributes: Communication Studies, GE\_Effective Spoken Communication.

**CAMS 1311 Communication in the Classroom**

*3 Credits Normal Grading Mode*

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. Course Attributes: Comm. and Media Studies, GE\_Effective Spoken Communication.

**CAMS 2011 Ethics of Global Aid**

*3 Credits Normal Grading Mode*

An examination of culturally sensitive aid and projects in developing countries and the United States. Students will be exposed to concepts such as cultural competence, sustainability, social entrepreneurship, providing help with out doing harm, and the Interdisciplinary of aid projects. Cross-cultural communication, cultural norms; volunteering and civic engagement; political, religious, and economic world views will be discussed. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures.

**CAMS 2151 Multimedia Writing**

*3 Credits Normal Grading Mode*

This basic introduction to media writing emphasizes the similarities in professional media writing environments while also recognizing that print, radio television, multimedia and social media writing each have special demands unique to medium and purpose. A writing exam will be given during the first week of this course. If score is not satisfactory, the course ENGL 2001, Grammar in Context, will be required to continue in major. Offered even fall semester, even years. Prerequisite(s): PR 1201 Minimum Grade of D.

**CAMS 2161 Multimedia Journalism Northern Review Practicum**

*1 to 3 Credits Grading mode is S/U*

Multimedia journalism activities in the ONU convergent newsroom including research, creation and dissemination of information across a variety of media platforms. One to three credits, depending on role, to be determined by department. Offered fall and spring semesters. This course is repeatable for a total of 6 hours.

**CAMS 2171 Multimedia Journalism Audio/Video Practicum**

*1 to 3 Credits Grading mode is S/U*

Multimedia A/V Practicum is a based on the work conducted for and with WONB-FM or ONU3-TV. This will be graded via the U/S system. Each student will keep a log or journal of his or her work during the semester. All work must be of service for either WONB-FM or ONU3-TV. Prerequisite(s): CAMS 1101 Minimum Grade of C. This course is repeatable for a total of 6 hours.

**CAMS 2301 Persuasion**

*3 Credits Normal Grading Mode*

Emphasis on special audiences and situations unique to persuasion and persuasive speaking. Focus on persuasive techniques and speaking skills as they relate to as they relate to various audiences. Offered spring semester. Course Attributes: Communication Studies, GE\_Effective Spoken Communication.

**CAMS 2311 Interpersonal Communication**

*3 Credits Normal Grading Mode*

Explores issues and theories which will assist students in their abilities to interact interpersonally in personal and professional relationships. Offered fall and spring semesters. Course Attributes: Communication Studies, GE\_Knowledge of Human Society.

**CAMS 2321 Group Dynamics and Team Interaction**

*3 Credits Normal Grading Mode*

Group dynamics, theory, and problem solving/decision making methods are examined; emphasis on working effectively in teams and effective team interaction. Offered fall semester. Course Attributes: Communication Studies, GE\_Effective Spoken Communication.

**CAMS 2331 Health Communication**

*3 Credits Normal Grading Mode*

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. Course Attributes: Communication Studies, GE\_Effective Spoken Communication.

**CAMS 2351 Independent Study in Communication Studies**

*1 to 3 Credits Normal Grading Mode*

A topic in Communication Studies that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. This course is repeatable for a total of 24 hours.

**CAMS 2361 Communication Studies Practicum**

*1 to 3 Credits Grading mode is S/U*

Hands-on experience learning related to a variety of areas of Communication Studies. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. This course is repeatable for a total of 5 hours.

**CAMS 2371 Video Games: Individual and Social Impacts**

*3 Credits Normal Grading Mode*

This course provides a broad overview of the impact of video games on individuals and society from a historical perspective and helps discern between the myths and facts that have developed over time. Topics include, but are not limited to, the gaming industry, the cultural position of video games and video game players, social outcomes, moral panics, eSports, violent video games, gaming addiction, gaming communities, and educational games.

**CAMS 2391 Communication Studies Special Topics**

*1 to 3 Credits Normal Grading Mode*

Course topics related to Communication Studies, but not part of regular curriculum. Course may be repeated, but course content must vary each time. Offered fall and spring semesters. This course is repeatable for a total of 24 hours.

**CAMS 3001 Communication Research Methods**

*3 Credits Normal Grading Mode*

Research design, data collection methods, sampling techniques, tabulation, analysis and presentation of information concerning issues in communication. Provides a working knowledge of the concepts and methods of communication research.

**CAMS 3111 Editing**

*3 Credits Normal Grading Mode*

Expansion of the basics of news reporting, including interviewing techniques and other methods of newsgathering, organizing information, and copyediting. Offered fall semester.

**CAMS 3141 Video Storytelling**

*3 Credits Normal Grading Mode*

Advanced course in video journalism designed to give the student the ability to communicate in the Video Age-whether for television, the web, public relations, professional associations, nonprofits or social networking. This course concentrates on video storytelling to emphasize the communication of ideas, along with the technical knowledge of shooting and editing video. Must be enrolled in the Communication and Media Studies Department as a major or minor or have approval from the department to enroll in this course. Offered fall semester, alternating years.

**CAMS 3151 Podcasting**

*3 Credits Normal Grading Mode*

Podcasting has hit the mainstream and is the fastest growth market for audio and amp; video content distribution and monetization. Podcasting continues to grow because it is automatic, easy to control by the consumer, it's portable and always available. However, effective video and audio podcasts employ time honored, high-quality production values and proper recording techniques. This skill set is acquired through, instruction and "hands-on" practice and production exercises.

**CAMS 3301 Interviewing**

*3 Credits Normal Grading Mode*

Basic principles and structures of interviewing are examined and applied to interview situations such as employment, performance/appraisal, journalism, counseling, etc. Offered fall semester. Course Attributes: Communication Studies.

**CAMS 3311 Cross-Cultural Communication**

*3 Credits Normal Grading Mode*

Equips students with an awareness of the social construction of values, cognitions, performances across cultural lines. Familiarization with major theories, concepts, and skills cultural adaptation and identity management. Offered fall semester. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: Communication Studies, GE\_Diverse Cultures.

**CAMS 3321 Organizational Communication**

*3 Credits Normal Grading Mode*

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. Course Attributes: Communication Studies.

**CAMS 3371 Communication Studies Internship**

*1 Credit Grading mode is S/U*

A supervised program of experiences applying discipline related theories and practices to a working experience. Course Attributes: Requires Department Approval. This course is repeatable for a total of 9 hours.

**CAMS 4001 Free Speech & Democracy**

*3 Credits Normal Grading Mode*

Freedom of speech and press with particular emphasis on major legal issues confronting media practitioners; introduction to such areas of law as censorship, libel, invasion of privacy, access to information, regulation of electronic and print media and commercial speech. Offered spring semester, alternating years.

**CAMS 4181 Multimedia Journalism Capstone**

*1 to 3 Credits Normal Grading Mode*

Designed for students seeking careers in print, broadcast, and online journalism. Provides information and instruction on skills, self-assessment, job procurement processes and procedures, career field expectations. The course requires production of a professional portfolio of journalism works and completion of a comprehensive senior journalism project. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. This course is repeatable for a total of 4 hours.

**CAMS 4301 Film Study and Analysis**

*3 Credits Normal Grading Mode*

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. Course Attributes: Communication Studies.

**CAMS 4311 Political Communications and Campaigns**

*3 Credits Normal Grading Mode*

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. Course Attributes: Communication Studies.

**CAMS 4331 Communication Theory**

*3 Credits Normal Grading Mode*

In depth examination and application of communication theories about the nature and dynamics of human communication/interaction. Must be enrolled in one of the following Classifications: Junior, Senior.

**CAMS 4351 Independent Study in Communication Studies**

*1 to 3 Credits Normal Grading Mode*

A topic in Communication Studies that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. This course is repeatable for a total of 24 hours.

**CAMS 4381 Communication Studies Senior Thesis**

*1 to 3 Credits Normal Grading Mode*

A multi-component project completed during the senior year. Integration of skills and experiences acquired during study to complete the major, project and design and planning. Offered fall semester. Must be enrolled in one of the following Major fields of study: Communication Studies, Multimedia Journalism, Public Relations. This course is repeatable for a total of 3 hours.

**CAMS 4391 Communication Studies Special Topics**

*1 to 3 Credits Normal Grading Mode*

Course topics related to Communication Studies, but not part of the regular curriculum. Course may be repeated, but course content must vary each time. Offered fall and spring semesters. This course is repeatable for a total of 24 hours.

**CAMS 4501 Multimedia Management**

*3 Credits Normal Grading Mode*

A comprehensive look at media management, including such topics as the basic schools of management theory; specific organizational structures for various media such as radio, TV, cable TV, newspaper, and Public Broadcasting; Regulations governing media, Broadcast sales, research and ratings; and employment opportunities in media. Offered spring semester, alternating years.

**Subject- Chemistry (CHEM)****CHEM 1001 Chemistry in Society**

*3 Credits Normal Grading Mode*

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. Offered fall and spring semesters. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World. May not be enrolled in one of the following Colleges: Pharmacy, Engineering. May not be enrolled in one of the following Major fields of study: Biochemistry, Biology, Chemistry, Forensic Biology, Molecular Biology, Nursing.

**CHEM 1201 Chemistry for the Health Sciences***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. High school chemistry recommended. Offered fall and spring semesters. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**CHEM 1301 Foundations of General Chemistry***3 Credits Normal Grading Mode*

An introduction to the fundamentals of chemistry. Areas of study include: metric measurements, unit conversions, significant figures, the properties of matter, atomic structure, periodic chart arrangement, chemical bonding, chemical reactions, stoichiometry, gas laws, acids and bases, and solutions. Successful completion of this course should prepare a student for further study in chemistry, especially CHEM 1711. Course Attributes: AS-Natural Sciences. Must be enrolled in one of the following Classifications: Freshman, Pharmacy - First Year. Sophomore, Pharmacy - Second Year.

**CHEM 1501 Chemistry for Engineering***3 Credits Normal Grading Mode*

Atomic structure, the mole, stoichiometry, chemical reactions, thermochemistry, electron configuration, periodicity, bonding, molecular structure, states of matter, solutions, thermodynamics, kinetics, equilibrium, acids, bases, and electrochemistry. Taken concurrently with CHEM 1551. High school chemistry recommended. Offered fall semester. Corequisite(s): CHEM 1551. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**CHEM 1551 Chemistry for Engineering Lab***1 Credit Normal Grading Mode*

Lab for CHEM 1501. Taken concurrently with CHEM 1501. There is an additional fee for this course. Offered fall semester. Corequisite(s): CHEM 1501.

**CHEM 1711 General Chemistry 1***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Credit may be received for either CHEM 1711, or CHEM 1811, but not for both. High school chemistry required. Offered fall semester. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**CHEM 1721 General Chemistry 2***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Credit may be received for either CHEM 1721 or CHEM 1821, but not for both. Offered spring semester. Prerequisite(s):CHEM 1711 Minimum Grade of D or CHEM 1811 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 1811 General Chemistry 1 - Majors***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Credit may be received for either CHEM 1711, or CHEM 1811, but not for both. Offered fall semester. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**CHEM 1821 General Chemistry 2 - Majors***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Credit may be received for either CHEM 1721 or CHEM 1821, but not for both. Offered spring semester. Prerequisite(s):CHEM 1711 Minimum Grade of D or CHEM 1811 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2001 Capstone 1***1 Credit Normal Grading Mode*

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 Minimum Grade of D or CHEM 1721 Minimum Grade of D.

**CHEM 2311 Analytical Chemistry 1***4 Credits Normal Grading Mode*

Practice and principles of modern chemical methods of analysis including instrumental methods. There is an additional fee for this course. Offered fall semester. Prerequisite(s):CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2321 Environmental Analysis***4 Credits Normal Grading Mode*

Sampling plans, regulations, environmentally relevant statistics, preparation and analysis of solid and liquid samples from the environment for chemical analysis. Exploration of techniques for environmental analysis. Interpretation of the results is emphasized and the biogeochemical relevance of environmental analysis will be discussed. Prerequisite(s):CHEM 1721 Minimum Grade of D or CHEM 1501 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2401 Elements of Physical Chemistry***3 Credits Normal Grading Mode*

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 Minimum Grade of D or CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2481 Chemical Applications of Mathematics***3 Credits Normal Grading Mode*

Application of mathematical techniques to problems in chemistry. Offered spring semester. Prerequisite(s): (CHEM 1721 Minimum Grade of D or CHEM 1821 Minimum Grade of D) and MATH 1641 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2511 Organic Chemistry 1***3 Credits Normal Grading Mode*

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 Minimum Grade of D or CHEM 1821 Minimum Grade of D) and CHEM 2551 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 2521 Organic Chemistry 2***3 Credits Normal Grading Mode*

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. Offered spring semester. Prerequisite(s): (CHEM 2511 Minimum Grade of D and CHEM 2551 Minimum Grade of D and CHEM 2561 Minimum Grade of D) or (CHEM 2611 Minimum Grade of D and CHEM 2651 Minimum Grade of D and CHEM 2561 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**CHEM 2551 Organic Chemistry Lab 1***1 Credit Normal Grading Mode*

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. There is an additional fee for this course. 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 Minimum Grade of D.

**CHEM 2561 Organic Chemistry Lab 2***1 Credit Normal Grading Mode*

Reactions with/on radicals, dienes, aromatics, alcohols, carbonyls, amines, the structure and chemistry of carbohydrates, and organic polymer chemistry. There is an additional fee for this course. 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 Minimum Grade of D.

**CHEM 2611 Organic Chemistry 1 - Majors***3 Credits Normal Grading Mode*

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 Minimum Grade of D or CHEM 1821 Minimum Grade of D. Corequisite(s): CHEM 2651. Course Attributes: AS-Natural Sciences.

**CHEM 2621 Organic Chemistry 2 - Majors***3 Credits Normal Grading Mode*

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. Offered spring semester. Prerequisite(s): (CHEM 2511 Minimum Grade of D and CHEM 2551 Minimum Grade of D and CHEM 2661 Minimum Grade of D) or (CHEM 2611 Minimum Grade of D and CHEM 2651 Minimum Grade of D and CHEM 2661 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**CHEM 2651 Organic Chemistry Lab 1 - Majors***1 Credit Normal Grading Mode*

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. There is an additional fee for this course. 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 Minimum Grade of D.

**CHEM 2661 Organic Chemistry Lab 2 - Majors***2 Credits Normal Grading Mode*

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. There is an additional fee for this course. Taken concurrently with CHEM 2621. Credit may be received for CHEM 2561 or 2661, but not for both. Offered spring semester. Prerequisite(s):CHEM 2621 Minimum Grade of D.

**CHEM 2901 Special Topics***1 to 3 Credits Normal Grading Mode*

Can be repeated as topic varies. Unlimited repeats permitted.

**CHEM 2971 Independent Study***1 to 4 Credits Normal Grading Mode*

Offered fall and spring semesters. This course is repeatable for a total of 4 hours.

**CHEM 3001 Capstone 2***1 Credit Normal Grading Mode*

Careers in the chemical/biochemical sciences. Researching, writing, and revising a scientific paper based on work published in peer-reviewed scientific literature. Offered spring semester. Prerequisite(s):CHEM 2001 Minimum Grade of D and (ENGL 1221 Minimum Grade of D or HONR 1221 Minimum Grade of D).

**CHEM 3111 Biochemistry***3 Credits Normal Grading Mode*

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 Minimum Grade of D and CHEM 2561 Minimum Grade of D) or (CHEM 2621 Minimum Grade of D and CHEM 2661 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**CHEM 3151 Biochemistry Lab***1 Credit Normal Grading Mode*

Structure and properties of proteins, carbohydrates, lipids, and nucleic acids; introduction to enzyme kinetics and proteomics. There is an additional fee for this course. Taken concurrently with CHEM 3111 or PHBS 3411. Offered fall semester. Prerequisite(s):CHEM 3111 Minimum Grade of D or PHBS 3411 Minimum Grade of D.

**CHEM 3201 Medicinal Chemistry***3 Credits Normal Grading Mode*

Fundamentals of drug design and drug action including SAR, stereochemical 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 Minimum Grade of D and CHEM 2561 Minimum Grade of D) or (CHEM 2621 Minimum Grade of D and CHEM 2661 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**CHEM 3411 Physical Chemistry 1***4 Credits Normal Grading Mode*

Classical thermodynamics. Quantum mechanics of atoms and molecules. Laboratory illustrates principles and applications. There is an additional fee for this course. Offered fall semester. Prerequisite(s): (CHEM 2481 Minimum Grade of D and PHYS 2311 Minimum Grade of D and PHYS 2321 Minimum Grade of D and PHYS 2341 Minimum Grade of D and PHYS 2351 Minimum Grade of D) or (MATH 2631 Minimum Grade of D and MATH 2651 Minimum Grade of D and PHYS Course Attributes: AS-Natural Sciences.

**CHEM 3421 Physical Chemistry 2***4 Credits Normal Grading Mode*

Molecular structure, statistical thermodynamics, and reaction dynamics. Laboratory illustrates applications in spectroscopy and kinetics. There is an additional fee for this course. Offered spring semester. Prerequisite(s):CHEM 3411 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 3501 Polymer Chemistry***3 Credits Normal Grading Mode*

The course will survey polymerization mechanisms including step-growth, radical, ionic, coordination, and ring-opening polymerization. Additionally, polymer properties such as molecular weight, crystallinity, solution behavior and bulk polymer properties will be studied. Students will conduct a detailed study on a polymer including information such as the commercial use, history of the material and current techniques in the chemical literature that utilize the material. Prerequisite(s):CHEM 2521 Minimum Grade of D or CHEM 2621 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 3601 Organic Synthesis***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered alternate spring semesters. Prerequisite(s): (CHEM 2621 Minimum Grade of D and CHEM 2661 Minimum Grade of D). Course Attributes: AS-Natural Sciences.

**CHEM 3711 Inorganic Chemistry 1***3 Credits Normal Grading Mode*

Bonding, structures, preparation, properties, compounds, and reactions of main group and transition metal elements. Offered fall semester. Prerequisite(s):CHEM 2621 Minimum Grade of D.

**CHEM 3751 Inorganic Chemistry 1 Lab***1 Credit Normal Grading Mode*

Basic methods of synthesis and characterization. There is an additional fee for this course. Offered fall semester. Prerequisite(s):CHEM 2661 Minimum Grade of C. Corequisite(s): CHEM 3711.

**CHEM 3801 Mentored Research in Chemistry***1 to 2 Credits Normal Grading Mode*

Mentored research experience. Offered fall and spring semesters. This course is repeatable for a total of 8 hours.

**CHEM 3901 Special Topics***1 to 3 Credits Normal Grading Mode*

Can be repeated as topic varies. Unlimited repeats permitted.

**CHEM 4001 Capstone 3***2 Credits Normal Grading Mode*

Oral presentation on a chemical topic. Offered spring semester. Prerequisite(s):CHEM 3001 Minimum Grade of D.

**CHEM 4011 Capstone 3a***2 Credits Normal Grading Mode*

Presentation on a current topic in chemistry or biochemistry. This course is offered in the fall semester. Prerequisite(s):CHEM 3001 Minimum Grade of D.

**CHEM 4111 Advanced Biochemistry: Proteins and Metabolism***3 Credits Normal Grading Mode*

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 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4121 Advanced Biochemistry: Information Transfer***3 Credits Normal Grading Mode*

DNA replication and repair; transcription; RNA modifications; translation; control of gene expression; signal transduction. Offered alternate spring semesters. Prerequisite(s):CHEM 3111 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4161 Advanced Biochemistry Lab***2 Credits Normal Grading Mode*

Purification and characterization of biological macromolecules; enzyme kinetics and uses of enzymes in biochemical analyses. There is an additional fee for this course. Offered spring semester. Prerequisite(s):CHEM 3151 Minimum Grade of D.

**CHEM 4321 Analytical Chemistry 2***3 Credits Normal Grading Mode*

Theoretical and experimental study of modern methods of instrumental analysis. Principles, design and use of chemical instrumentation. Laboratory stresses independent, investigative experimentation. There is an additional fee for this course. Offered alternate spring semesters. Prerequisite(s):CHEM 2311 Minimum Grade of D and CHEM 3411 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4421 Advanced Physical Chemistry***3 Credits Normal Grading Mode*

Selected topics from group theory, advanced quantum mechanics, spectroscopy and chemical dynamics. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s):CHEM 3421 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4601 Physical Organic Chemistry***3 Credits Normal Grading Mode*

Application of molecular orbital theory, thermodynamics, and kinetics to the study of organic reaction mechanisms. Offered alternate spring semesters. Prerequisite(s): (CHEM 2521 Minimum Grade of D or CHEM 2621 Minimum Grade of D) and CHEM 3411 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4721 Inorganic Chemistry 2***3 Credits Normal Grading Mode*

Theory, bonding, spectroscopy, reaction mechanisms and organometallic compounds. Can be taken concurrently with CHEM 3421. Offered alternate spring semesters. Prerequisite(s):CHEM 3711 Minimum Grade of D and CHEM 3421 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**CHEM 4811 Senior Research 1***2 Credits Normal Grading Mode*

Mentored research project. Offered fall semester. Prerequisite(s):CHEM 3001 Minimum Grade of D.

**CHEM 4821 Senior Research 2**

*3 Credits Normal Grading Mode*

Mentored research project. Offered spring semester.  
Prerequisite(s):CHEM 4811 Minimum Grade of D.

**CHEM 4971 Independent Study**

*1 to 4 Credits Normal Grading Mode*

Offered fall and spring semesters. This course is repeatable for a total of 4 hours.

**Subject- Criminal Justice (CJ)****CJ 1211 Introduction To Criminal Justice**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 2001 Criminal Justice Systems: The Police**

*3 Credits Normal Grading Mode*

Historical, philosophical and legal basis of police institutions, practices and procedures. Issue oriented course. Discussion topics will vary with prevailing policing issues. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 2101 Criminal Justice Systems: The Courts**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 2201 Criminal Justice Systems: Corrections**

*3 Credits Normal Grading Mode*

Historical, philosophical and legal basis of correctional procedures and institutions. Probation and parole. Issue oriented course. Discussion topics will vary with prevailing corrections issues. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 2401 Crime in the Movies**

*3 Credits Normal Grading Mode*

This course is designed to help students examine how feature films represent crime and the criminal justice system. Media representations have the potential to influence how individuals and communities view the threat of crime, those responsible for or impacted by crime, and the responses in place to address crime. This course explores recent scholarly research on how and why certain information is presented in films.

**CJ 2711 Responses to Terrorism**

*3 Credits Normal Grading Mode*

This course provides an introduction to the major issues that impact responses to terrorism within the United States and other democracies. These issues as well as their impact at the individual, community, and national levels are explored. Additional topics covered in the course include tactics and operations of law enforcement agencies, media representations of terrorism, unique problems posed by domestic terrorism, and private sector responses to terrorism.

**CJ 2951 Sophomore Seminar: Internship Experience**

*1 Credit Normal Grading Mode*

This course will help students prepare for their public service internship. Students will learn how to identify internship opportunities, draft their resumes, write cover letters and prepare all necessary paperwork for their internship applications.

**CJ 2961 Independent Study in Criminal Justice**

*1 to 3 Credits Normal Grading Mode*

Independent Study Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**CJ 3221 Criminal Justice Through the Wire**

*3 Credits Normal Grading Mode*

This course will utilize The Wire, a highly regarded HBO show, to guide the examination of some of the most important issues facing the modern criminal justice system including police use of force and accountability; incarceration and reentry; criminal organizations and destabilization strategies; gun violence; policing strategies; unequal treatment of offenders and victims based on race, class, and gender; and the lasting impacts of the war on drugs in America. Prerequisite(s):ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures.

**CJ 3301 Drugs, Society, and Justice**

*3 Credits Normal Grading Mode*

Impact of drug use on individuals, society, and the criminal justice system in the United States. The production, trafficking, distribution, and use of illicit drugs in the United States continue to have a major influence on the structure and operation of the criminal justice system. Further, drug use and the resulting interactions with the criminal justice system directly impact individuals, families, and communities. An examination of the consequences of these interactions serves as the basis for this course. Includes but is not limited to impact of drug use at the individual, community, and national levels will be explored. Law enforcement and political responses to the drug crisis will be examined through their historical roots, including war on drugs. The causes and motivations that continue to influence how law enforcement, political leaders, and society respond to the drug crisis will also be examined. Additional topics covered in the course include the tactics and operations of law enforcement agencies, media representations of drug use and responses to drug use, the legalization of some drugs, drug use on college campuses, the connection between drug trafficking and terrorism, and alternative responses to the drug crisis. May not be enrolled in one of the following Classifications: Freshman.

**CJ 3401 Comparative Criminal Justice**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 3431 Substantive Criminal Law**

*3 Credits Normal Grading Mode*

Law as a method of social control. The nature, sources, and types of criminal law. History and theories of criminal law. Behavioral and legal aspects of criminal acts. Classification and analysis of selected criminal offenses. Common law doctrine, statutory reform, and constitutional law that affect the substantive criminal law. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 3531 Class, Race, and Gender in CJ**

*3 Credits Normal Grading Mode*

The impact that class, race, and gender can have on individuals and groups interacting with the criminal justice system in the United States. The roles that class, race, and gender play in the experiences of victims, offenders, and practitioners will be explored using scholarly research and media accounts. Additional topics will include the ways class, race, and gender intersect and the way each relates to differences in offending, responses of law enforcement; disparities in punishment including the death penalty; and overrepresentation of minorities in the corrections system. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures. May not be enrolled in one of the following Classifications: First year.

**CJ 3561 Juvenile Justice***3 Credits Normal Grading Mode*

Operations of the American juvenile justice system. The history of juvenile delinquency and the evolution of the juvenile justice system. Police treatment of juveniles, juvenile rights, juvenile court procedures, treatment and punishment of juvenile offenders. Prevention of juvenile delinquency. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 3601 Criminal Investigation***3 Credits Normal Grading Mode*

Principles and theories of criminal investigative procedure. Organizing and managing investigations. Techniques for collecting, evaluating, and preserving evidence. Interrogation and arrest of suspects. Effective report writing and trial preparation. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 3901 Special Topics In Criminal Justice***3 Credits Normal Grading Mode*

May be repeated as topic varies. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**CJ 3951 Junior Seminar: Capstone Development***1 Credit Normal Grading Mode*

The purpose of this course is to help students begin the capstone project. Throughout the semester, students will learn how to construct key components of their project and establish a schedule to guide their progress towards completion of the project. During the semester students will identify their topic, develop a project proposal, complete an annotated bibliography, and construct a detailed outline. Enrollment as least two semester before the semester of expected graduation. Prerequisite(s): SOC 2531 Minimum Grade of C and SOC 2541 Minimum Grade of C.

**CJ 4011 The Death Penalty***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 4101 Criminal Behavior***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 4111 Serial Killers***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 4211 Crime And The Media***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**CJ 4401 Inside-Out Prison Exchange***3 Credits Normal Grading Mode*

A semester-long academic course formatted as a prison exchange in which approximately 10 "outside" students and the same number of "inside" students from a local prison attend class together inside the prison. All participants read a variety of texts and write several papers. During class sessions, students discuss issues in small and large groups; and in the final month of class, students work together on a class project. The subject matter covered in class will focus on relevant criminal justice issues, like: Why do people commit crime; What is the purpose of prisons; myths and realities of life in prison; and a number of other related issues. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society, Requires Instructor Approval.

**CJ 4411 Inside-Out 2***1 to 3 Credits Normal Grading Mode*

Continuation of CJ 4401, Inside-Out 2 is a semester long academic course in which "outside" students and "inside" students attend class together inside a prison. All participants read a variety of texts and work together to research projects. The goal of which is produce academic paper(s) which can be presented at academic conferences. Research topics will vary based on class interests. Prerequisite(s): CJ 4401 Minimum Grade of D. Course Attributes: AS-SOCSCI - Social Science, Requires Instructor Approval. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**CJ 4621 Issues In Criminal Justice***3 Credits Normal Grading Mode*

Intensive study of selected topics related to criminal justice. May be repeated as topic varies. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society. Unlimited repeats permitted.

**CJ 4711 Public Service Internship Program***1 to 6 Credits Normal Grading Mode*

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 480 hours of on-site work. Student may apply up to 6 credit hours of departmental internship to the BA degree. Consultation with the department internship committee and completion of the application process; 2.75 GPA. Must be enrolled in one of the following Classifications: Senior, Junior. This course is repeatable for a total of 6 hours.

**CJ 4721 Seminar - The Washington Center Seminar***3 Credits Normal Grading Mode*

Course Attributes: AS-SOCSCI - Social Science, Requires Department Approval.

**CJ 4901 Special Topics In Criminal Justice***3 Credits Normal Grading Mode*

May be repeated as topic varies. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**CJ 4941 Seminar In Criminal Justice***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**CJ 4951 Senior Capstone***1 Credit Normal Grading Mode*

Completion of Senior Capstone project under the direction of a departmental faculty member and second reader. Second part of the departmental capstone course for majors in Criminal Justice (must have previously completed CJ 3951 Junior Seminar; Capstone development with a minimum grade of C). Required for all Criminal Justice majors. Enrollment at least one semester before the semester of expected graduation. Prerequisite(s): CJ 3951 Minimum Grade of C and CJ 2531 Minimum Grade of C and CJ 2541 Minimum Grade of C.



**CJ 4961 Independent Study In Criminal Justice**

*1 to 3 Credits Normal Grading Mode*

\_ Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**CJ 4981 Senior Thesis 1**

*1 Credit Normal Grading Mode*

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. Prerequisite(s): (SOC 2531 Minimum Grade of C) and (SOC 2541 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Criminal Justice.

**CJ 4991 Senior Thesis 2**

*2 Credits Normal Grading Mode*

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. Prerequisite(s): CJ 4981 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Criminal Justice.

**Subject- Design (DSGN)****DSGN 1101 Photography and Communication**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_ Knowledge of Human Thought/Culture.

**DSGN 1201 Introductory Visual Communication Design**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_ Knowledge of Human Thought/Culture.

**DSGN 1301 Typography**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_ Knowledge of Human Thought/Culture.

**DSGN 2101 Advanced Photography and Communication**

*3 Credits Normal Grading Mode*

Visual language in context of form, content and meaning; aesthetics and style; sequence and narrative. Offered spring semester. Prerequisite(s): DSGN 1101 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**DSGN 2401 Narrative Structures**

*3 Credits Normal Grading Mode*

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 alternate fall semesters. Prerequisite(s): DSGN 1301 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**DSGN 2601 Design Research Methods**

*3 Credits Normal Grading Mode*

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 post-project evaluation. Offered alternate spring semesters. Course Attributes: AS-FINRT Fine Arts.

**DSGN 2651 History of Graphic Design**

*3 Credits Normal Grading Mode*

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 spring semesters. Course Attributes: AS-FINRT Fine Arts.

**DSGN 2801 Design for Social Change**

*3 Credits Normal Grading Mode*

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 fall semesters. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**DSGN 3401 Packaging and Identity Design**

*3 Credits Normal Grading Mode*

Investigation of comprehensive applied problems in visual communication addressing design identity, branding programs and consumer-oriented design. Offered spring semesters. Prerequisite(s): DSGN 1301 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**DSGN 3501 Persuasive Design**

*3 Credits Normal Grading Mode*

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 alternate spring semesters. Prerequisite(s): DSGN 2401 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**DSGN 3551 Advertising Design 1**

*3 Credits Normal Grading Mode*

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 fall semesters. Prerequisite(s): DSGN 2401 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**DSGN 3701 Visual Interface Design**

*3 Credits Normal Grading Mode*

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 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course is repeatable for a total of 3 hours.

**DSGN 4201 Advanced Visual Communication Design**

*3 Credits Normal Grading Mode*

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 alternate fall semesters. Prerequisite(s): DSGN 3501 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**DSGN 4601 Professional Practices in Design**

*3 Credits Normal Grading Mode*

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. Offered alternate fall semesters. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times.

**DSGN 4901 Senior Capstone in Design 1**

*3 Credits Normal Grading Mode*

Yearlong investigative project that synthesizes liberal arts and departments learning objectives. Offered fall semester. Course Attributes: AS-FINRT Fine Arts.

**DSGN 4911 Senior Capstone in Design 2**

*3 Credits Normal Grading Mode*

Culmination and presentation of demonstrated knowledge of practices, methods, theories, concepts, and issues. Offered spring semester. Prerequisite(s): DSGN 4901 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**DSGN 4921 Internship**

*1 to 3 Credits Normal Grading Mode*

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. May repeat, but only 6 credits count toward graduation. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. This course is repeatable for a total of 6 hours.

**DSGN 4981 Independent Study in Design**

*1 to 3 Credits Normal Grading Mode*

May repeat as topic varies. Unlimited repeats permitted.

**Subject- Education (EDUC)****EDUC 1151 Culture and Schooling**

*3 Credits Normal Grading Mode*

The philosophical, historical, and sociological aspects of the American public school experience. Included is the impact that cultural factors have on students, teachers, and on the development and enactment of the school curriculum. Offered fall and spring semesters. 20 hours field experience. Course Attributes: GE\_Knowledge of Human Thought/Culture.

**EDUC 2001 Foundations of Literacy**

*3 Credits Normal Grading Mode*

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 semester. Prerequisites include: EDUC 1151 minimum grade of C, Praxis Core, and 2.50 GPA Prerequisite(s): EDUC 1151 Minimum Grade of C.

**EDUC 2051 Multicultural Literature**

*3 Credits Normal Grading Mode*

This course covers the selection and evaluation of quality children's literature for individual, group, and whole-class reading in early and middle childhood educational settings, as well as the examination of works of notable authors and illustrators, concepts of diversity, strategies for integrating various genre into the curriculum, story-telling, and encouraging students to respond to literature. Prerequisite(s): EDUC 1151 Minimum Grade of C.

**EDUC 2101 Exceptional Learners**

*3 Credits Normal Grading Mode*

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. 20 hours field experience. Prerequisite(s): EDUC 1151 Minimum Grade of C.

**EDUC 2121 Phonics and Word Study**

*3 Credits Normal Grading Mode*

Emphasis on stages of orthographic development, phonics generalizations, how to teach phonics, and word recognition skills within a structured word study methodology. Offered spring semester. 5 hours field experience. Prerequisite(s): EDUC 2001 Minimum Grade of C.

**EDUC 2421 Reading Across the Content Areas**

*3 Credits Normal Grading Mode*

Focuses on the development of disciplinary literacy and literacy connections across the curriculum including instruction methods derived from theory in prereading, vocabulary, comprehension strategies, and study skills. Appropriate for licensure requirements in EC/MC/AYA/MA. Must be enrolled in one of the following Fields of Study: Adolescent Licensure, Early Childhood Education, Education, Middle Childhood Education, Multiage Licensure.

**EDUC 2461 Understanding Human Difference in a Globalized World**

*3 Credits Normal Grading Mode*

In today's world people, ideas, and goods spread throughout the world as a result of globalization. This has resulted in greater integration between the world's cultures, economics, and governments. Globalization will be discussed in these contexts. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures.

**EDUC 2501 Introduction to Education**

*3 Credits Normal Grading Mode*

An introduction to the profession including the history, philosophy, and organization of early and middle school education. The course includes an emphasis on issues, ethics, developmentally appropriate practices in education including creating effective family and community partnerships: planning, instructional strategies, and evaluation responsive to needs of all learners; and utilization of multi-media materials, creative exploration, and enrichment activities to build an effective curriculum. Prerequisite(s): EDUC 1151 Minimum Grade of C.

**EDUC 2991 Independent Study**

*1 to 3 Credits Normal Grading Mode*

May repeat as topic varies. May be repeatable for up to 6 credits. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Sophomore, Freshman. This course is repeatable for a total of 6 hours.

**EDUC 3061 Language Arts Methods and Intervention PK-9**

*3 Credits Normal Grading Mode*

Strategies for integrating the language arts with a literacy program with an emphasis on the writing process, applications and conventions. Three evidence-based instructional strategies including (a) differentiation, (b) data-driven instruction, and (c) Universal Design for Learning (UDL) will be implemented within the field experience. CEC Standards. Offered fall semester. 20-hours field experience. Prerequisite(s): EDUC 2001 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education.

**EDUC 3071 Social Studies Methods and Intervention PK-9**

*3 Credits Normal Grading Mode*

An integrated approach to the planning, processes and content of social studies based on developmental characteristics for elementary and middle childhood students. Educator preparation knowledge and skills identified in the Ohio Standards for the Teaching profession, the National Association for the Education of Young Children (NAEYC) Standards for the Initial Early Childhood Professionals, and the Council for Exceptional Children (CEC). Offered fall semester. 20-hours field experience. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education.

**EDUC 3081 Mathematics Methods and Intervention PK-9**

*3 Credits Normal Grading Mode*

Content, strategies, materials, technology and assessment from a constructivist perspective in the early and middle childhood mathematics classroom. CEC Standards. Offered fall semester. 20 hours field experience. Prerequisite(s): MATH 1661 Minimum Grade of D and MATH 1671 Minimum Grade of D. Course Attributes: Requires CTE admission.

**EDUC 3091 Science Methods and Intervention PK-9**

*3 Credits Normal Grading Mode*

Constructivist approach to science education methods and materials in the early and middle childhood classroom. Focus on standards, inquiry, safety, assessment, and incorporation of technology with content of a general science curriculum. NSTA and CEC Standards. Offered fall semester. 20 hours field experience. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education.

**EDUC 3101 Inclusive Learning Environments**

*3 Credits Normal Grading Mode*

The course provides students with foundational knowledge about the philosophy and sociology of inclusive education, provides students with opportunities to develop a vision of an effective inclusive teacher. The course will also examine best practices in classroom and behavior management. Teacher candidates will also learn to use data collected to develop Individualized Education Programs (IEP). CEC Standards. 20 hours of field experience. Prerequisite(s): EDUC 2101 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education.

**EDUC 3401 Educational Psychology**

*3 Credits Normal Grading Mode*

Psychological theories, concepts, and principles applied to teaching and learning. Building on the psychology of learning through motivation, development, social processes, social and emotional learning, individual differences, instructional practices, behaviorism, instructional techniques and classroom management from a constructivist perspective. 10 hours field experience. Prerequisite(s): PSYC 2151 Minimum Grade of C or PSYC 2161 Minimum Grade of C or PSYC 2171 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Adolescent Licensure, Early Childhood Education, Education, Middle Childhood Education, Multiage Licensure.

**EDUC 3501 Departmental Field Experience**

*0 Credits Grading mode is S/U*

Individually planned field experience based on an area of licensure purposes and objectives and/or student teaching objectives. Specific objectives and experience proposed by student and must be approved by major department and education advisors. Required for adolescent or multiage licensure if 120 hours of field experience is not complete in other professional education courses. Prerequisite(s): EDUC 1151 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Departments: Education.

**EDUC 3681 Curriculum, Assessment, and Instruction**

*3 Credits Normal Grading Mode*

The alignment of curricular goals, assessment, and instructional design is a primary focus. Candidates develop a theoretical and practical understanding of contemporary curriculum and application of backward design to develop synergy between instructional intentions and assessment. Topics include standardized tests; knowledge and application of educational standards; development of authentic assessment activities; and the social, legal and ethical implications of testing for all licensing areas. Prerequisite(s): EDUC 1151 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Fields of Study: Adolescent Licensure, Early Childhood Education, Education, Middle Childhood Education, Multiage Licensure.

**EDUC 3901 Special Topics in Education**

*1 to 3 Credits Grading mode is S/U*

Course topics related to education, but not part of the current curriculum. Course may be repeated for an unlimited number of hours with departmental approval. Offered fall and spring semesters. Unlimited repeats permitted.

**EDUC 4001 Literacy Assessment**

*3 Credits Normal Grading Mode*

Use of student assessment information to inform planning, teaching and learning for struggling readers and writers. Offered fall and spring semesters. 10 hours field experience. Prerequisite(s): EDUC 2121 Minimum Grade of C. Course Attributes: Requires CTE admission.

**EDUC 4041 Strategies for Technology Educators**

*3 Credits Normal Grading Mode*

This course will assist teacher candidates with instruction using proven strategies and theory in a technology-driven environment by incorporating lab-based activities and problem-based learning. Includes 30 hours of field experience. Course Attributes: Requires CTE admission.

**EDUC 4101 Consultation and Collaboration**

*3 Credits Normal Grading Mode*

This course will engage in theory related to appropriate consultation, collaboration, and cooperative practices. The main purpose of this course is for students to examine the critical role collaboration has in education to improve educational opportunities for all students. This course is designed to provide a working understanding of various collaborating models currently available in public school settings and intended to equip the candidates to be able to identify and implement collaborative approaches. 20 hours of field experience. Prerequisite(s): EDUC 2101 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education.

**EDUC 4201 The Teaching Profession**

*1 Credit Grading mode is S/U*

An emphasis on the teaching profession especially on teacher evaluation such as the edTPA, RESA, and OTES, and student growth measures such as Value Added. CTE admission required. Prerequisite(s): EDUC 1151 Minimum Grade of C. Course Attributes: Requires CTE admission. Must be enrolled in one of the following Classifications: Senior, Junior.

**EDUC 4511 Integrated Science Methods**

*3 Credits Normal Grading Mode*

Constructivist approach to science education methods and materials in the AYA classroom. Focus on standards, inquiry, safety, assessment, and incorporation of technology with content of a general science curriculum. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4521 Integrated Language Arts Methods**

*3 Credits Normal Grading Mode*

Effective methods in teaching language, writing, and literature. Preparation for Licensure exam. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4531 Integrated Social Studies Methods**

*3 Credits Normal Grading Mode*

A theoretical basis for social studies education with a strong emphasis on the teaching methods and practices that enliven the social studies classroom for adolescent students. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4561 Integrated Modern Language Methods**

*3 Credits Normal Grading Mode*

Practical approaches to meeting standards for foreign language teaching. Strategies for developing communication skills, addressing diverse learner needs, and assessing outcomes. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4571 Integrated Art Methods***3 Credits Normal Grading Mode*

Effective strategies and methods of instruction in teaching visual art. Lesson planning, resource materials, media, curriculum, issues, and assessment of a comprehensive program. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4581 Organization and Methods of Technology Education***3 Credits Normal Grading Mode*

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. 18 hours field experience, 6 hours clinical. Course Attributes: Requires CTE admission.

**EDUC 4591 Integrated Music Methods***3 Credits Normal Grading Mode*

Philosophy, techniques, materials, curriculum planning for the music teacher. Offered alternate fall semesters. 20 hours field experience. Course Attributes: Requires CTE admission.

**EDUC 4761 Education Studies Capstone***3 Credits Normal Grading Mode*

Exploration of a topic in education with faculty supervision including preparation of a paper on the topic. Offered fall and spring semesters. This capstone does not lead to teacher licensure. Course Attributes: Requires CTE admission.

**EDUC 4801 Assessment Practicum***1 Credit Normal Grading Mode*

This course prepares teacher candidates to successfully complete the edTPA. Taken the semester prior to student teaching. Prerequisite(s): EDUC 1151 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior. This course is repeatable for a total of 12 hours.

**EDUC 4901 Student Teaching Practicum***12 Credits Grading mode is S/U*

Capstone practicum of supervised teaching in the major licensure field of the candidate. Offered fall and spring semesters. Corequisite(s): EDUC 4951. Course Attributes: Requires CTE admission.

**EDUC 4951 Student Teaching Seminar***2 Credits Grading mode is S/U*

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. Offered fall and spring semesters. Corequisite(s): EDUC 4901. Course Attributes: Requires CTE admission.

**EDUC 4991 Independent Study***1 to 3 Credits Normal Grading Mode*

May repeat as topic varies. May be repeatable for up to 6 credits. Offered fall and spring semesters. Prerequisite(s): EDUC 1151. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Senior, Junior. This course is repeatable for a total of 6 hours.

**Subject- English (ENGL)****ENGL 1001 Introduction to Literature***3 Credits Normal Grading Mode*

Approaches to analyzing, interpreting, and writing about literature. Offered fall and spring semesters. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: First year, Sophomore, Junior, Senior.

**ENGL 1011 Introduction to English Studies***1 Credit Grading mode is S/U*

Orientation to English Studies and the English major tracks (Creative Writing, Literature, Language Arts Education, Writing and Multimedia Studies). Must be enrolled in one of the following Classifications: First year. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, Literature.

**ENGL 1121 Introduction to Academic Writing***3 Credits Normal Grading Mode*

This course uses the basic principles of rhetoric to explore academic writing practices across a range of disciplines. Students will analyze a variety of writing techniques and practice incorporating those techniques in their writing. This course aims to establish foundational writing skills that will prepare students to succeed in a range of academic writing contexts, including English 1221: Writing Seminar. ACT Reading 16 or 16 or less.

**ENGL 1221 Writing Seminar***3 Credits Normal Grading Mode*

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. Offered fall and spring semesters. Course Attributes: GE\_Effective Written Communication.

**ENGL 1311 Intensive College Composition Lab 1***1 Credit Normal Grading Mode*

Composition Course for International Students ONLY This intensive writing lab is designed to supplement ENGL 1511, with a focus on grammar and sentence-level structures that will help students full develop paragraphs and essays. This lab meets one hour per week. Enrollment is determined by ONU Writing Placement Exam, administered during International Student Orientation. ENGL 1511 must be taken concurrently. Students must earn a C or better in this course to advance to ENGL 1321 and 1521. Co-requisite(s): ENGL 1511. This is for international students only. Corequisite(s): ENGL 1511.

**ENGL 1321 Intensive College Composition Lab 2***1 Credit Normal Grading Mode*

Composition Course for International Students ONLY. This intensive writing lab is designed to supplement ENGL 1521, with additional support for academic writing, documenting sources, and research writing. This lab meets one hour per week. Enrollment is determined by ONU Writing Placement Exam administered during International Student Orientation. Those required to enroll in ENGL 1321 must take ENGL 1521 during the same semester in order to satisfy the general education first-year writing requirement. Prerequisite(s): ENGL 1311 and ENGL 1511 Minimum Grade of C. Co-requisite(s): ENGL 1521 This course is for international students only. Prerequisite(s): ENGL 1311 Minimum Grade of C and ENGL 1511 Minimum Grade of C or ENGL 1411 Minimum Grade of C. Corequisite(s): ENGL 1521.

**ENGL 1511 College Composition 1***3 Credits Normal Grading Mode*

Composition Course for International Students ONLY. 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 who score lower than 3.5 on the ONU Writing Placement Exam must also complete ENGL 1311 and ENGL 1321 to fulfill this requirement. Students must earn a C or better to advance to ENGL 1521. Corequisite(s): ENGL 1311 or score of 3.5 or higher on the ONU Writing Placement Exam. This course is for international students only. Course Attributes: GE\_Effective Written Communication.

**ENGL 1521 College Composition 2***3 Credits Normal Grading Mode*

Composition Course for International Students ONLY. 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 who score lower than 3.5 on the ONU Writing Placement Exam must also complete ENGL 1311 and ENGL 1321 to fulfill this requirement. Students must a C or better to advance to ENGL 1521. Corequisite(s): ENGL 1311 or score of 3.5 or higher on the ONU Writing Placement Exam. This course is for international students only. Prerequisite(s):ENGL 1511 Minimum Grade of C or ENGL 1411 Minimum Grade of C. Course Attributes: GE\_Effective Written Communication.

**ENGL 1671 Introduction to Linguistics***3 Credits Normal Grading Mode*

An introduction to the study of how languages work, examining sounds, forms of words, sentence structure, meaning and usage, as well as providing a comprehensive view of human language ability. Course Attributes: AS-SOCSCI - Social Science.

**ENGL 2001 Grammar in Context***3 Credits Normal Grading Mode*

English grammatical structures and their rhetorical effects.

**ENGL 2011 Introduction to Creative Writing***3 Credits Normal Grading Mode*

Introduction to creative writing techniques and texts in multiple genres. Course Attributes: GE\_Knowledge of Human Thought/Culture.

**ENGL 2021 Business Writing***3 Credits Normal Grading Mode*

Approaches to business communication focused on evaluating audience, purpose, and genre. Practical experience in drafting, revising and presenting formal documents including memos, proposals and presentations. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C.

**ENGL 2031 Technical and Science Writing***3 Credits Normal Grading Mode*

Approaches to technical communication focused on evaluating audience, purpose and genre in the production and use of documents in professional contexts and in the Natural Sciences. May include production of abstracts, proposals, usability studies, grant applications, lab reports and scholarly articles. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C.

**ENGL 2041 Great Works***3 Credits Normal Grading Mode*

Major literary texts covering a range of historical periods and genres. A general education course with an emphasis on writing. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or ENGL 111 Minimum Grade of C or HONR 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior,Senior.

**ENGL 2071 Topics in Fiction***3 Credits Normal Grading Mode*

Exploration of thematic and stylistic elements in fiction from a variety of cultures and periods. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**ENGL 2081 Topics in Drama***3 Credits Normal Grading Mode*

Exploration of thematic and stylistic elements in dramatic literature from a variety of cultures and periods. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**ENGL 2091 Topics in Poetry***3 Credits Normal Grading Mode*

Exploration of thematic and stylistic elements in poetry from a variety of cultures and periods. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**ENGL 2101 Text and Theory***3 Credits Normal Grading Mode*

Overview of theoretical and practical approaches to interpreting and writing about texts. Offered fall semester. Prerequisite(s):ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, or Literature.

**ENGL 2111 American Literature 1***3 Credits Normal Grading Mode*

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 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2121 American Literature 2***3 Credits Normal Grading Mode*

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 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2131 British Literature 1***3 Credits Normal Grading Mode*

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 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2141 British Literature 2***3 Credits Normal Grading Mode*

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 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2191 Topics in World Literature**

3 Credits Normal Grading Mode

Approaches to reading world literatures in a variety of cultural and literary contexts. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2221 Words at Work**

1 Credit Normal Grading Mode

Exploration of careers related to English Studies. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, or Literature.

**ENGL 2251 Young Adult Literature**

3 Credits Normal Grading Mode

Literary approaches to young adult fiction, drama, and poetry. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2261 Literature, Sexuality and Gender**

3 Credits Normal Grading Mode

Investigation of literary representations of sexual identities and gender practices and how they are affected by cultural, historical, and social values. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture, GE\_Diverse Cultures.

**ENGL 2311 The Hero's Journey**

3 Credits Normal Grading Mode

An intensive survey of the creation, function, and meaning of the hero myth in literature, history, and film from ancient samurai to contemporary America. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures.

**ENGL 2321 Everyday Life**

3 Credits Normal Grading Mode

Examination of everyday life practices from a historical and cross-cultural perspective. Introduction to major theories of everyday life and representative literature and criticism. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures.

**ENGL 2331 International Short Stories**

3 Credits Normal Grading Mode

An exploration of diverse stories containing characters and situations written by a variety of authors from all over the world. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures.

**ENGL 2351 Pushing Boundaries**

3 Credits Normal Grading Mode

Works by and about people who explore the new world, those who came to live here, and those who were here first. We will track the impact of this influx of people from different cultures and look at their influence on the developing nations, particularly Mexico and the U.S; embracing literacy, historical, cultural, social, scientific and environmental issues. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures.

**ENGL 2511 Magazine Publishing Practicum**

1 to 3 Credits Grading mode is S/U

This course provides hands-on professional experience and education in publishing *Polaris* literary magazine, from soliciting submissions, selecting work for publication and production of the annual issue. One to six credits, depending on role, to be determined by the program. Offered fall and spring semester. This course may be repeated 8 times. This course is repeatable for a total of 6 hours.

**ENGL 2521 Journal Publishing Practicum**

1 to 3 Credits Normal Grading Mode

Workshop experience in technical and management skills related to the publication of professional journals. One to three credits, depending on role, to be determined by faculty. Course may be repeated, but only six hours will count toward graduation. Offered fall and spring semesters. This course may be repeated 8 times. This course is repeatable for a total of 6 hours.

**ENGL 2531 Web Publishing Practicum**

1 to 6 Credits Grading mode is S/U

Publication activities on the ONU research journal *Aurora*. One to six credits, depending on role, to be determined by the faculty. This course may be repeated 8 times. This course is repeatable for a total of 6 hours.

**ENGL 2551 Creative Writing Workshop**

1 to 3 Credits Grading mode is S/U

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). Offered fall and spring semesters. This course is repeatable for a total of 6 hours.

**ENGL 2571 Research Practicum**

1 to 3 Credits Normal Grading Mode

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 the faculty. Offered fall and spring semesters. This course is repeatable for a total of 6 hours.

**ENGL 2581 Writing Center Tutor Training Practicum**

1 Credit Grading mode is S/U

This course supports Writing Center tutor training, introducing tutors to theories and practices that foster productive collaboration with students. Prerequisite(s):ENGL 1221 Minimum Grade of B. This course is repeatable for a total of 6 hours.

**ENGL 2601 Introduction to Shakespeare**

3 Credits Normal Grading Mode

Representative plays and poetry from the entire span of Shakespeare's career and from each of the genres. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 2631 Women's Literature**

3 Credits Normal Grading Mode

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. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**ENGL 2741 American Multicultural Literature***3 Credits Normal Grading Mode*

American multicultural literature with an emphasis on aesthetic value and cultural context. Offered alternate fall semesters. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture, Requires Department Approval.

**ENGL 2901 Special Topics***3 Credits Normal Grading Mode*

May be repeated as the topic varies. This course is repeatable for a total of 9 hours.

**ENGL 2961 Independent Study in English***1 to 3 Credits Normal Grading Mode*

May be repeated as the topic varies. Course Attributes: Requires Program Approval. This course is repeatable for a total of 6 hours.

**ENGL 3051 Literary and Cultural Theory***3 Credits Normal Grading Mode*

Theoretical interpretations of texts. Prerequisite(s): ENGL 2101 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 3151 Literature and the Environment***3 Credits Normal Grading Mode*

The study of classic and contemporary literature about the natural world. Literature as an exploration of the cultural construction of the environment. Literature as a response to environmental issues. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1421 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/Principles of Aesthetics.

**ENGL 3161 Law, Literature and Culture***3 Credits Normal Grading Mode*

Examination of the intersections of literature and law. The study of how literature constructs and represents the law and the use of literature and literary structure in law environments. Examination of both canonical and contemporary literary texts that depict crime and punishment, trial and jury, ethics and justice, and the role of race, class, and gender in such texts. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 3171 Women and Writing: Writing about Gender and Sexuality***3 Credits Normal Grading Mode*

Exploration of the construction of gender in literature and in students' own writing. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 3271 Literature and Medicine***3 Credits Normal Grading Mode*

Exploration of interdisciplinary fields of literature and medicine. Literary representations of health and illness, the practitioner-patient relationship, and the social role of medicine. Prerequisite(s): ENGL 1221 Minimum Grade of D or HONR 1221 Minimum Grade of D or ENGL 1421 Minimum Grade of D or ENGL 1521 Minimum Grade of D. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. May not be enrolled in one of the following Classifications: Freshman.

**ENGL 3321 Readings in Comparative Literature***3 Credits Normal Grading Mode*

A major work, genre, or theme in dramatic, narrative, or poetic literature. Prerequisite(s): ENGL 1221 Minimum Grade of D or ENGL 1421 Minimum Grade of D or ENGL 1521 Minimum Grade of D or HONR 1221 Minimum Grade of D. Course Attributes: AS-HUM - Humanities.

**ENGL 3401 Intermediate Poetry Writing***3 Credits Normal Grading Mode*

The discipline and techniques of poetry writing and analysis. Workshop and discussion setting. Offered every other year, either fall or spring semester. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or ENGL 2011 Minimum Grade of C.

**ENGL 3411 Intermediate Fiction Writing****3 Credits Normal Grading Mode**

The discipline and technique of fiction writing and analysis. Workshop and discussion setting. Offered every other year, fall or spring semester. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or ENGL 2011 Minimum Grade of C. May not be enrolled in one of the following Classifications: First year.

**ENGL 3421 Screenwriting***3 Credits Normal Grading Mode*

The theory and practice of screenwriting in a workshop setting. Offered every other year, either fall or spring semester. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Knowledge of Human Thought/Culture.

**ENGL 3431 English Newsletter***3 Credits Normal Grading Mode*

Creation of the annual newsletter; involves interviews, writing articles, layout and design. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, Literature.

**ENGL 3511 English Language***3 Credits Normal Grading Mode*

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 2101 Minimum Grade of C and ENGL 2041 Minimum Grade of C) or ENGL 1001 Minimum Grade of C or ENGL 2071 Minimum Grade of C or ENGL 2081 Minimum Grade of C or ENGL 2091 Minimum Grade of C or ENGL 2111 Minimum Grade of C or ENGL 2121 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, Literature; others by permission of instructor.

**ENGL 3521 Rhetorical Theory***3 Credits Normal Grading Mode*

The history and theory of rhetoric and its practice in contemporary public discourse and media. Offered alternate spring semesters. Prerequisite(s): ENGL 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 3671 Readings in the Novel***3 Credits Normal Grading Mode*

Exploration of themes, topics and literary contexts of the novel. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 3681 Readings in Poetry***3 Credits Normal Grading Mode*

A major work, genre, or theme in poetic literature. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 3751 Teaching Writing***3 Credits Normal Grading Mode*

Topics in teaching writing. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C.

**ENGL 3761 Topics in Writing**

*3 Credits Normal Grading Mode*

Themes and topics in writing. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C.

**ENGL 3771 Writing for Publication**

*3 Credits Normal Grading Mode*

Contemporary practices in both print and online publication, with emphasis on practical experience in submitting original work for publication. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C.

**ENGL 3901 Special Topics in English**

*3 Credits Normal Grading Mode*

May be repeated as the topic varies. Course Attributes: AS-HUM - Humanities, Requires Instructor Approval. Unlimited repeats permitted.

**ENGL 4101 Chaucer**

*3 Credits Normal Grading Mode*

The poetry of Chaucer, with special emphasis on *The Canterbury Tales*, *Troilus and Criseyde*, and reading and understanding Middle English. Prerequisite(s): ENGL 2101 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4121 Shakespeare Studies**

*3 Credits Normal Grading Mode*

Close reading and analysis of Shakespeare's plays and their historical context, using a variety of critical approaches. Offered alternate fall semesters. Prerequisite(s): ENGL 2101 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4131 Major Authors**

*3 Credits Normal Grading Mode*

In-depth literary study of works by a single author. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4311 Studies in American Literature**

*3 Credits Normal Grading Mode*

A major writer, genre, or theme in American literature, with attention to cultural contexts. Prerequisite(s): (ENGL 2101 Minimum Grade of C and ENGL 2041 Minimum Grade of C) or ENGL 1001 Minimum Grade of C or ENGL 2071 Minimum Grade of C or ENGL 2081 Minimum Grade of C or ENGL 2091 Minimum Grade of C or ENGL 2111 Minimum Grade of C or ENGL 2121 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4351 Studies in British Literature**

*3 Credits Normal Grading Mode*

Themes, topics, and genres in British Literature. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4401 Advanced Poetry Writing**

*3 Credits Normal Grading Mode*

The discipline and technique of advanced poetry writing and analysis. Workshop and discussion setting. Offered every other year, either fall or spring semester. Prerequisite(s): ENGL 3401 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, or Literature.

**ENGL 4411 Advanced Fiction Writing**

*3 Credits Normal Grading Mode*

The discipline and technique of writing fiction. Workshop and discussion setting. Offered every other year, either fall or spring semester. Prerequisite(s): ENGL 3411 Minimum Grade of C.

**ENGL 4421 Nonfiction Writing**

*3 Credits Normal Grading Mode*

A literary approach to the reading and writing of nonfiction essays. Prerequisite(s): ENGL 2101 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**ENGL 4451 Capstone Project**

*1 Credit Normal Grading Mode*

Preparation of supporting materials and draft of capstone project. Prerequisite(s): ENGL 2101 Minimum Grade of C. Course Attributes: AS-HUM - Humanities.

**ENGL 4461 Capstone Presentation**

*2 Credits Normal Grading Mode*

Oral presentation of the project completed in a designated 3000-4000 level course as a capstone project. Offered fall and spring semesters. Prerequisite(s): ENGL 4451 Minimum Grade of D. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Creative Writing, Language Arts Education, Literature.

**ENGL 4791 Advanced Professional Writing**

*3 Credits Normal Grading Mode*

Advanced study and practice of the kinds of internal and external writing used in different organizations—utilities, for-profit corporations, non-profit organizations, and others. May include practice in the researching, writing, and editing of advertising copy, fundraising materials, surveys, reports, market analyses, promotions, product descriptions, grants, proposals, etc. Relevant ethical issues will be included. Prerequisite(s): ENGL 2051 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ENGL 4821 Internship in English**

*1 to 3 Credits Grading mode is S/U*

Provides practical experience outside the classroom and enhances the students' professional interests. Courses appropriate for the internship required. Offered fall and spring semesters. This course is repeatable for a total of 15 hours.

**ENGL 4831 Library Studies Internship**

*1 to 3 Credits Grading mode is S/U*

Provides practical experience in library studies outside the classroom to enhance students' professional interests. Offered fall and spring semesters. This course may be repeated 6 times.

**ENGL 4841 Internship in Teaching English as a Second Language**

*1 to 3 Credits Grading mode is S/U*

Provides practical experience outside the classroom to enhance students' professional interest.

**ENGL 4901 Special Topics**

*3 Credits Normal Grading Mode*

May be repeated as the topic varies. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**ENGL 4961 Independent Study in English**

*1 to 3 Credits Normal Grading Mode*

May be repeated as the topic varies. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**Subject- Exercise Physiology (EXPH)****EXPH 1001 Introduction to Exercise & Health**

*3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Fields of Study: Athletic Training, Exercise Physiology.



**EXPH 1101 Medical Emergency Management***3 Credits Normal Grading Mode*

To provide the citizen responder and healthcare professional 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 of adults, children, and infants including AEDs, BVM, stabilization, transportation, and special resuscitation techniques. American Heart Association Basic Life Support (BLS) for Healthcare Providers and Heartsaver First Aid certifications may be obtained by students who pass written and skill examinations. Course can only be taken once for graduation credit. Course may be repeated once for recertification as space permits. There is an additional fee for this course. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 1201 Basic Strength and Conditioning***3 Credits Normal Grading Mode*

This course uses a systematic approach to teaching resistance/strength training movements. The practical application of anatomy, physiology, and body alignment is introduced to emphasize correct performance of various exercise and spotting techniques, analyze strength training techniques and various pieces of exercise equipment for appropriate incorporation into a comprehensive training plan, and to conduct a risk/benefit analysis for specific techniques and exercises. Equipment modalities reviewed will include but are not limited to: stability balls, exercise bands, free weights, body weight, commercial strength equipment. Must be enrolled in one of the following Fields of Study: Exercise Physiology.

**EXPH 2101 Sports Nutrition and Supplementation***3 Credits Normal Grading Mode*

Examination of the role of macro/micronutrients and nutritional supplements in exercise performance. Offered fall semester. Prerequisite(s):EXPH 1001 Minimum Grade of D. Must be enrolled in one of the following Fields of Study: Athletic Training, Exercise Physiology.

**EXPH 2201 Kinesiology***3 Credits Normal Grading Mode*

As the study of the science of human movement, this course will include investigations into: the anatomical structure of muscle, bone, and nerve; movement biomechanics including gravitational and mechanical laws; and the physiology of muscle and nerve. Offered spring semester. Prerequisite(s):BIOL 2311 Minimum Grade of D or BIOL 2331 Minimum Grade of D. Must be enrolled in one of the following Fields of Study: Athletic Training, Exercise Physiology.

**EXPH 2301 Exercise Physiology***4 Credits Normal Grading Mode*

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 Minimum Grade of D or BIOL 2331 Minimum Grade of D. Must be enrolled in one of the following Fields of Study: Athletic Training, Exercise Physiology.

**EXPH 2501 Application and Response to Strength and Conditioning***3 Credits Normal Grading Mode*

This course offers a study of physiological basis of anaerobic, aerobic and resistance strength and conditioning as it applies to exercise techniques. Learning advanced strength and conditioning techniques and proper instruction of, but no limited to: Core and Assistive Resistance Exercises, Olympic movements, Speed and Agility Plyometric Exercises, and Functional Training. Concepts and applications will be based upon the highly physically active and athletic team(s). Prerequisite(s):EXPH 1201 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 2551 Programming and Management of Strength and Conditioning***3 Credits Normal Grading Mode*

This course covers the concepts and applications of strength and conditioning as it applies to program design, testing and periodization. Focus on implementation of testing procedures and results into program design. Large and Small group management and instructional concepts. Program development for the highly physically active and athletic team(s). Possible instruction and implementation of testing procedures and program designs with ONU intercollegiate athletes. Prerequisite(s):EXPH 2501 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 2701 Orthopedic Measurement and Assessment***3 Credits Normal Grading Mode*

Overview of the orthopedic diagnostic process using an evidence-based approach, including practical skill application in palpation, motion, strength and neurological testing, goniometry and inclinometry and gait analysis. Documentation and referral procedures will also be discussed. Prerequisite(s):BIOL 1131 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 2901 Independent Study***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Sophomore, Freshman. Unlimited repeats permitted.

**EXPH 3101 Exercise Testing and Prescription I***3 Credits Normal Grading Mode*

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 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Athletic Training, Exercise Physiology.

**EXPH 3151 Exercise Testing and Prescription II***3 Credits Normal Grading Mode*

Basic and advanced exercise testing, assessment and interpretation of cardiovascular, respiratory and muscular changes associated with training, aging and disease. Offered spring semester. Prerequisite(s):EXPH 3101 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training, Exercise Physiology.

**EXPH 3201 Research and Design***3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Major fields of study: Athletic Training, Exercise Physiology.

**EXPH 3251 Biomechanics***3 Credits Normal Grading Mode*

The purpose of EXPH 3251 is to introduce students to concepts of mechanics as they apply to human movement during exercise, sport, and physical activity. Students will gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective. Prerequisite(s):EXPH 2201 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3351 Organization and Administration***3 Credits Normal Grading Mode*

Current topical issues affecting Exercise Professionals (Physical Therapists, Athletic Trainer, Strength and Conditioning Professionals for example) include organization and administration topics, legal issues, and selected health issues that are present in the population Exercise Physiology Professionals may encounter. Must be enrolled in one of the following Classifications: Junior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3451 Therapeutic Interventions***3 Credits Normal Grading Mode*

An overview of the inflammatory process, pain, pain control, and tissue healing. Indications and contraindications and practical application of contemporary modalities as they relate to the healing process. Basic components of a rehabilitation program, focusing on restoration of flexibility, strength, endurance and functional activity. Laboratory experiences to apply didactic material to clinical use. Prerequisite(s):EXPH 2701 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3501 Practical Applications of Exercise Programming***3 Credits Normal Grading Mode*

Examination of current exercise programming strategies, fitness facility operations, professional competencies, and disease state management. Course requires experiences in an exercise environment. Offered fall and spring semester. Prerequisite(s):EXPH 2201 Minimum Grade of C and EXPH 2301 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3551 Orthopedic Taping, Bracing and Casting***2 Credits Grading mode is S/U*

Orthopedic taping, kinesio taping, bracing, casting and immobilization principles and techniques associated with selected joints and body parts. Additional focus will be on concepts regulating design, application, construction, maintenance and reconditioning of immobilization devices. Prerequisite(s):EXPH 2701 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3701 Behavioral Strategies in Exercise Physiology***2 Credits Normal Grading Mode*

Understanding the foundation of behavioral change as well as identifying tools, motivational strategies, communication techniques, educational and referral resources to support clients in an exercise program. Must be enrolled in one of the following Classifications: Junior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 3801 Practicum in Strength and Conditioning***3 Credits Normal Grading Mode*

To provide the student with Practical application of scientific principles and concepts related to ONU intercollegiate athlete's strength and conditioning. This program and concepts to be implemented with an ONU intercollegiate team and supervised by a qualified strength and conditioning coach in agreement. Prerequisite(s):EXPH 2551 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4201 ECG Analysis and Interpretation***3 Credits Normal Grading Mode*

Basic electrocardiographic analysis and interpretation of ECGs in healthy and diseased populations. Offered spring semester. Prerequisite(s):EXPH 2201 Minimum Grade of C and EXPH 2301 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4301 Physiology of Aging***3 Credits Normal Grading Mode*

The course provides instruction in the theories of the aging process and the age-related changes in the functioning of various physiological systems. Specifically, the age-related changes in bioenergetics, work capacity/efficiency, cardiopulmonary function, muscular strength/ endurance, motor control, motor performance, and psychosocial functioning, among other variables, are discussed. Additionally, the potential role of physical activity and exercise in the alteration of these age-related changes, quality of life indices, functional capacity, and productivity in the elderly will be presented. Prerequisite(s):EXPH 2301 Minimum Grade of C.

**EXPH 4451 Senior Seminar in Exercise Physiology***3 Credits Normal Grading Mode*

This course will discuss preparation for exercise physiology professional careers, professional certification exams, allied health graduate programs (e.g. physical/occupational therapy and athletic training) and professional job opportunities. Preparation for profession certifications and exams, required graduate school exams and entrance requirements will be discussed along with effective resume development and interview preparation. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4501 Exercise Physiology Internship***3 Credits Normal Grading Mode*

An off-campus, experiential experience designed to provide practical and applied professional experiences in exercise physiology-related professions. Offered Summer, Fall and Spring semesters. Prerequisite(s):EXPH 3151 Minimum Grade of C. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4701 Advanced Exercise Techniques and Assessments***3 Credits Normal Grading Mode*

This course will examine current exercise industry trends involving advanced exercise modalities. Students will lead discussions and provide instruction in exercise Modalities which could include: TRX training, slide board training, kettlebell training, yoga, pilates, and high-intensity training. Students will also lead seminar discussions to examine current events or research in the exercise industry. Offered fall semester. Prerequisite(s):EXPH 2201 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4801 Exercise Pathophysiology***3 Credits Normal Grading Mode*

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 will be discussed. Offered fall semester. Prerequisite(s):EXPH 2301 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Athletic Training, Exercise Physiology.

**EXPH 4851 Exercise Biochemistry***3 Credits Normal Grading Mode*

The examination of energy metabolism and ATP production at rest and during exercise. The major biochemical pathways, enzymes, intermediates and regulation 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 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Exercise Physiology.

**EXPH 4901 Independent Study***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

## **Subject- French (FREN)**

### **FREN 1011 Elementary French 1**

#### *3 Credits Normal Grading Mode*

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. Course Attributes: AS -Foreign Language.

### **FREN 1021 Elementary French 2**

#### *3 Credits Normal Grading Mode*

Continuation of FREN 1021. Prerequisite(s):FREN 1011 Minimum Grade of C or French BYU 200. Course Attributes: AS -Foreign Language.

### **FREN 2011 Intermediate French 1**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C or French BYU 250.

Course Attributes: AS -Foreign Language.

### **FREN 2021 Intermediate French 2**

#### *3 Credits Normal Grading Mode*

Continuation of FREN 2021. Prerequisite(s):FREN 2011 Minimum Grade of C or French BYU 350. Course Attributes: AS -Foreign Language.

### **FREN 3011 Introduction to French Literature**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C or French BYU 400. Course Attributes: AS -Foreign Language, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture,

### **FREN 3021 Advanced French: Speaking**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C or French BYU 400.

Course Attributes: AS -Foreign Language.

### **FREN 3031 Advanced French: Writing**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C.

Course Attributes: AS -Foreign Language.

### **FREN 3041 Cultural History of France 1**

#### *3 Credits Normal Grading Mode*

Discussion in French of French history, art, architecture, and cultural institutions from their origins to the Fifth Republic. Prerequisite(s):FREN 3021 Minimum Grade of C and FREN 3031 Minimum Grade of C.

Course Attributes: AS -Foreign Language.

### **FREN 3051 Cultural History of France 2**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C and FREN 3031 Minimum Grade of C. Course Attributes: AS -Foreign Language.

### **FREN 4001 Special Topics**

#### *3 Credits Normal Grading Mode*

May be repeated as topic varies. Prerequisite(s):FREN 3021 Minimum Grade of C and FREN 3031 Minimum Grade of C. Course Attributes: AS -Foreign Language. Unlimited repeats permitted.

### **FREN 4031 French Theatre**

#### *3 Credits Normal Grading Mode*

Reading and discussion in French of representative works from the 17th century to the present. Prerequisite(s):FREN 3011 Minimum Grade of C and FREN 3021 Minimum Grade of C and FREN 3031 Minimum Grade of C. Course Attributes: AS -Foreign Language, GE\_Knowledge of Human Thought/Culture.

### **FREN 4201 French Film**

#### *3 Credits Normal Grading Mode*

Viewing, discussion, and analysis in French of representative French and francophone films, directors, and actors. Prerequisite(s):FREN 3021 Minimum Grade of C and FREN 3031 Minimum Grade of C. Course Attributes: AS -Foreign Language.

### **FREN 4401 Modern French Musical**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of C and FREN 3021 Minimum Grade of C and FREN 3021 Minimum Grade of C. Course Attributes: AS -Foreign Language, GE\_Knowledge of Human Thought/Culture. Unlimited repeats permitted.

### **FREN 4501 Capstone**

#### *1 Credit Normal Grading Mode*

Written or other presentational record of study abroad experience.

Alternative: extensive research paper in French, evaluated by department faculty.

### **FREN 4901 Independent Study in French**

#### *1 to 3 Credits Normal Grading Mode*

For advanced students only. Requires department approval. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

## **Subject- Geography (GEOG)**

### **GEOG 1001 Introduction To Geography: Methods And Materials**

#### *3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science.

### **GEOG 1961 Independent Study in Geography**

#### *1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

### **GEOG 2261 World Regional Geography**

#### *3 Credits Normal Grading Mode*

Regional survey of the non-Western world. Examination of the leading cultural, economic, historical, political, and environmental features of the non-Western world. Confers International Politics elective credit. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

### **GEOG 2371 Physical Geography**

#### *3 Credits Normal Grading Mode*

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. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**GEOG 2401 Political Geography***3 Credits Normal Grading Mode*

Geographical examination of state formation, nations, nationalism, sovereignty, and geopolitics. Electoral geography. Concepts of core and periphery. Power and empowerment. Colonialism and post colonialism. Course Attributes: AS -Non Western Cultural, AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**GEOG 2421 Population Geography***3 Credits Normal Grading Mode*

Spatial variations in the distribution, composition, migration, and growth of populations in relation to the nature of places. Demography from a geographical perspective. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**GEOG 2481 Introduction To Geographic Information Systems***3 Credits Normal Grading Mode*

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. There is an additional fee for this course.

**GEOG 2551 Spatial Methods 1***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Course Attributes: AS-SOCSCI - Social Science.

**GEOG 2681 Cartography***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Course Attributes: AS-SOCSCI - Social Science.

**GEOG 2901 Special Topics In Geography***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. There is an additional fee for this course. Unlimited repeats permitted.

**GEOG 2961 Independent Study in Geography***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**GEOG 3041 Historical Geography***3 Credits Normal Grading Mode*

An exploration of the geographies and legacies of local cultures, with emphasis to the Ada region. Topics may include: settlement, Ada formation, Lincoln Highway, warfare, nearby industries, education and Ohio Northern University, architecture diffusion, religious, agriculture, and other topics. Field trips, guest speakers, and creative and interactive projects are important. Students interview locals to glean historical and geographical information, and create desktop documentary videos that demonstrate the importance of the Ada region. Cross-listed as HIST 3041. Students who have received credit for HIST 3041 may not receive credit for GEOG 3041. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**GEOG 3481 Applied Geographic Information Systems***3 Credits Normal Grading Mode*

Advanced discussion of geographic information systems, Global Positioning Systems (GPS), and spatial statistics. Advanced knowledge of GIS theory and science. Projects geared toward the relevant major. Exercises require work in the computer lab outside of class hours. There is an additional fee for this course. Prerequisite(s):GEOG 2481 Minimum Grade of C.

**GEOG 3961 Independent Study in Geography***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**GEOG 4711 Public Service Internship Program***1 to 6 Credits Normal Grading Mode*

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 6 credit hours of departmental internship to the BA degree. Completion of the application process; 2.75 GPA. Must be enrolled in one of the following Classifications: Junior, Senior. This course is repeatable for a total of 6 hours.

**GEOG 4721 Seminar - The Washington Center Seminar***3 Credits Normal Grading Mode*

Course Attributes: AS-SOCSCI - Social Science, Requires Department Approval.

**Subject- Geology (GEOL)****GEOLOGY 2801 Geology***3 Credits Normal Grading Mode*

Physical geology and paleogeology, including chemical properties of minerals and rocks, geologic processes, and earth materials. May be taken without GEOL 2811. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**GEOLOGY 2811 Geology Lab***1 Credit Normal Grading Mode*

Labs utilize minerals, rock, sediments, maps and field trips to illustrate techniques used by geologists. There is an additional fee for this course. Corequisite(s): GEOLOGY 2801.

**GEOLOGY 2971 Independent Study in Geology***1 to 3 Credits Grading mode is S/U*

Independent study in geology. Course Attributes: Requires Instructor Approval. This course is repeatable for a total of 6 hours.

**Subject- German (GERM)****GERMAN 1011 Elementary German 1***3 Credits Normal Grading Mode*

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. Course Attributes: AS -Foreign Language.

**GERMAN 1021 Elementary German 2***3 Credits Normal Grading Mode*

Continuation of GERM 1011. Prerequisite(s):GERM 1011 Minimum Grade of D or German BYU 200. Course Attributes: AS -Foreign Language.

**GERM 2011 Intermediate German 1***3 Credits Normal Grading Mode*

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 Minimum Grade of D or German BYU 250. Course Attributes: AS -Foreign Language.

**GERM 2021 Intermediate German 2***3 Credits Normal Grading Mode*

Continuation of GERM 2011. Prerequisite(s): GERM 2011 Minimum Grade of D or German BYU 350. Course Attributes: AS -Foreign Language.

**GERM 2901 Independent Study in German***1 to 3 Credits Normal Grading Mode*

Independent Study in German for intermediate students. Course Attributes: AS -Foreign Language, Requires Department Approval. Unlimited repeats permitted.

**GERM 3011 German Language Studies***3 Credits Normal Grading Mode*

Intensive overview of German grammatical structures. Emphasis on reading of more complex texts; vocabulary acquisition; training in composition. Prerequisite(s): GERM 2021 Minimum Grade of C or German BYU 400. Course Attributes: AS -Foreign Language.

**GERM 3021 Using German***3 Credits Normal Grading Mode*

Intensive practice of listening, reading and speaking skills. Some writing. Use of authentic materials. Prerequisite(s): GERM 2021 Minimum Grade of C or German BYU 400. Course Attributes: AS -Foreign Language.

**GERM 3111 Culture of German-Speaking Europe***3 Credits Normal Grading Mode*

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 3011 Minimum Grade of C or GERM 3021 Minimum Grade of C. Course Attributes: AS -Foreign Language.

**GERM 3121 Studies in German Literature***3 Credits Normal Grading Mode*

Readings and discussion in German of drama, poetry short stories and the Novelle from the 19th century to the present. Prerequisite(s): (GERM 3011 Minimum Grade of C or GRMN 313 Minimum Grade of C) and (GERM 3021 Minimum Grade of C or GRMN 311 Minimum Grade of C). Course Attributes: AS -Foreign Language, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**GERM 4501 Capstone***1 Credit Normal Grading Mode*

Written or other presentational record of study abroad experience. Alternative: extensive research paper in German, evaluated by department faculty.

**GERM 4901 Independent Study in German***1 to 3 Credits Normal Grading Mode*

For advanced students only. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- History (HIST)****HIST 41 Teacher Licensure Orientation***0 Credits Grading mode is S/U*

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. There is an additional fee for this course. Must be enrolled in one of the following Fields of Study: Social Studies.

**HIST 1101 Western Civilization 1***3 Credits Normal Grading Mode*

Ideas, attitudes, and institutions basic to civilization as it developed in the West from ancient times to the sixteenth century. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1111 Western Civilization 2***3 Credits Normal Grading Mode*

Ideas, attitudes, and institutions basic to civilization as it developed in the West from the seventeenth century to the present. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1131 US History to 1877***3 Credits Normal Grading Mode*

American colonies and United States from 1492 to 1877. Emphasis on the formation of American political, economic, and social attitudes, their application in the early Republic, the Civil War, and Reconstruction. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**HIST 1141 US History Since 1877***3 Credits Normal Grading Mode*

The United States since the end of Reconstruction. Major topics include the role played by the US in global affairs and US domestic policy. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**HIST 1151 World Civilizations 1***3 Credits Normal Grading Mode*

The emergence, development, and interactions of civilizations in Africa, Asia, Europe, and the Americas, from the Neolithic Revolution to 1400 CE. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1161 World Civilizations 2***3 Credits Normal Grading Mode*

The development and interactions of Western and non-Western civilizations from 1400-present. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1201 Public History***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1301 Local History***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 1901 Special Topics In History***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**HIST 1961 Independent Study in History***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**HIST 2041 Historiography**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 2081 Women's Sport History**

*3 Credits Normal Grading Mode*

This course will consider women athletes and teams from ancient to modern times, along with taking a global view of historical and contemporary women's sports. Course Attributes: AS-HUM - Humanities.

**HIST 2301 Introduction To Museums And Archives**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities.

**HIST 2501 Military and Society**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**HIST 2601 Sport and Society**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 2701 American Architecture**

*3 Credits Normal Grading Mode*

This course will explore and critically examine the various aspects of architecture from construction and design to how American society and culture shaped its surroundings and how its surroundings shaped American ideas and lifestyles. The time period will be inclusive, starting with Native use of resources and ending with post-modern architecture and future trends. No background in architecture or architectural history is necessary. Students will learn the necessary physical and conceptual components of architecture for identifying and analyzing buildings, structures, and objects; the issues and problems faced by architects and the general public in accepting architectural diversity into society; and a sense of the historical periods and activities that affected architectural development.

**HIST 2721 U.S Popular Culture**

*3 Credits Normal Grading Mode*

In the nineteenth century, mass communication, fostered the creation of a new mass culture that challenged the cultural elite's conception of what culture should be. New mass entertainment forms such as vaudeville, sports, film, radio, television, and then the internet challenged high culture's former hold on the culture. This course will explore how popular culture eclipsed high culture and created an American culture fixated on an ever-shifting conception of culture. Course Attributes: AS-HUM - Humanities.

**HIST 2771 Digital History**

*3 Credits Normal Grading Mode*

Students will explore the emerging field of Digital History, including the primary methods used. A large part of the course will require students to apply their learning by doing projects, including a major final project. Course Attributes: AS-HUM - Humanities.

**HIST 2801 History of the American Environmental Movement**

*3 Credits Normal Grading Mode*

Analyzes the origins and nature of all aspects of the American environmental movement from the colonial era to the present through monographs, poetry, art, music, and films. Compares American developments with non-Western and indigenous ideas, assumptions, and practices. Fosters cultural self-awareness of other cultural world-views on the environment. Encourages empathy, curiosity, and openness to a wide range of environmental attitudes and values. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures.

**HIST 2861 East Asia**

*3 Credits Normal Grading Mode*

This course explores the origins of cultural forms in China, Japan, and Korea and their migration to the West through trade and warfare. The course focuses on the unique philosophies, arts and cuisines the East Asian culture has contributed to our globalized world. Course Attributes: AS-HUM - Humanities.

**HIST 2901 Special Topics In History**

*1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**HIST 2961 Independent Study in History**

*1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**HIST 3041 Historical Geography**

*3 Credits Normal Grading Mode*

An exploration of the geographies and legacies of local cultures, with emphasis to the Ada region. Topics may include: settlement, Ada formation, Lincoln Highway, warfare, nearby industries, education and Ohio Northern University, architecture diffusion, religious, agriculture, and other topics. Field trips, guest speakers, and creative and interactive projects are important. Students interview locals to glean historical and geographical information, and create desktop documentary videos that demonstrate the importance of the Ada region. Cross-listed as GEOG 3041. Students who received credit for GEOG 3041 may not receive credit for HIST 3041. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3071 Introduction To Family History And Genealogy**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities.

**HIST 3081 Material Culture**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3201 Advanced Public History***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3301 Advanced Local History***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3401 Colonial North America***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3421 The Constitutional Era In United States History***3 Credits Normal Grading Mode*

The founding of the United States, 1763-1803, with emphasis on the period 1781-1803. Consequences of the French and Indian War. Causes of the American Revolution. The Declaration of Independence and its impact. Government under the Articles of Confederation. Constitutional reform vs. revolution. The Constitution and its passage. The Bill of Rights. Determining the meaning of the Constitution. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture, GE\_Knowledge/ Principles of Civics/Ethics

**HIST 3451 African American History***3 Credits Normal Grading Mode*

The history of the African-American experience from the African beginnings to the present-day. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3541 Civil War and Reconstruction***3 Credits Normal Grading Mode*

Origins, operations, and effects of the American Civil War. Team taught course. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 3551 World War I***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3561 World War II***3 Credits Normal Grading Mode*

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 popular culture. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3571 Cold War***3 Credits Normal Grading Mode*

Capitalism vs. communism in a race for global dominance from 1945 to 1990. Political and cultural trends in the events of half a century of East-West conflict. Team taught course. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3581 Vietnam War***3 Credits Normal Grading Mode*

The origins, operations, and effects of the wars in Vietnam, from 1945 to the present. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3701 The Ancient World***3 Credits Normal Grading Mode*

The political, social, economic, and cultural development of the Near Eastern, Greek, and Roman civilizations of antiquity. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3711 Medieval Europe***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 3791 Topics In Modern Europe***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture. Unlimited repeats permitted.

**HIST 3901 Special Topics In History***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**HIST 3961 Independent Study in History***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**HIST 4121 Field School In Archaeology***3 Credits Normal Grading Mode*

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; preparation and identification of recovered artifacts. There is an additional fee for this course. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 4211 Fascism***3 Credits Normal Grading Mode*

Origins and nature of fascism. Contrasts the regimes in Italy and Germany with those in Spain, France, and elsewhere. Utilizes biographical, descriptive, analytical, and theoretical approaches. Examines fascist leaders, including Mussolini, Hitler, and Franco, as well as fascist activists, journalists, and intellectuals. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 4221 Hitler And Nazism***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Knowledge of Human Thought/Culture.

**HIST 4231 The Holocaust***3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, AS-International Studies, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**HIST 4411 Baseball in American Culture***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 4421 Football in America***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 4511 History of Law***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**HIST 4711 Public Service Internship Program***1 to 6 Credits Grading mode is S/U*

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 6 credit hours of departmental internship to the BA degree. Completion of the application process; 2.75 GPA. Must be enrolled in one of the following Classifications: Junior, Senior. This course is repeatable for a total of 6 hours.

**HIST 4721 Seminar - The Washington Center Seminar***3 Credits Grading mode is S/U*

Course Attributes: AS-HUM - Humanities, Requires Department Approval.

**HIST 4961 Independent Study In History***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**HIST 4981 Senior Thesis 1***1 Credit Normal Grading Mode*

First part of the two-course departmental Capstone sequence for majors in History and Social Studies. Topic selection; development of bibliography, preliminary thesis, outline for senior thesis; examination of the norms of the discipline; post-graduate planning; selection of thesis director for HIST 4991. Required of History and Social Studies majors. Enrollment at least two semesters before expected semester of graduation. First part of the University General Education Capstone course requirement. Prerequisite(s): HIST 2041 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: History, Social Studies.

**HIST 4991 Senior Thesis 2***1 Credit Normal Grading Mode*

Second part of the two-course departmental Capstone sequence for majors in History and Social Studies. Completion of the senior thesis under the direction of a paper director and a second reader. Student must present his or her senior thesis at a public forum. Required of History and Social Studies majors. Enrollment at least one semester before expected semester of graduation. Completes University General Education Capstone course requirement. Prerequisite(s): HSPS 4981 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: History, Social Studies.

**Subject- History and Politics (HSPS)****HSPS 1901 Special Topics In History and Politics***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**HSPS 2611 Contemporary Europe***3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture

**HSPS 2621 Contemporary Asia***3 Credits Normal Grading Mode*

Transformation of political systems, economic systems, societies, culture, art, religion, and the family in Asia since World War II. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**HSPS 2631 Contemporary Africa***3 Credits Normal Grading Mode*

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. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Thought/Culture.

**HSPS 2641 Contemporary Middle East***3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture



**HSPS 2651 Contemporary Latin America**

3 Credits Normal Grading Mode

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.

Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**HSPS 2901 Special Topics In History And Politics**

1 to 3 Credits Normal Grading Mode

May be repeated as topic varies. Unlimited repeats permitted.

**HSPS 4161 Russia And The Near Abroad**

3 Credits Normal Grading Mode

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**HSPS 4521 American Foreign Relations**

3 Credits Normal Grading Mode

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. Course Attributes: AS-HUM - Humanities, AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Thought/Culture.

**HSPS 4981 Senior Thesis 1**

1 Credit Normal Grading Mode

First part of the two-course departmental Capstone sequence for majors in History, Political Science and Social Studies who elect to enroll in this course sequence to meet the Capstone requirement. Selection of an interdisciplinary topic; development of bibliography, preliminary thesis, outline for senior thesis; examination of the norms of the disciplines; post-graduate planning; selection of thesis director for HSPS 4991. Required of History, Political Science, and Social Studies majors who elect to enroll in this course sequence to meet the departmental Capstone requirement. Enrollment at least two semesters before expected semester of graduation. First part of the University General Education Capstone course requirement. Prerequisite(s): HIST 2041 Minimum Grade of C or SOC 2531 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: History, History and Political Science, Political Science, Social Studies.

**HSPS 4991 Senior Thesis 2**

1 Credit Normal Grading Mode

Second part of the two-course departmental Capstone sequence for majors in History, Political Science, and Social Studies. Completion of an interdisciplinary senior thesis under the direction of a paper director and a second reader. Students must present his or her senior thesis at a public forum. Required of History, Political Science, Social Studies majors who elect to enroll in this course sequence to meet the departmental Capstone requirement. Enrollment at least one semester before expected semester of graduation. Completes University General Education Capstone course requirement. Prerequisite(s): HSPS 4981 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: History, History and Political Science, Political Science, Social Studies.

**Subject- Mathematics (MATH)****MATH 1201 Mathematics for Liberal Arts**

3 Credits Normal Grading Mode

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, numeration systems, number theory, modeling, consumer mathematics, apportionment, voting methods, and counting techniques. Offered fall and spring semesters. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**MATH 1251 College Algebra**

3 Credits Normal Grading Mode

The real number system, exponents, polynomials, factoring, rational expressions, equations and inequalities, functions and their graphs, polynomial and rational functions. 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. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**MATH 1301 The Mathematics of Social Issues**

3 Credits Normal Grading Mode

This is a mathematics course intended for non-mathematics, non-science majors. Students will examine current social justice issues through a mathematical lens. Topics may include but be limited to electoral distracting, fairness in voting, income inequality, climate change, infectious disease progression, human trafficking, racial profiling, student loans, social security, school choice, acceptance of same-sex relationships, and other topics as appropriate. Course Attributes: AS - Math/Natural Sciences, GE\_Knowledge of Math/Stats.

**MATH 1401 Precalculus**

3 Credits Normal Grading Mode

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 semester. Prerequisite(s): MATH 1251 Minimum Grade of D or ACT Math 21 or MATH SECTION SCORE 530. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**MATH 1461 Calculus for Life Sciences**

3 Credits Normal Grading Mode

Concepts of differentiation and integration applied to algebraic, exponential, and logarithmic functions. 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 1251 Minimum Grade of D or MATH 1401 Minimum Grade of D or ACT Math 23 or MATH SECTION SCORE 560. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**MATH 1631 Calculus 1**

4 Credits Normal Grading Mode

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. Offered fall and spring semesters. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**MATH 1641 Calculus 2**

4 Credits Normal Grading Mode

Inverse functions; logarithmic, exponential, inverse trig, hyperbolic and inverse hyperbolic functions; sequences and series; Taylor series; parametric curves; polar coordinates; conic sections. Offered fall and spring semesters. Prerequisite(s): MATH 1621 Minimum Grade of D or MATH 1631 Minimum Grade of D. Course Attributes: AS -Mathematics & Statistics.

**MATH 1661 Fundamental Mathematics 1**

3 Credits Normal Grading Mode

Problem solving skills and techniques, elementary set theory, whole numbers, integers, theory of arithmetic, and introductory number theory. Offered fall semester. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats. Must be enrolled in one of the following Fields of Study: Early Childhood Education, Middle Childhood Education.

**MATH 1671 Fundamental Mathematics 2**

3 Credits Normal Grading Mode

Rational and real numbers, introduction to the fundamentals of counting, probability and statistics, geometric figures, measurement, congruence, symmetry, constructions, transformations, and similarity. Offered spring semester. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats. Must be enrolled in one of the following Fields of Study: Early Childhood Education, Middle Childhood Education.

**MATH 1951 Freshman Seminar**

1 Credit Normal Grading Mode

Familiarization with the Mathematics and Statistics Department, requirements for majors, planning a program of courses, university catalog, career planning, and problem-solving. Must be enrolled in one of the following Fields of Study: Applied Mathematics, Mathematical Statistics, Mathematics, Statistics. This course is repeatable for a total of 1 hour.

**MATH 2011 History of Mathematics**

3 Credits Normal Grading Mode

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. Offered spring semester. Prerequisite(s):MATH 1431 Minimum Grade of D or MATH 1461 Minimum Grade of D or MATH 1621 Minimum Grade of D or MATH 1631 Minimum Grade of D. Course Attributes: AS -Mathematics & Statistics.

**MATH 2631 Calculus 3**

4 Credits Normal Grading Mode

Vectors and vector valued functions, planes and lines in space, multivariate functions, differential and integral calculus of multivariate functions. Offered fall and spring semesters. Prerequisite(s):MATH 1641 Minimum Grade of D. Course Attributes: AS -Mathematics & Statistics.

**MATH 2651 Differential Equations**

4 Credits Normal Grading Mode

Matrices and vector spaces; bases and dimension; first and second order linear differential equations with applications, Laplace transforms. Offered fall and spring semesters. Prerequisite(s):MATH 1641 Minimum Grade of D. Course Attributes: AS -Mathematics & Statistics.

**MATH 2901 Special Topics in Mathematics**

1 to 3 Credits Normal Grading Mode

Course Attributes: Requires Instructor Approval.

**MATH 2951 Sophomore Seminar**

1 Credit Normal Grading Mode

The course will assist students in taking the first steps in building their own list of classical mathematics problems, perform semi-independent investigation on selected mathematical problems (using appropriate software if necessary), applying for internships or REU's, and building their first resume. Must be enrolled in one of the following Classifications: Sophomore. Must be enrolled in one of the following Major fields of study: Applied Mathematics, Mathematics, Statistics.

**MATH 2971 Independent Study**

1 to 4 Credits Normal Grading Mode

This course may be repeated 2 times.

**MATH 3021 Mathematics and Pedagogy for Secondary Teachers**

4 Credits Normal Grading Mode

Methods of teaching secondary mathematics including concept construction, differentiation, assessment, and teaching strategies integrated with and demonstrated through enrichment and extension mathematics topics for the secondary mathematics classroom. Must have admissions to the Teacher Education Program. Includes 20 hours field experience. Prerequisite(s):MATH 2691 Minimum Grade of D.

**MATH 3041 Theory of Interest**

3 Credits Normal Grading Mode

General theories of interest rates and factors, level and varying annuities, non-annual interest rates and annuities, loan repayment, bond valuation, and additional topics in financial analysis. This course provides the background for SOA/CAS FM/2 professional actuary exam. Prerequisite(s):MATH 1641 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3061 Discrete Mathematics**

3 Credits Normal Grading Mode

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. Offered fall and spring semesters. Prerequisite(s):MATH 1641 Minimum Grade of C or MATH 1631 Minimum Grade of D or MATH 1621 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3251 Optimization**

3 Credits Normal Grading Mode

Linear programming: basic solutions, simplex method, duality theory, unconstrained optimization. Newton's method for minimization. Nonlinear programming, optimality conditions for constrained problems. Additional topics from linear and nonlinear programming. Prerequisite(s):MATH 2631 Minimum Grade of D and MATH 2651 Minimum Grade of D.

**MATH 3261 Linear Algebra**

3 Credits Normal Grading Mode

Finite and infinite dimensional vector spaces over a field, linear transformations, inner product spaces, and canonical forms. Offered fall semester. Prerequisite(s):MATH 2691 Minimum Grade of C or MATH 3061 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3411 Abstract Algebra 1**

3 Credits Normal Grading Mode

An introduction to algebraic structures; groups, rings and fields. Offered fall semester. Prerequisite(s):MATH 2691 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3421 Abstract Algebra 2**

3 Credits Normal Grading Mode

A continued study of groups, rings, and fields. Offered alternate spring semesters. Prerequisite(s):MATH 3411 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3611 Real Analysis 1**

3 Credits Normal Grading Mode

Real numbers, sequences, limits of functions, continuous functions. Offered fall semester. Prerequisite(s):MATH 2691 Minimum Grade of C or MATH 3061 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3621 Real Analysis 2**

3 Credits Normal Grading Mode

Continuous functions. Differentiation, derivative theorems, Taylor's formula. The Riemann integral and properties of integrals. Offered alternate spring semesters. Prerequisite(s):MATH 3611 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3631 Complex Variables***3 Credits Normal Grading Mode*

Complex algebra, complex calculus, analytic functions, infinite series over the complex plane, theory of residues, conformal mapping. Offered alternate spring semesters. Prerequisite(s):MATH 2631 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3651 Partial Differential Equations***3 Credits Normal Grading Mode*

First-order equations: the method of characteristics and systems of first-order equations. Second-order equations: the Cauchy-Kowaleskaya theorem, canonical forms of second-order equations, Fourier series, Fourier integrals, boundary-value and initial-value problems. Offered alternate spring semesters. Prerequisite(s):MATH 2631 Minimum Grade of C and MATH 2651 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 3701 MATLAB Computing and Fractals***2 Credits Normal Grading Mode*

Programming concepts and techniques using MATLAB. 2D/3D plots and animation. Numerical techniques for creating fractal images and animation. Interpolation. Prerequisite(s):MATH 2651 Minimum Grade of C.

**MATH 3901 Special Topics in Mathematics***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Instructor Approval.

**MATH 3951 Junior Seminar***1 Credit Normal Grading Mode*

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. Offered spring semester. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Applied Mathematics, Mathematical Statistics, Mathematics, Statistics.

**MATH 3981 Independent Research in Mathematics***1 to 3 Credits Normal Grading Mode*

The Independent Research in Mathematics courses will help student get immersed in a particular research topic that would result in a student conference or seminar presentation, thus offering them a genuine research experience. It is conducted as a research seminar in which students collaborate with the instructor as a team working towards finalizing the final product (conference presentation paper or poster). Prerequisite(s):MATH 1631 Minimum Grade of D. This course is repeatable for a total of 6 hours.

**MATH 4211 Foundations of Geometry***3 Credits Normal Grading Mode*

An axiomatic approach to geometry including the concepts of incidence, ordering, separation, and congruence in incidence, affine, Euclidean, and non-Euclidean geometries. Offered alternate fall semesters. Prerequisite(s):MATH 2691 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 4411 Number Theory & Cryptography***3 Credits Normal Grading Mode*

An introduction to number theory, modular arithmetic and finite fields, with applications to pseudo-random sequences, cryptography and coding theory. Offered alternate spring semesters. Prerequisite(s):MATH 1631 Minimum Grade of C or MATH 1621 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 4611 Numerical Analysis***3 Credits Normal Grading Mode*

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. Offered alternate spring semesters. Prerequisite(s):MATH 2651 Minimum Grade of C and (MATH 3601 Minimum Grade of C or ECCS 1611 Minimum Grade of C). Course Attributes: AS -Mathematics & Statistics.

**MATH 4651 Probability Theory***3 Credits Normal Grading Mode*

Axioms of probability theory; Discrete and continuous random variables; multivariate distributions; functions of random variables; Central Limit Theorem. Offered alternate fall semesters. Prerequisite(s):MATH 2631 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**MATH 4671 Probability and Graphs***3 Credits Normal Grading Mode*

Probability spaces and their role in combinatorics, discrete mathematical structures, and probabilistic algorithms with an emphasis on random graphs, with applications to Ramsey theory, real-world random networks modeling, probabilistic number theory and quasi-random sets. Prerequisite(s):MATH 1641 Minimum Grade of D.

**MATH 4901 Special Topics in Mathematics***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Instructor Approval.

**MATH 4951 Senior Capstone***1 Credit Normal Grading Mode*

The student prepares a paper and gives a presentation based on the work done in both MATH 3951 - Junior Seminar and this course. Offered fall and spring semesters. Prerequisite(s):MATH 3951 Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Fields of Study: Applied Mathematics, Mathematics, Statistics.

**MATH 4971 Independent Study***1 to 4 Credits Normal Grading Mode*

Prerequisite(s):MATH 2691 Minimum Grade of C. This course may be repeated 2 times.

**Subject- Modern Language (MLNG)****MLNG 2001 Exploring the World's Languages***3 Credits Normal Grading Mode*

Introduction to study of the world's languages, nature of human linguistic ability, cultural aspects of language diversity, variation and survival. Introduction to various branches of linguistic study, including phonetics, phonology, morphology, syntax, semantics. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures.

**MLNG 2021 Beyond Les Mis: Global Issues in French Musical Theatre***3 Credits Normal Grading Mode*

Oral and written analysis of global issues (e.g. poverty, immigration, war) as presented in French musical theatre. Study of musical and visual elements to understand artists' viewpoints on past and current global problems. Students will be invited to make connections between and among different productions in order to examine manifestations of and various solutions to these global concerns. No knowledge of French or musical theatre is necessary for this course. Course Attributes: GE\_Knowledge of Human Thought/Culture.

**MLNG 2901 Special Topics in Modern Languages**

3 Credits Normal Grading Mode

Special Topics offerings in Modern Languages. This course may be repeated 2 times.

**MLNG 4901 Special Topics in Modern Languages**

3 Credits Normal Grading Mode

Special topics offerings in Modern Languages This course may be repeated 2 times.

**Subject- Medical Laboratory Science (MLS)****MLS 4601 Foundations of Medical Laboratory Science**

3 Credits Normal Grading Mode

Lecture/laboratory coverage of the professional practices, including safety, regulatory issues, phlebotomy and specimen collection, handling, and processing, quality assurance, professionalism and ethics. There is an additional fee for this course. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4611 Professional Practice & Development**

3 Credits Normal Grading Mode

Lecture 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. There is an additional fee for this course. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4621 Biological Fluids**

4 Credits Normal Grading Mode

Lecture/laboratory coverage of various human body fluids, including urine, feces, 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. There is an additional fee for this course. Minimum grade of C for MLS majors. Course Attributes: AS-Natural Sciences, Requires Instructor Approval.

**MLS 4641 Hematology and Hemostasis**

4 Credits Normal Grading Mode

Lecture/laboratory coverage of human blood ontogeny, kinetics, pathophysiology, and methods used to diagnose, prognose, and monitor diseases of the blood, blood forming tissues, and disorders of hemostasis. There is an additional fee for this course. Minimum grade of C for MLS majors. Course Attributes: AS-Natural Sciences, Requires Instructor Approval.

**MLS 4651 Blood Banking & Transfusion Science**

4 Credits Normal Grading Mode

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. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4661 Medical Chemistry**

4 Credits Normal Grading Mode

Lecture/laboratory coverage of analytical principles, techniques, and applications of tests to diagnose, assess, and manage health and disease states. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4691 Medical Hematology Practicum**

4 Credits Normal Grading Mode

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. There is an additional fee for this course. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4701 Blood Bank Practicum**

4 Credits Normal Grading Mode

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. There is an additional fee for this course. Prerequisite(s):MLS 4651 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4711 Medical Chemistry Practicum**

3 Credits Normal Grading Mode

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. There is an additional fee for this course. Prerequisite(s):MLS 4661 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4721 Medical Microbiology Practicum**

4 Credits Normal Grading Mode

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. There is an additional fee for this course. Prerequisite(s):BIOL 3461 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4741 Case Studies in Medical Laboratory Science**

1 Credit Grading mode is S/U

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. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4901 Special Topics in Medical Laboratory Science**

1 to 3 Credits Normal Grading Mode

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. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science. This course is repeatable for a total of 6 hours.

**MLS 4921 MLS Capstone Experience**

1 Credit Normal Grading Mode

Students complete a 15 week clinical practicum experience at a WCOMLS program affiliate hospital laboratory. The practicum is arranged by the WCOMLS program director. Students must be a Medical Laboratory Science major or pursuing the post-baccalaureate certificate in Medical Laboratory Science. Corequisite(s): MLS 4941. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**MLS 4941 MLS Capstone Seminar**

1 Credit Normal Grading Mode

Written thesis and oral presentation of the Capstone (clinical practicum) experience. Students must be a Medical Laboratory Science major. Corequisite(s): MLS 4921. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science.

**Subject- Music (MUSC)****MUSC 0011 Concert and Recital Observation**

0 Credits Grading mode is S/U

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. Offered fall and spring semesters. Unlimited repeats permitted.

**MUSC 1001 Music Appreciation***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 1011 Introduction to the Study of Music***2 Credits Normal Grading Mode*

A survey of western art music from the Medieval through the Renaissance. Music terms, styles, composers and representative literature is emphasized. In addition, the basic concepts and issues involved on the academic study of music is covered, with in-depth discussions of career options for the music major, graduate school expectations, and music educator options. Offered fall semester. Music majors must pass with a C or better. A grade of C or higher is a prerequisite for Music History I and Music History II. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Fields of Study: Music, Music Education, Music Performance, Musical Theatre.

**MUSC 1041 Fundamentals of Music for Musical Theatre Majors***3 Credits Normal Grading Mode*

Reading and writing musical notation including rhythms, note names, scales, chords, intervals, and interpretation. Offered fall semester. Course Attributes: AS-FINRT Fine Arts.

**MUSC 1051 Musicianship for the Musical Theatre***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts.

**MUSC 1111 Music Theory I***3 Credits Normal Grading Mode*

Foundational music theory and harmony including analysis, part-writing, and creative projects in composition and arranging. Limited to music majors and/or minors. Offered fall semester. Corequisite(s): MUSC 1131. Course Attributes: AS-FINRT Fine Arts.

**MUSC 1121 Music Theory II***3 Credits Normal Grading Mode*

Continuation of MUSC 1111. Offered spring semester. Prerequisite(s): MUSC 1111 Minimum Grade of C. Corequisite(s): MUSC 1141. Course Attributes: AS-FINRT Fine Arts.

**MUSC 1131 Aural Skills I***1 Credit Normal Grading Mode*

Introduction to sight-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. Offered fall semester. Corequisite(s): MUSC 1111.

**MUSC 1141 Aural Skills II***1 Credit Normal Grading Mode*

Continuation of MUSC 1131. Offered spring semester. Prerequisite(s): MUSC 1131 Minimum Grade of C. Corequisite(s): MUSC 1121.

**MUSC 1301 Introduction to Sound & Recording Technology***3 Credits Normal Grading Mode*

Students will explore the basic principles involved in the process of sound reinforcement and recording, including microphones and the principles of sound transduction, basic analog audio electronics, device interconnection, shielding and grounding, analog-to-digital conversion, magnetic recording processes in both analog and digital systems, and standard practices of recording, mixing, editing, and mastering. Studio and live sound equipment are used in class, in studio exercises, and student projects.

**MUSC 1331 Singers Diction I***1 Credit Normal Grading Mode*

The proper pronunciation of vocal and choral texts in Italian and Latin, and English. Introduction of the International Phonetic Alphabet as it applies to all languages. Offered spring semester.

**MUSC 1401 Foundations of Music Education***1 Credit Normal Grading Mode*

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. Successful completion of this course is required for Music Faculty consideration for admission to the ONU Center for Teacher Education. Offered each fall semester. Must be enrolled in one of the following Major fields of study: Music Education.

**MUSC 1901 Special Topics***1 to 3 Credits Normal Grading Mode*

Topics include, but are not limited to special areas in music theory, music history, and/or music education. May be repeated as topics vary. Offered on demand. Course Attributes: Requires Department Approval.

**MUSC 2111 Music Theory III***3 Credits Normal Grading Mode*

Continuation of MUSC 1121. The study of 18th, 19th and 20th century compositional techniques, orchestration and counterpoint. Includes development of analytical skills. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C. Corequisite(s): MUSC 2131. Course Attributes: AS-FINRT Fine Arts.

**MUSC 2121 Music Theory IV***3 Credits Normal Grading Mode*

Continuation of MUSC 2111. Offered spring semester. Prerequisite(s): MUSC 2111 Minimum Grade of C. Corequisite(s): MUSC 2141. Course Attributes: AS-FINRT Fine Arts.

**MUSC 2131 Aural Skills III***1 Credit Normal Grading Mode*

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. Offered fall semester. Prerequisite(s): MUSC 1141 Minimum Grade of C. Corequisite(s): MUSC 2111.

**MUSC 2141 Aural Skills IV***1 Credit Normal Grading Mode*

Continuation for MUSC 2131. Offered spring semester. Prerequisite(s): MUSC 2131 Minimum Grade of C. Corequisite(s): MUSC 2121.

**MUSC 2201 Non-Western Music***3 Credits Normal Grading Mode*

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 each spring semester. Prerequisite(s): MUSC 1121 Minimum Grade of C. Course Attributes: AS-Non Western Cultural, AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 2271 Technology for Musicians and Educators***3 Credits Normal Grading Mode*

The use of technology in the music professions. Includes experiences with music notation and sequencing software, learning management systems, audio amplification, recording and editing, video recording and editing, and website creation and management. 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. Must be enrolled in one of the following Fields of Study: Music.

**MUSC 2301 Recording Studio Performance and Practice***3 Credits Normal Grading Mode*

This course is designed to explore intermediate and advanced principles regarding practices and the principles of sound transduction. This will include basic signal flow analyses, digital and analog sound synthesis, advanced microphone selection and placement techniques, MIDI mapping, audio sampling and sequencing using analog and digital interfaces, advanced audio editing using digital audio workstations, basic mixing and mastering techniques, and basic sound repair and maintenance. Studio and live sound equipment will be used in class, studio exercises, and student projects.

**MUSC 2311 Basic Conducting***2 Credits Normal Grading Mode*

Basic baton technique applied to choral and instrumental conducting practices. Includes score reading and rehearsal techniques for various ensembles. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C.

**MUSC 2331 Singers Diction II***1 Credit Normal Grading Mode*

Continuation of MUSC 1331, with specialized work in German. Offered alternate fall semesters. Prerequisite(s): MUSC 1331 Minimum Grade of C.

**MUSC 2341 Survey of Piano Literature***2 Credits Normal Grading Mode*

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. Permission of instructor required. Offered alternate spring semesters. Course Attributes: Requires Instructor Approval.

**MUSC 2351 Piano Pedagogy***2 Credits Normal Grading Mode*

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 methods of teaching individual and group piano; technology applicable to the above. Permission of instructor required. Offered alternate fall semesters. Course Attributes: Requires Instructor Approval.

**MUSC 2411 Woodwind Methods***1 Credit Normal Grading Mode*

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.

**MUSC 2421 Brass Methods***1 Credit Normal Grading Mode*

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.

**MUSC 2431 String Methods***1 Credit Normal Grading Mode*

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.

**MUSC 2441 Percussion Methods***1 Credit Normal Grading Mode*

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.

**MUSC 2551 Music Integration for PK-5 Educators***3 Credits Normal Grading Mode*

Strategies for the co-equal integration of standards-based objectives in music, English language arts, math, and social studies by Pk-5 classroom teachers and music educators. Elements of music and movement applied to developmentally appropriate practice and culturally responsive pedagogy. Offered alternating fall semesters in even years. Must be enrolled in one of the following Major fields of study: Early Childhood Education, Education, Middle Childhood Education, Music Education.

**MUSC 2901 Special Topics***1 to 3 Credits Normal Grading Mode*

Topics include, but are not limited to special areas in music theory, music history, and/or music education. May be repeated as topics vary. Offered on demand. Requires department approval. Unlimited repeats permitted.

**MUSC 2911 Independent Study***1 to 3 Credits Grading mode is S/U*

Individual study of a course of interest to, or needed by, a music major. May be repeated as the topic varies. Offered on demand. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Sophomore, Freshman. Must be enrolled in one of the following Fields of Study: Music, Music Education, Performance. Unlimited repeats permitted.

**MUSC 3151 Composition***2 Credits Normal Grading Mode*

Principles and practices general to all compositional styles applied to weekly composition projects. Includes score study of great works. Limited to music majors. Offered fall and spring semesters. Prerequisite(s): MUSC 2121 Minimum Grade of C and MUSC 2141 Minimum Grade of C. Unlimited repeats permitted.

**MUSC 3211 Music History and Literature I***3 Credits Normal Grading Mode*

A survey of the history of Western music from the Baroque and Classical 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. Designed for the music major and minor. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 3221 Music History and Literature II***3 Credits Normal Grading Mode*

A survey of the history of Western music from the Romantic and Modern 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. Designed for the music major and minor. Offered fall semester. Prerequisite(s): MUSC 1121 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 3231 Jazz History and Literature***3 Credits Normal Grading Mode*

Jazz from African influences through present developments; personalities involved in stylistic change. Listening-based; experiential component. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 3241 American Music***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 3251 African Music**

3 Credits Normal Grading Mode

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**MUSC 3271 Survey of Vocal Literature I**

1 Credit Normal Grading Mode

Study of recital vocal literature, focusing on the Lied, French melodie, and British and American art song. Some Russian and Czech literature included. Offered alternate fall semesters.

**MUSC 3281 Survey of Vocal Literature II**

1 Credit Normal Grading Mode

Continuation of MUSC 3271. Offered alternate spring semesters.

**MUSC 3311 Choral Conducting**

2 Credits Normal Grading Mode

Adaption 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 alternate spring semesters. Prerequisite(s):MUSC 2311 Minimum Grade of C.

**MUSC 3321 Instrumental Conducting**

2 Credits Normal Grading Mode

Adaption 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 alternate spring semesters. Prerequisite(s):MUSC 2311 Minimum Grade of C.

**MUSC 3331 Singers Diction III**

1 Credit Normal Grading Mode

Continued development of the skills acquired in Diction I, with specialized work in French. Offered alternate fall semesters. Prerequisite(s):MUSC 1331 Minimum Grade of C.

**MUSC 3461 Methods of Marching and Jazz Bands**

2 Credits Normal Grading Mode

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 every alternate fall semester. Prerequisite(s):MUSC 1121 Minimum Grade of C and MUSC 1141 Minimum Grade of C. Corequisite(s): MUSE 1051.

**MUSC 4111 Analytical Techniques**

2 Credits Normal Grading Mode

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 alternate fall semesters. Prerequisite(s):MUSC 2121 Minimum Grade of C and MUSC 2141 Minimum Grade of C.

**MUSC 4171 Instrumentation and Arranging**

2 Credits Normal Grading Mode

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.

**MUSC 4291 Applied Field Literature and Pedagogy for Instrumentalists**

2 Credits Normal Grading Mode

Study of the professional and pedagogical literature for each instrument except piano and voice. Offered on demand.

**MUSC 4481 Instrumental Music Methods**

3 Credits Normal Grading Mode

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 alternate spring alternate semesters. Course Attributes: AS-FINRT Fine Arts.

**MUSC 4491 Choral Music Methods**

3 Credits Normal Grading Mode

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, and curriculum. Twenty (20) hours of field experience required. Admission to the Teacher Education Program or approval of the Director of Teacher Education required. Limited to music education majors. Offered alternate fall semesters. A vocal ensemble or voice class is preferred to be taken ahead of time. Prerequisite(s):MUSE 1151 Minimum Grade of D or MUSE 1161 Minimum Grade of D or MUSE 1011 Minimum Grade of D or MUSL 0401 Minimum Grade of D. Course Attributes: AS-FINRT Fine Arts.

**MUSC 4601 Senior Capstone Research Project**

3 Credits Normal Grading Mode

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. Offered on demand. There is an additional fee for this course if a faculty or staff accompanist will be needed for a recital portion. Prerequisite(s):MUSL 2391 Minimum Grade of S. Course Attributes: AS-FINRT Fine Arts.

**MUSC 4911 Independent Study**

1 to 3 Credits Grading mode is S/U

Individual study of a course of interest to, or needed by, a music major. May be repeated as the topic varies. Offered on demand. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**Subject- Music Ensembles (MUSE)**

Membership in music ensembles is open to all university students. All ensembles may be repeated for credit.

**MUSE 1011 University Singers**

1 Credit Normal Grading Mode

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. All vocal majors must audition for this ensemble. Offered fall and spring semesters. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1021 Symphony Orchestra**

1 Credit Normal Grading Mode

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1041 Symphonic Band***1 Credit Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1051 Marching Band***1 Credit Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1131 Chamber Singers***1 Credit Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1171 Jazz Ensemble***1 Credit Normal Grading Mode*

The study and performance of characteristic jazz literature. Membership is by audition. Offered fall and spring semesters. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1181 Steel Drum Band***1 Credit Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1201 Percussion Ensemble***1 Credit Normal Grading Mode*

Studies and performs music specific to the varied world of percussion. Includes chamber 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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1231 Athletic Band***1 Credit Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1241 Composer's Workshop Ensemble***1 Credit Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1251 Chamber Music***1 Credit Normal Grading Mode*

Music for a small group of instruments, either with or without conductor, usually with one or two performers per part. Includes standard trios, quartets, and quintets for woodwinds, brass, strings, and piano as well as like-instrument ensembles or mixed ensembles with or without piano, and also percussion ensembles. Chamber music requires special musical and social skills that differ from the skills required to play solo works, or large-ensembles symphonic or vocal works. Chamber Music credits can fulfill the minor ensemble requirements. Offered fall and spring semesters. Unlimited repeats permitted. Course Attributes: AS-FINRT Fine Arts. Unlimited repeats permitted.

**MUSE 1261 Chamber Winds***1 Credit Normal Grading Mode*

A Chamber Winds ensemble is a heterogeneous ensemble of seven to sixteen instrumentalists, having one player to a part, in which wind instruments function in a primary role. Strings, keyboards, and percussion may be included only if they comprise less than half of the ensemble. The use of a conductor is implied, but is not a requirement. Open to all ONU students on an auditioned basis. Occasionally involves travel. Offered fall and Spring semesters. This course may be repeated 9 times. This course is repeatable for a total of 9 hours.

**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). 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.

Applied Area	Catalog Suffix	Applied Area	Catalog Suffix
Voice	A	Clarinet	M
Piano	B	Bassoon	N
Harpichord	C	Saxophone	O
Organ	D	French Horn	P
Guitar	E	Trumpet	Q
Harp	F	Trombone	R
Violin	G	Euphonium	S
Viola	H	Tuba	T
Cello	I	Percussion	U
Double Bass	J		
Flute	K		
Oboe	L		



**MUSL 0011 Applied Lessons for Non-Music Majors - Voice***1 Credit Normal Grading Mode*

Development of musical skills at all ability levels. Preference for placement in lessons is given to student participating in ONU ensembles. Skills include but are not limited to: repertoire; improvisation; sight-reading; technique; and other skills pertinent to students profession and interest. There is an additional fee for this course. Offered fall and spring semesters. Course Attributes: Requires Department Approval. May not be enrolled in one of the following Major fields of study: Music, Music Education, Music Performance. Unlimited repeats permitted.

**MUSL 0021 Supplemental Lessons for Music Majors - Voice***1 Credit Normal Grading Mode*

Development of musical skills at all ability levels for music majors who wish to broaden their knowledge in supplemental lessons on instruments or voice in addition to their major applied area of study. Skills include but are not limited to: repertoire, improvisation; sight-reading; technique; lead sheet reading; and other skills pertinent to student's profession and interest. Offered fall and spring semesters. Additional fee for voice only. Must be enrolled in one of the following Major fields of study: Music, Music Education, Music Performance. Unlimited repeats permitted.

**MUSL 0401 Voice Class for Non-Voice Majors***1 Credit Normal Grading Mode*

Introduction to a variety of technical exercises, improvisation and the basic concepts of vocal technique and song interpretation. Offered fall and spring semesters. Unlimited repeats permitted.

**MUSL 0421 Piano Class for Non-Music Majors***1 Credit Normal Grading Mode*

Applied piano study for non-majors with various levels of experience. Basic concepts for beginners and advanced concepts for experienced performers, according to individual skill level. Offered fall and spring semesters. Unlimited repeats permitted. May not be enrolled in one of the following Major fields of study: Music, Musical Theatre. Unlimited repeats permitted.

**MUSL 0431 Piano Class 1 for Musical Theatre Majors***1 Credit Normal Grading Mode*

Piano 1 Class is an introductory course to develop functional keyboard skills and a working knowledge of piano skills necessary for the musical theatre profession. Familiarizes students with basic aspects of fluent playing, sight-reading, intervals, harmonization of melodies, transposition/clefs, and improvisation while focusing on building the foundation of piano technique. Prior reading skills and knowledge of fundamentals is strongly recommended. Prior experience on the piano is not required. Offered fall and spring semesters. This course may be repeated. Must be enrolled in one of the following Major fields of study: Musical Theatre. Unlimited repeats permitted.

**MUSL 0441 Piano Class II for Musical Theatre Majors***1 Credit Normal Grading Mode*

Piano II Class is a continuation of MUSL 0431. Limited to Musical Theatre majors. Offered fall and spring semesters. This course may be repeated. Prerequisite(s):MUSL 0431 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Musical Theatre. Unlimited repeats permitted.

**MUSL 1011 Piano Skills for Music Majors I***1 Credit Normal Grading Mode*

Continuing course to develop functional keyboard skills and a working knowledge of piano in the music profession. Skills include: repertoire; pedaling; 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. Course Attributes: Requires Department Approval.

**MUSL 1021 Piano Skills for Music Majors II***1 Credit Normal Grading Mode*

Continuation of MUSL 1011. Offered fall and spring semesters. Prerequisite(s):MUSL 1011 Minimum Grade of C. Course Attributes: Requires Department Approval. This course may be repeated 3 times.

**MUSL 1071 Piano Class 1 for Music Majors***1 Credit Normal Grading Mode*

Piano Class 1 continues to develop functional keyboard skills and a working knowledge of piano in the music profession. Skills include: repertoire; pedaling; 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. This course may be repeated. Must be enrolled in one of the following Major fields of study: Music. Unlimited repeats permitted.

**MUSL 1081 Piano Class II for Music Majors***1 Credit Normal Grading Mode*

Piano Class II is a continuation of MUSL 1071. Limited to music majors. Offered fall and spring semesters. This course may be repeated. Prerequisite(s):MUSL 1071 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Music. Unlimited repeats permitted.

**MUSL 1111A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

First-year study in applied voice for Musical Theatre majors. There is an additional fee for this course. Offered fall and spring semesters.

**MUSL 1121A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

Continuation of MUSL 1111A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 1111A Minimum Grade of C.

**MUSL 1211 Applied Lessons for Music Majors/Voice***2 Credits Normal Grading Mode*

Applied lessons in voice to prepare for the respective proficiency exams and recitals required in the Bachelor of Arts and Bachelor of Music degree programs. There is an additional fee for this course. Offered fall and spring semesters. Must be enrolled in one of the following Classifications: First year.

**MUSL 1221 Applied Lessons for Music Majors/Voice***2 Credits Normal Grading Mode*

Continuation of MUSL 1211. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 1211 Minimum Grade of C. Must be enrolled in one of the following Classifications: First year.

**MUSL 2011 Piano Skills/Music Majors III***1 Credit Normal Grading Mode*

Continuation of MUSL 1021. Offered fall and spring semesters. Prerequisite(s):MUSL 1021 Minimum Grade of C. Course Attributes: Requires Department Approval. This course may be repeated 4 times.

**MUSL 2021 Piano Skills/Music Majors IV***1 Credit Normal Grading Mode*

Continuation of MUSL 2011. Offered fall and spring semesters. Prerequisite(s):MUSL 2011 Minimum Grade of C. Course Attributes: Requires Department Approval. This course may be repeated 5 times.

**MUSL 2041 Piano Proficiency Exam***0 Credits Grading mode is S/U*

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.

**MUSL 2071 Piano Class III for Music Majors***1 Credit Normal Grading Mode*

Piano Class III is a continuation of MUSL 1081. Limited to music majors. Offered fall and spring semesters. This course may be repeated. Prerequisite(s):MUSL 1081 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Music. Unlimited repeats permitted.

**MUSL 2081 Piano Class IV for Music Majors***1 Credit Normal Grading Mode*

Piano Class IV is a continuation of MUSL 2071. Limited to music majors. Offered fall and spring semester. This course may be repeated. Prerequisite(s):MUSL 2071 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Music. Unlimited repeats permitted.

**MUSL 2091 Piano Class V for Music Majors***1 Credit Normal Grading Mode*

Piano Class V is a continuation of MUSL 2081 either for additional preparation for piano proficiency (MUSL 2041) or for further piano training after the piano proficiency (MUSL 2041) is passed. Limited to music majors. Offered fall and spring semesters. This course may be repeated. Prerequisite(s):MUSL 2081 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Music. Unlimited repeats permitted.

**MUSL 2111A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

Continuation of MUSL 1121A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 1121A Minimum Grade of C.

**MUSL 2121A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

Continuation of MUSL 2111A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 2111A Minimum Grade of C.

**MUSL 2211 Applied Lessons for Music Majors/Voice***2 Credits Normal Grading Mode*

Continuation of MUSL 1221A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 1221A Minimum Grade of C. Must be enrolled in one of the following Classifications: Sophomore.

**MUSL 2221 Applied Lessons for Music Majors/Voice***2 Credits Normal Grading Mode*

Continuation of MUSL 2211A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 2211A Minimum Grade of C. Must be enrolled in one of the following Classifications: Sophomore.

**MUSL 2381 2nd Year Applied Proficiency Exam***0 Credits Grading mode is S/U*

Juried performance exam on the major applied instrument during second year, assessing basic competency in technique and musicality. Required for BA History/Literature and BA Theory/Composition track only. Offered fall and spring semesters. This course may be repeated 2 times. Must be enrolled in one of the following Campuses: Arts and Sciences. Must be enrolled in one of the following Concentration fields of study: Music History and Literature Concentration, Music Theory and Composition Concentration. This course may be repeated 2 times.

**MUSL 2391 Second Year Applied Proficiency Exam***0 Credits Grading mode is S/U*

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 for Bachelor of Music Education, Bachelor of Music Performance, and Bachelor of Arts in Music for Applied Studies track. This course may be repeated 1 time.

**MUSL 3111A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

Continuation of MUSL 2121A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 2121A Minimum Grade of C.

**MUSL 3121A Applied Lessons for Musical Theatre Majors/Voice***1 Credit Normal Grading Mode*

Continuation of MUSL 3111A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 3111A Minimum Grade of C.

**MUSL 3211 Applied Lessons for Music Majors/Voice***2 to 3 Credits Normal Grading Mode*

Continuation of MUSL 2221A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 2221A Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior.

**MUSL 3221 Applied Lessons for Music Majors/Voice***2 to 3 Credits Normal Grading Mode*

Continuation of MUSL 3211A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 3211A Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior.

**MUSL 3301 Half Recital***0 Credits Grading mode is S/U*

Recital at least 30 minutes in length given typically in the fourth year of study. Required for music education majors. There is an additional fee for this course. Offered fall and spring semesters.

**MUSL 3311 Junior Recital***1 Credit Grading mode is S/U*

Full length (60 minutes) recital in the third year of study. Required for performance majors. There is an additional fee for this course. Offered fall and spring semesters.

**MUSL 4111A Applied Lessons for Musical Theatre Majors***1 Credit Normal Grading Mode*

Fourth-year study in applied voice for musical theatre majors. Prerequisite(s):MUSL 3121A Minimum Grade of C. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Major fields of study: Musical Theatre. This course is repeatable for a total of 1 hour.

**MUSL 4121A Applied Lesson for Musical Theatre Majors***1 Credit Normal Grading Mode*

Fourth-year study in applied voice for musical theatre majors. Prerequisite(s):MUSL 3121A Minimum Grade of C. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Major fields of study: Musical Theatre. This course is repeatable for a total of 1 hour.

**MUSL 4211 Applied Lessons for Music Majors/Voice***2 to 3 Credits Normal Grading Mode*

Continuation of MUSL 3221A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 3221A Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior. This course may be repeated 1 time.

**MUSL 4221 Applied Lessons for Music Majors/Voice***2 to 3 Credits Normal Grading Mode*

Continuation of MUSL 4211A. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):MUSL 4211A Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior. This course may be repeated 1 time.

**MUSL 4311 Senior Capstone Recital***1 Credit Grading mode is S/U*

Full length (60 minutes) recital in the fourth year of study. Required for performance majors. There is an additional fee for this course. Offered fall and spring semesters.

## **Subject- Nursing (NURS)**

### **NURS 1101 Professional Concepts**

#### *1 Credit Normal Grading Mode*

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. Offered spring semester. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 2101 Physical Assessment (2+3+0)**

#### *3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Prerequisite(s):BIOL 2331 Minimum Grade of C or BIOL 2311 Minimum Grade of C and NURS 1101 Minimum Grade of C and CHEM 1201 Minimum Grade of C. Corequisite(s): BIOL 2341. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 2201 Pathophysiology**

#### *3 Credits Normal Grading Mode*

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 or BIOL 2341 Minimum Grade of C). Corequisite(s): NURS 2301, NURS 2501. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 2301 Fundamentals**

#### *5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered spring semester. Prerequisite(s):NURS 2101 Minimum Grade of C and (BIOL 2321 Minimum Grade of C or BIOL 2341 Minimum Grade of C) and BIOL 2151 Minimum Grade of C. Corequisite(s): NURS 2201, NURS 2501. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 2501 Pharmacology**

#### *3 Credits Normal Grading Mode*

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 or BIOL 2341 Minimum Grade of C). Corequisite(s): NURS 2201, NURS 2301. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 2991 Independent Study**

#### *1 to 3 Credits Normal Grading Mode*

Individual study of a course of interest to, or needed by a student to progress in the nursing curriculum. May be repeated according to the policies of the Department of Nursing. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 3101 Medical Surgical Nursing I (2.5+3+6)**

#### *5 Credits Normal Grading Mode*

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. There is an additional fee for this course. 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 3231, NURS 3301. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 3231 Older Adult Nursing**

#### *2 Credits Normal Grading Mode*

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.

### **NURS 3301 Transcultural Healthcare**

#### *2 Credits Normal Grading Mode*

To broaden an understanding and perspective of health and illness of differing sociocultural populations. Transcultural health care will introduce cultural influences which affect an individual's 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 3231. Must be enrolled in one of the following Fields of Study: Nursing.

### **NURS 3311 Global Medical Mission Experience**

#### *1 Credit Grading mode is S/U*

This course will allow students to prepare for and participate in the planning and implementation of a global medical mission experience in a third world country as part of an interprofessional healthcare team. This experience will support student development of cultural awareness and understanding, sensitivity to a diverse population, and deeper understanding of unique health care needs of an underserved population. It will include a 7 day study abroad experience as part of course expectations. Must be enrolled in one of the following Classifications: Sophomore, Pharmacy - Fourth Year, Pharmacy - Fifth Year, Junior, Pharmacy - Third Year. Must be enrolled in one of the following Major fields of study: Medical Laboratory Science, Nursing, Pharmacy. This course may be repeated 2 times.

### **NURS 3351 Nursing Research 1 and Informatics**

#### *3 Credits Normal Grading Mode*

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. Offered spring semester. Prerequisite(s):NURS 3231 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. Corequisite(s): NURS 3441, NURS 3501. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 3441 Mental Health Nursing (2+0+4)***3 Credits Normal Grading Mode*

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 3231 Minimum Grade of C. Corequisite(s): NURS 3351, NURS 3501. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 3501 Nursing Care of the Developing Child and Family (3.5+0+6)***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered spring semester. Prerequisite(s):NURS 3231 Minimum Grade of C and NURS 3101 Minimum Grade of C and NURS 3301 Minimum Grade of C. Corequisite(s): NURS 3351, NURS 3441. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 3801 Topics in Nursing***1 to 4 Credits Normal Grading Mode*

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. Prerequisite(s):NURS 3101 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Nursing. Unlimited repeats permitted.

**NURS 4101 Community Health Nursing (2+0+4)***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Prerequisite(s):NURS 3351 Minimum Grade of C and NURS 3501 Minimum Grade of C and NURS 3441 Minimum Grade of C. Corequisite(s): NURS 4201, NURS 4401. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 4201 Leadership and Management in Nursing***2 Credits Normal Grading Mode*

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 3441 Minimum Grade of C. Corequisite(s): NURS 4101, NURS 4401. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 4351 Nursing Research II***3 Credits Normal Grading Mode*

This required course is designed to explore the role of the nurse in research applications, research methods, and evidence-based care for clients. Focus will be on discussion of varied research methods, literature review and the writing process, project selection and development, review of the institutional review board (IRB) process, and professional poster preparation and presentation. Prerequisite(s):NURS 3351 Minimum Grade of C. Corequisite(s): NURS 4981. Must be enrolled in one of the following Major fields of study: Nursing.

**NURS 4401 Medical Surgical Nursing II (2.5+3+6)***5 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Prerequisite(s):NURS 3501 Minimum Grade of C and NURS 3441 Minimum Grade of C and NURS 3351 Minimum Grade of C. Corequisite(s): NURS 4101, NURS 4201. Must be enrolled in one of the following Fields of Study: Nursing.

**NURS 4801 Topics in Nursing***1 to 4 Credits Normal Grading Mode*

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. Prerequisite(s):NURS 4401 Minimum Grade of C. Must be enrolled in one of the following Fields of Study: Nursing. Unlimited repeats permitted.

**NURS 4981 Transition to Professional Practice: Nursing Capstone (2.5+0+14)***6 Credits Normal Grading Mode*

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. There is an additional fee for this course. 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.

**Subject- Philosophy (PHIL)****PHIL 1001 Theories of Human Nature***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 1011 Plato***3 Credits Normal Grading Mode*

Plato's early to middle dialogues, including the Republic. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/ Ethics

**PHIL 1021 Philosophy of Science***3 Credits Normal Grading Mode*

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? Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 1041 Philosophy and Film***3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 1051 Ethics, Justice and Law**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**PHIL 1901 Special Topics in Philosophy**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Unlimited repeats permitted.

**PHIL 2021 Ancient Philosophy**

*3 Credits Normal Grading Mode*

Greek philosophical traditions against the background of the Pre-Socratics and Socrates, with a special emphasis on Plato and Aristotle. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 2061 Philosophy of Identity**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**PHIL 2251 Philosophy of Religion**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 2281 Philosophy of Law**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**PHIL 2341 Logic**

*3 Credits Normal Grading Mode*

Logical fallacies and the principles of correct reasoning. The application of formal logical analysis to arguments encountered in ordinary language. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**PHIL 2401 Professional Ethics**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**PHIL 2431 Asian Philosophies**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**PHIL 2901 Special Topics in Philosophy**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Unlimited repeats permitted.

**PHIL 2971 Independent Study in Philosophy**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Fields of Study: Philosophy. Unlimited repeats permitted.

**PHIL 3101 Environmental Ethics**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics Must be enrolled in one of the following Classifications: Sophomore, Senior, Junior.

**PHIL 3201 Political Philosophy**

*3 Credits Normal Grading Mode*

Theories of political philosophy, such as social contract, libertarianism, utilitarianism, feminist, and political liberalism. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Society. Must be enrolled in one of the following Classifications: Sophomore, Senior, Junior.

**PHIL 3401 Metaphysics**

*3 Credits Normal Grading Mode*

Classical metaphysical questions about human nature and the world, such as the nature of reality, essence, existence, and causation. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**PHIL 3441 Ethical Theory**

*3 Credits Normal Grading Mode*

Major ethical theories, such as utilitarianism, deontology, and virtue theory. Additional topics, such as ethical egoism, moral realism, and ethical relativism. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**PHIL 3551 Epistemology**

*3 Credits Normal Grading Mode*

Knowledge, its origins, structure, scope, justification and limitations, with reference to such problems as skepticism, realism, sense perception, mental representation, opinion and truth. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**PHIL 3901 Special Topics in Philosophy**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior. Unlimited repeats permitted.

**PHIL 4811 Philosophy Senior Essay I***1 Credit Normal Grading Mode*

The first stage of the philosophy capstone project: completion of a rough draft of a critical essay on a topic selected in consultation with a faculty advisor. Course Attributes: AS-HUM - Humanities. Must be enrolled in one of the following Major fields of study: Philosophy.

**PHIL 4911 Philosophy Senior Essay II***2 Credits Normal Grading Mode*

The second and final stage of the philosophy capstone project: completion of and presentation of the critical essay begun in PHIL 4811. Prerequisite(s):PHIL 4811 Minimum Grade of C. Course Attributes: AS-HUM - Humanities. Must be enrolled in one of the following Major fields of study: Philosophy.

**PHIL 4971 Independent Study in Philosophy***1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Fields of Study: Philosophy. Unlimited repeats permitted.

**Subject- Physics (PHYS)****PHYS 1001 Conceptual Physics***3 Credits Normal Grading Mode*

Issues involving science and society, classical physics, relativity, atomic and nuclear physics. Students may not receive credit for PHYS 1001 after completion of either PHYS 2121 or 2321. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**PHYS 1051 Planetary Astronomy***3 Credits Normal Grading Mode*

Introduction to solar system science, history of astronomy, telescopes, basic earth science. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**PHYS 1061 Stars and Galaxies***3 Credits Normal Grading Mode*

Structure, motions and evolution of stars, interstellar material, galaxies and the universe as a whole. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**PHYS 1081 Planetary Astronomy Laboratory***1 Credit Normal Grading Mode*

Laboratory and mathematical companion to PHYS 1051.

**PHYS 1091 Stars and Galaxies Laboratory***1 Credit Normal Grading Mode*

Laboratory and mathematical companion to PHYS 1061.

**PHYS 2111 General Physics 1***3 Credits Normal Grading Mode*

Classic Newtonian mechanics. Oscillatory motion. Thermodynamics. Algebra and trigonometry used. The corresponding laboratory is PHYS 2341. Offered fall semester. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**PHYS 2121 General Physics 2***3 Credits Normal Grading Mode*

Electric and magnetic phenomena. Waves, sound, and optics. Algebra and trigonometry are used. The corresponding laboratory is PHYS 2351. Offered spring semester. Prerequisite(s):PHYS 2111 Minimum Grade of D or PHYS 2311 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 2311 Physics 1***3 Credits Normal Grading Mode*

Classic Newtonian mechanics. Oscillatory motion. Thermodynamics. Differential and integral calculus are used. The corresponding laboratory is PHYS 2341. Offered fall and spring semesters. Prerequisite(s):MATH 1611 Minimum Grade of D or MATH 1631 Minimum Grade of D. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Physical/Natural World.

**PHYS 2321 Physics 2***3 Credits Normal Grading Mode*

Electric and magnetic phenomena. Waves, sound, and optics. Differential and integral calculus are used. The corresponding laboratory is PHYS 2351. Offered fall and spring semesters. Prerequisite(s):PHYS 2311 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 2341 Physics Laboratory 1***1 Credit Normal Grading Mode*

Experiments in Newtonian mechanics. Oscillatory motion. Thermodynamics. PHYS 2111 or 2311 should be taken concurrently, or instructor's permission must be obtained. Offered fall and spring semesters.

**PHYS 2351 Physics Laboratory 2***1 Credit Normal Grading Mode*

Experiments in electricity and magnetism, and optics. PHYS 2121 or 2321 should be taken concurrently, or instructor's permission must be obtained. Offered fall and spring semesters.

**PHYS 2901 Special Topics in Physics***1 to 3 Credits Normal Grading Mode*

This course may be repeated 4 times. This course is repeatable for a total of 6 hours.

**PHYS 2931 Independent Study***1 to 3 Credits Normal Grading Mode*

Individual study of topics in physics. May be repeated as the topic varies. Must be enrolled in one of the following Classifications: Sophomore, Freshman. Unlimited repeats permitted.

**PHYS 3011 Advanced Physics Research Lab***2 Credits Normal Grading Mode*

Statistical analysis of data and error propagation. Linear and non-linear curve fitting. Design and construction of scientific apparatus. Signal conditioning. Optical techniques. Vacuum systems. Research and scholarship ethics. Offered alternate spring semesters. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D.

**PHYS 3051 Modern Physics***3 Credits Normal Grading Mode*

General and special relativity, quantum and wave mechanics, atomic and nuclear physics. Offered spring semester. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3111 Nuclear Physics***3 Credits Normal Grading Mode*

Nuclear structure, nuclear reactions, nuclear constituents, fundamentals of nuclear reactor theory and design, shielding and safety principles in nuclear physics. Offered alternate spring semesters. Course Attributes: AS-Natural Sciences.

**PHYS 3311 Physics of Photovoltaic Materials***3 Credits Normal Grading Mode*

The course provides a thorough understanding of the principles and technology of various renewable energy sources and their environmental impact. The focus is on photovoltaic (PV) conversion of solar energy. We will discuss various types of solar cells - some still in research phase, some currently in use in industry - from the established crystalline silicon solar cells to the recently developed perovskite solar cells, with emphasis on the physics of the material used in the cells. Prerequisite(s):PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3411 Optics***3 Credits Normal Grading Mode*

Elements of geometrical optics; wave optics: interference, diffraction, polarization; Fourier optics; basics of coherence theory and properties of lasers; holography: theory and actual exposure of various types of holograms. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3451 Math Methods***3 Credits Normal Grading Mode*

Mathematics applied to solving physical problems in electricity and magnetism, mechanics, quantum mechanics, optics. Vector analysis: gradient, divergence, curl; tensor analysis; determinants and matrices: eigenvalues and eigenvectors, diagonalization; series solutions of differential equations: Legendre equation, Hermite polynomials; Fourier series and transform. Offered alternate fall semesters. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3471 Introductory Astrophysics***3 Credits Normal Grading Mode*

Physical nature of planets, stars, galaxies and the universe as a whole. Particle and wave properties of light and matter, the Bohr atom, and astronomical instrumentation. Offered alternate years. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3511 Solid State***3 Credits Normal Grading Mode*

Basic elements of the physics of solids: the crystalline structure; thermal and electrical conductivity; semiconductors; magnetic properties of solids; superconductivity. Prerequisite(s):PHYS 3051 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3531 Statistical Mechanics***3 Credits Normal Grading Mode*

Properties of gases, thermal properties of solids and liquids. Thermodynamic laws. Heat transfer. Kinetic thermodynamic laws. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3571 Computational Physics***3 Credits Normal Grading Mode*

Methods and problems in computational physics. Prerequisite(s):PHYS 3451 Minimum Grade of D and ECCS 4611 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3731 Analytical Mechanics***3 Credits Normal Grading Mode*

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. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3751 Quantum Mechanics***3 Credits Normal Grading Mode*

The mathematical language of quantum mechanics; the postulates of quantum mechanics; the one-dimensional Schrodinger equation; the 3-dimensional Schrodinger equation; the hydrogen atom; angular momentum; the interpretation of quantum mechanics. Offered alternate fall semesters. Prerequisite(s):PHYS 2121 Minimum Grade of D or PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 3901 Special Topics in Physics***1 to 3 Credits Normal Grading Mode*

This course may be repeated 4 times. This course is repeatable for a total of 6 hours.

**PHYS 3951 Capstone I***1 to 2 Credits Grading mode is S/U*

This course may be repeated 4 times. This course is repeatable for a total of 8 hours.

**PHYS 3971 Independent Research***1 to 3 Credits Grading mode is S/U*

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.

**PHYS 4111 Electricity and Magnetism 1***3 Credits Normal Grading Mode*

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. Prerequisite(s):PHYS 2321 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 4121 Electricity and Magnetism 2***3 Credits Normal Grading Mode*

Advanced electric and magnetic fields; electric and magnetic properties of solids, electromagnetic radiation. Offered alternate spring semesters. Prerequisite(s):PHYS 4111 Minimum Grade of D. Course Attributes: AS-Natural Sciences.

**PHYS 4131 Introduction to Quantum Computing***3 Credits Normal Grading Mode*

The basic ideas of superposition and entanglement inherent to quantum states make it possible to develop quantum computers. We will explore how qubits can be manipulated through quantum logical gates to carry out the quantum version of various algorithms. Algorithms covered: Grover's search algorithm, Deutsch's algorithm, the quantum Fourier transform (QFT). QFT application to quantum cryptography as well as a discussion of the current stage in making a quantum computer will be addressed. Prerequisite(s):PHYS 3751 Minimum Grade of D. Course Attributes: AS - Math/Natural Sciences.

**PHYS 4151 Plasma Physics***3 Credits Normal Grading Mode*

Single particle motions. Plasmas as fluids. Waves and wave formation in plasmas. Nonlinear effects in plasmas. Course Attributes: AS-Natural Sciences.

**PHYS 4901 Special Topics in Physics***1 to 3 Credits Normal Grading Mode*

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.

**PHYS 4931 Independent Study***1 to 3 Credits Normal Grading Mode*

Individual study of topics in physics. May be repeated as the topic varies. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**PHYS 4951 Capstone II***2 Credits Normal Grading Mode*

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. Prerequisite(s):PHYS 3951 Minimum Grade of D.

**Subject- Political Science (PLSC)****PLSC 1011 Introduction to American Politics***3 Credits Normal Grading Mode*

Constitutional underpinnings, political behavior, processes, and institutions of American national politics. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 1021 Introduction to International Relations***3 Credits Normal Grading Mode*

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. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

**PLSC 1031 Introduction to Comparative Politics**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

**PLSC 1961 Independent Study in Political Science**

*1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PLSC 2021 Global Society and World Peace**

*3 Credits Normal Grading Mode*

Global peace requires collective efforts by various actors from diverse cultural backgrounds to deal with our collective problems. However, due to global cultural differences and associated differential values, proposed solutions to global problems mostly generate disagreements fueled by subjectivity. The focus of this course is to bridge this gap by helping students analyze global issues objectively. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science, GE\_Diverse Cultures.

**PLSC 2501 State and Local Politics**

*3 Credits Normal Grading Mode*

Legal underpinnings, political behavior, processes, and institutions of American states and localities. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 2661 Public Administration**

*3 Credits Normal Grading Mode*

Bureaucrats as actors in the American political system, their sources of power, and their relationship to elected public officials. American Politics Elective Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 2701 Gender and Politics**

*3 Credits Normal Grading Mode*

This course provides an overview to the field of gender and politics by examining the influence of gender in politics as well as how politics influences issues related to gender. We will cover the central concepts, questions, and debates within the field, and discuss the theoretical and methodological frameworks for studying gender and politics. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AM\_P - American Politics, AS-SOCSCI - Social Science, GE\_Diverse Cultures.

**PLSC 2901 Special Topics In Political Science**

*1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**PLSC 2961 Independent Study in Political Science**

*1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PLSC 3061 Environmental Law**

*3 Credits Normal Grading Mode*

American legal system used to preserve the nation's environment. Significant environmental laws and policies developed for implementation. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3211 Political Parties And Interest Groups**

*3 Credits Normal Grading Mode*

Formation, maintenance, and influence of interest groups and political parties in the United States. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3221 Campaigns And Elections**

*3 Credits Normal Grading Mode*

Theory, practice and role of voting behavior in the United States. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 3231 Mass Media And Politics**

*3 Credits Normal Grading Mode*

Historical development and contemporary operation of the mass media as they relate to the American political system. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3241 Film And Politics**

*3 Credits Normal Grading Mode*

Historical development and contemporary role of films that relate to political processes and institutions. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3251 Popular Culture In American Politics**

*3 Credits Normal Grading Mode*

Historical development and contemporary role of popular culture in American politics. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3301 Comparative Politics Of Democracies**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3311 Comparative Politics In The Developing World**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3411 Human Rights**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.



**PLSC 3421 Conflict Analysis And Resolution***3 Credits Normal Grading Mode*

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.

Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

**PLSC 3431 Terrorism***3 Credits Normal Grading Mode*

Forms of terrorism in the world. Relative threats characteristic of different forms of terrorism. Origins, causes, motivations, scope for growth, and effectiveness of terrorist strategies. The role of the media. Counterterrorist responses, including domestic counterterrorism, international counterterrorism, and intelligence. Effectiveness of these responses. International Politics Elective. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of H

**PLSC 3441 Wars In Africa***3 Credits Normal Grading Mode*

Causes and types of war in Africa. Processes of resolution and management of civil wars by interested stake holders. Global responses, underlying principles for such responses, and their effectiveness. Obstacles to the resolution of civil wars in Africa. International Politics Elective. Course Attributes: AS -Non Western Cultural, AS-International Studies, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society, Integration.

**PLSC 3501 Constitutional Law And Government***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 3511 Constitutional Law And Civil Liberties***3 Credits Normal Grading Mode*

Late nineteenth, twentieth, and twenty-first century decisions of the Supreme Court pertaining to civil liberties, civil rights, and criminal justice. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 3541 Judicial Process, Behavior, And Impact***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3601 Introduction to Health Policy***3 Credits Normal Grading Mode*

An introduction of the basics of US health policy. Review of the policy-making process as it applies to public health. Focus on issues to access, cost, and quality of care. Other covered topics include workforce development, long-term care, health promotion, and state activity following the passage of the Affordable Care Act. Course Attributes: AM\_P - American Politics, AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3671 Policy Analysis***3 Credits Normal Grading Mode*

Basic dynamics and problems of policymaking and the widely used analytical approaches to public policy. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PLSC 3881 International Law And Organizations***3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1321 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-International Studies, AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

**PLSC 3901 ST- Political Science***1 to 3 Credits Normal Grading Mode*

May be repeated as topic varies. Unlimited repeats permitted.

**PLSC 3961 Independent Study in Political Science***1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PLSC 4091 The Presidency***3 Credits Normal Grading Mode*

Development and operation of the Presidency. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 4111 Congress***3 Credits Normal Grading Mode*

Structure and operation of Congress. American Politics Elective. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 4581 Western Political Thought 1***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 4591 Western Political Thought 2***3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge/ Principles of Civics/Ethics

**PLSC 4711 Public Service Internship Program***1 to 6 Credits Grading mode is S/U*

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 PLSC 4711 to a PLSC Elective major requirement. Student may apply up to 6 credit hours of departmental internship to the BA degree. Completion of the application process; 2.75 GPA. Must be enrolled in one of the following Classifications: Junior, Senior. This course is repeatable for a total of 6 hours.

**PLSC 4721 Seminar - The Washington Center Seminar**

3 Credits Grading mode is S/U

Course Attributes: AS-SOCSCI - Social Science, Requires Department Approval.

**PLSC 4731 Washington Center Internship**

1 to 6 Credits Grading mode is S/U

Field Experience to take place through the Washington Center Internship program. May not be enrolled in one of the following Classifications: Freshman. This course is repeatable for a total of 6 hours.

**PLSC 4751 Model United Nations**

1 to 2 Credits Normal Grading Mode

Simulation based course where students act as world leaders within the United Nations framework. Course preparation to travel to and participate in a Model UN conference. Students may apply 3 credit hours of Model United Nations to the Political Science/International Politics major (Academic Component). Students may apply up to 9 hours of Model United Nations to the BA degree. There is an additional fee for this course. Open to any major. This course is repeatable for a total of 9 hours.

**PLSC 4761 Mock Trial**

1 to 2 Credits Normal Grading Mode

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 major. Student may apply up to 6 credit hours of Mock Trial to the BA degree. Confers up to 3 hours of American Politics Elective credit. There is an additional fee for this course. Open to any major. This course is repeatable for a total of 6 hours.

**PLSC 4961 Independent Study In Political Science**

1 to 3 Credits Normal Grading Mode

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PLSC 4981 Senior Thesis 1**

1 Credit Normal Grading Mode

First part of the two-course departmental Capstone sequence for majors in Political Science. Topic selection; development of bibliography, preliminary thesis, outline for senior thesis; examination of the norms of the discipline; post-graduate planning; selection of thesis director for PLSC 4991. Required of all Political Science majors. Enrollment at least two semesters before expected semester of graduation. First part of the University General Education Capstone course requirement. Prerequisite(s):ISR 2531 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Political Science.

**PLSC 4991 Senior Thesis 2**

1 Credit Normal Grading Mode

Second part of the two-course departmental Capstone sequence for majors in Political Science. Completion of the senior thesis under the direction of a paper director and a second reader. Student must present his or her senior thesis at a public forum. Required of all Political Science majors. Enrollment at least one semester before expected semester of graduation. Completes University General Education Capstone course requirements. Prerequisite(s):PLSC 4981 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior Must be enrolled in one of the following Fields of Study: Political Science.

**Subject- Psychology (PSYC)****PSYC 0011 Psychology Major Orientation**

1 Credit Grading mode is S/U

This course is designed to give Psychology majors the knowledge and tools they need to get the most out of the major, and assist them in making informed decisions about extra-curricular experiences that will enhance their future career success. Topics include but are not limited to: teaching skill sets that will help students acclimate to college, learning various research and practicum opportunities in the department, and reviewing the various career options within the field. Must be enrolled in one of the following Major fields of study: Psychology.

**PSYC 1001 Psychology**

3 Credits Normal Grading Mode

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**PSYC 2001 Brain and Behavior**

3 Credits Normal Grading Mode

Introduction to the biological basis of behavior. Lecture topics will focus on the fundamental principles underlying neural communication, neurotransmitters systems, brain structure and function, and how they collectively result in overt behaviors. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Must be enrolled in one of the following Major fields of study: Psychology.

**PSYC 2151 Development across the Lifespan**

3 Credits Normal Grading Mode

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society. May not be enrolled in one of the following Major fields of study: Psychology.

**PSYC 2161 Child Psychology**

3 Credits Normal Grading Mode

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. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 2171 Adolescent Psychology**

3 Credits Normal Grading Mode

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 spring semester. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 2201 Health Psychology**

3 Credits Normal Grading Mode

Examination of 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 spring semester. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 2311 Abnormal Psychology**

3 Credits Normal Grading Mode

The development of a scientific approach to abnormal behavior. A review of the psychological, sociological, and biological factors related to the development of abnormal behavior. A review of the research of, the causal factors related to, and the diagnosis and treatment of mental disorders and intellectual disability. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 2401 Statistics for the Behavioral Sciences***4 Credits Normal Grading Mode*

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. Lab component will instruct students on use of SPSS software with respect to the statistical procedures specific to the course. This course may be used to fulfill a math/stat distributional requirement. Offered fall semester. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Math/Stats. Must be enrolled in one of the following Fields of Study: Psychology.

**PSYC 2901 Special Topics in Psychology***3 Credits Normal Grading Mode*

Coverage of special topics in psychology. This course may be repeated as topic changes. Offered fall and spring semesters. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**PSYC 2971 Independent Study in Psychology***1 to 3 Credits Normal Grading Mode*

Independent Study Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PSYC 3011 Social Psychology***3 Credits Normal Grading Mode*

The effects of social and cultural forces upon the individual. Topics covered include attitudes and behaviors, social perception and cognition, conformity, persuasion, group influence, aggression, attraction, helping behavior, racism, and sexism. Offered fall semester. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3111 Psychology of Personality***3 Credits Normal Grading Mode*

Analysis and contemporary/historical context of the major theories of personality. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3131 Introduction to Clinical Psychology***3 Credits Normal Grading Mode*

An introduction to the discipline of clinical psychology and clinical analysis, including an overview of sub-disciplines, exposure to clinical skills, and a review of pertinent clinical literature. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3151 Learning and Behavior with Lab***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3171 Adulthood and Aging***3 Credits Normal Grading Mode*

Survey of the basic theories and research relative to human growth and development from mid-life through late life with an emphasis on the physiological, cognitive, socioemotional, and cultural changes and differences associated with human life. Offered alternate fall semesters. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3251 Cognitive Psychology with Lab***4 Credits Normal Grading Mode*

An introduction to the study of various aspects of mental activities. 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 generating research methodologies to address various issues in cognition. There is an additional fee for this course. Offered spring semester. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3301 Sensation and Perception with Lab***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered alternate fall semesters. Prerequisite(s):PSYC 1001 Minimum Grade of C and (PSYC 2001 Minimum Grade of C or BIOL 1131 Minimum Grade of C or BIOL 1211 Minimum Grade of C or BIOL 1301 Minimum Grade of C). Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3351 Physiological Psychology with Lab***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered spring semester. Prerequisite(s):PSYC 1001 Minimum Grade of C and (PSYC 2001 Minimum Grade of C or BIOL 1301 Minimum Grade of C or BIOL 1211 Minimum Grade of C or BIOL 1131 Minimum Grade of C). Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3401 Experimental Psychology with Lab***4 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s):PSYC 2401 Minimum Grade of C or STAT 1561 Minimum Grade of C or STAT 1311 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 3901 Special Topics in Psychology***3 Credits Normal Grading Mode*

Coverage of special topics in psychology. This course may be repeated as topic changes. Offered fall and spring semesters. Prerequisite(s):PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**PSYC 4261 Practicum in Psychology***1 to 3 Credits Grading mode is S/U*

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. This course is repeatable for a total of 9 hours.

**PSYC 4271 Research Practicum in Psychology***1 to 6 Credits Normal Grading Mode*

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. Unlimited repeats permitted.

**PSYC 4281 Teaching Practicum in Psychology**

*1 to 4 Credits Normal Grading Mode*

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 3401 Minimum Grade of B. Course Attributes: AS-SOCSCI - Social Science. This course may be repeated 2 times. This course is repeatable for a total of 8 hours.

**PSYC 4291 Independent Research in Psychology**

*1 to 4 Credits Normal Grading Mode*

Faculty-mentored independent research projects that are approved by the department and chair. This course is repeatable for a total of 6 hours.

**PSYC 4301 Multicultural Psychology**

*3 Credits Normal Grading Mode*

Knowledge of key concepts in multicultural psychology including: stereotyping, prejudice, discrimination, racism, privilege, acculturation, identity development, culture and mental health, cultural worldviews, multiculturalism in research and assessment, multiculturalism in psychotherapy. Class includes experiential components designed to develop an awareness of personal identity and biases.

Prerequisite(s): PSYC 1001 Minimum Grade of C and PSYC 2311 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**PSYC 4311 Child Psychopathology**

*3 Credits Normal Grading Mode*

Students will examine the research from the fields of clinical and developmental psychology in order to understand the biological, cognitive, social, and psychological factors influencing the etiology and progression of psychological disorders in childhood. Expectations will include reading, discussion, and evaluation of empirical articles as well as student presentations. Prerequisite(s): (PSYC 1001 Minimum Grade of C and PSYC 2311 Minimum Grade of C and PSYC 2151 Minimum Grade of C) or PSYC 2161 Minimum Grade of C or PSYC 2171 Minimum Grade of C.

**PSYC 4351 Psychopharmacology**

*3 Credits Normal Grading Mode*

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 PSYC 2001 Minimum Grade of C) or (BIOL 1131 Minimum Grade of C or BIOL 1211 Minimum Grade of C or BIOL 1301 Minimum Grade of C). Course Attributes: AS-SOCSCI - Social Science.

**PSYC 4901 Special Topics in Psychology**

*3 Credits Normal Grading Mode*

Coverage of special topics in psychology. This course may be repeated as topic changes. Offered fall and spring semesters. Prerequisite(s): PSYC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Unlimited repeats permitted.

**PSYC 4911 Child Development Center Practicum**

*1 to 3 Credits Normal Grading Mode*

This course is designed to provide students with hands-on experience with toddlers and young children at the ONU Child Development Center (CDC). Students will assist with care of the children at the Child Development Center and will do a semi-independent review of child development. Students will apply areas of child development by observing children's behaviors at the CDC as they relate to normative development, and students will create developmentally appropriate tasks for the children at the CDC. Prerequisite(s): PSYC 1001 Minimum Grade of C. Course Attributes: Requires Instructor Approval. This course is repeatable for a total of 3 hours.

**PSYC 4951 Senior Capstone in Psychology I**

*1 Credit Normal Grading Mode*

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 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 and spring semesters. Prerequisite(s): PSYC 1001 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

**PSYC 4961 Senior Capstone in Psychology II**

*1 Credit Normal Grading Mode*

Continuation of PSYC 4951. There is an additional fee for this course. Offered fall and spring semesters. Prerequisite(s): PSYC 1001 Minimum Grade of C and PSYC 3401 Minimum Grade of C and PSYC 4951 Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior.

**PSYC 4971 Independent Study in Psychology**

*1 to 4 Credits Normal Grading Mode*

Offered fall and spring semesters. This course may be repeated 1 time.

**Subject- Religion (RELG)****RELG 1001 Death and Beyond in World Religions**

*3 Credits Normal Grading Mode*

An examination of distinct religious perspectives on individuals' dying, afterlife, and additional goals beyond the experience of physical death. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**RELG 1021 Christianity and Natural World**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge/ Principles of Civics/Ethics

**RELG 1031 Religion and Culture**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Society.

**RELG 1041 Women in the Bible**

*3 Credits Normal Grading Mode*

The portrayal of women in the Old and New Testaments with secondary readings of feminist theory. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**RELG 1051 American Christianity**

*3 Credits Normal Grading Mode*

An introductory survey of the varieties of American Christian religious experience, from Puritanism to Mormonism, from evangelicalism to the rise of Pentecostalism/charismatic movement, to newer expressions of the church. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**RELG 1061 The Bible and the Environment**

*3 Credits Normal Grading Mode*

Humans construct their understanding of "nature" and "culture" and this is evident in how the Bible constructs its various views of the environment of ancient Israel. As a foundational literary text in Western civilization, the Bible's construction of "nature" and "culture" influences contemporary understandings of environmental issues. Thus, the study of the Bible can help us understand more about human attitudes concerning contemporary environmental issues and a better understanding of environmental issues can see how to understand the Bible's constructions of ancient environment period. Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**RELG 1071 Religions East and West**

*3 Credits Normal Grading Mode*

Representative major religions of the world, their origins, sacred writings, basic beliefs, and life practices, with special attention to non-Western religious traditions. Course Attributes: AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture.

**RELG 1901 Special Topics In Religion**

*3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Course Attributes: AS-HUM - Humanities. Unlimited repeats permitted.

**RELG 2001 Introduction to Old Testament**

*3 Credits Normal Grading Mode*

Critical reading of the Old Testament (Hebrew Bible): its historical background, literary features, and theological claims. Course Attributes: AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture.

**RELG 2011 Introduction to New Testament**

*3 Credits Normal Grading Mode*

Critical reading of the New Testament: its historical background, literary features, and theological claims. Course Attributes: AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture.

**RELG 2031 Eastern Religious Traditions**

*3 Credits Normal Grading Mode*

Major religions of Asia: their origins, sacred writings, basic beliefs, life practices, and, where applicable, presence in the West. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_Diverse Cultures, GE\_ Knowledge of Human Thought/Culture.

**RELG 2071 Bible and Empire**

*3 Credits Normal Grading Mode*

The Bible itself is literature written when the Jewish and Christian authors were subjects of imperial power from the Babylonian Empire to the Roman Empire. Later the Christian Bible was used as an imperial tool for the colonization of Africa, Asia, Australasia, and the Americas by European countries and this history continues today influencing the globalization of Western culture. However, non-Western Christians have taken the interpretation of the Bible into their own hands to use it as a liberating tool against colonization and globalization. Thus, the study of the Bible can profit much from a better understanding of postcolonial theory. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_ Knowledge of Human Thought/Culture, Philosophy and Religion.

**RELG 2081 Women and Religion**

*3 Credits Normal Grading Mode*

Cross-cultural investigation of the relationship between women and religion, exploration of images of women, their prescribed gender roles and experiences in major religions. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-HUM - Humanities, GE\_Diverse Cultures, GE\_ Knowledge of Human Thought/Culture.

**RELG 2911 Special Topics in Religion**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Unlimited repeats permitted.

**RELG 2981 Independent Study in Religion**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Fields of Study: Religion, Youth Ministry. Unlimited repeats permitted.

**RELG 3001 Christian Thought to 1500**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**RELG 3011 Christian Thought 1500 to the Present**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**RELG 3021 Buddhism**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**RELG 3031 Hinduism**

*3 Credits Normal Grading Mode*

The ideas and practices of the Hindu tradition, with emphasis on historical development, varied literatures, societal influence, and encounters with the contemporary West. Course Attributes: AS -Non Western Cultural, AS-HUM - Humanities, GE\_ Knowledge of Human Thought/Culture. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**RELG 3911 Special Topics in Religion**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior. Unlimited repeats permitted.

**RELG 4901 Religion Senior Essay I**

*1 Credit Normal Grading Mode*

The first stage of the capstone project for religion majors and youth ministry majors: completion of an annotated bibliography on a selected topic in consultation with a faculty advisor. Course Attributes: AS-HUM - Humanities. Must be enrolled in one of the following Major fields of study: Religion, Youth Ministry.

**RELG 4911 Religion Senior Essay II**

*2 Credits Normal Grading Mode*

The second and final stage of the capstone project for religion majors and youth ministry majors: completion of and presentation of the research paper proposed in RELG 4901. Prerequisite(s): RELG 4901 Minimum Grade of C. Course Attributes: AS-HUM - Humanities. Must be enrolled in one of the following Major fields of study: Religion, Youth Ministry.

**RELG 4981 Independent Study in Religion**

*1 to 3 Credits Normal Grading Mode*

May be repeated for credit, depending on content. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Fields of Study: Religion, Youth Ministry. Unlimited repeats permitted.

**Subject- Russian (RUSS)****RUSS 1011 Elementary Russian 1**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS -Foreign Language.

**RUSS 1021 Elementary Russian 2**

*3 Credits Normal Grading Mode*

Continuation of RUSS 1011. Offered alternate spring semesters.  
Prerequisite(s):RUSS 1011 Minimum Grade of D or RUSS 150 Minimum Grade of D. Course Attributes: AS -Foreign Language.

**RUSS 2901 Independent Study in Russian**

*1 to 3 Credits Normal Grading Mode*

Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Sociology (SOC)****SOC 1001 Introduction to Sociology**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 1111 Introduction to Social Work**

*3 Credits Normal Grading Mode*

Provides a comprehensive overview of the social work field and social welfare. The course focuses on the attempt to help people develop an understanding of their problems, strengthen their social relationships, and provides examples of how people are affected by their problems. Emphasis is placed on the various roles of social workers, theoretical framework, ethical practice, family and child welfare services, case management, drug abuse and social work, and social work in rural areas. Also addressed are the clinical/direct practice processes of social work, practice with groups, practice with communities, and administration and research. Course Attributes: AS-SOCSCI - Social Science, Requires Instructor Approval.

**SOC 2301 Sociology of Religion**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 2431 Deviant Behavior**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science.

**SOC 2461 Social Construction of Difference**

*3 Credits Normal Grading Mode*

Social construction of difference and diversity. Increasing importance of diversity in the modern world. The focus will be on cultural diversity and how we understand differences across dimensions including race, ethnicity, nationality, gender, sexual orientation, physical ability, social class, and religion. Group dynamics, status, and identity processes will also be discussed in relation to issues of diversity. Prerequisite(s):ENGL 1221 Minimum Grade of D or ENGL 1231 Minimum Grade of D or HONR 1221 Minimum Grade of D or HONR 1231 Minimum Grade of D or ENGL 1421 Minimum Grade of D or ENGL 1521 Minimum Grade of D. Course Attributes: AS-SOCSCI - Social Science, GE\_Diverse Cultures.

**SOC 2531 Research Methods**

*3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Classifications: Sophomore, Junior. Must be enrolled in one of the following Major fields of study: Communication Studies, Criminal Justice, Multimedia Journalism, Political Science, Public Relations, Sociology.

**SOC 2541 Data Analysis**

*4 Credits Normal Grading Mode*

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 or STAT 1561 Minimum Grade of C. Course Attributes: AS-Natural Sciences, GE\_Knowledge of Math/Stats. May not be enrolled in one of the following Classifications: Senior, Freshman. Must be enrolled in one of the following Major fields of study: Criminal Justice, Political Science, Public Health, Sociology.

**SOC 2601 Social Problems**

*3 Credits Normal Grading Mode*

Sociological perspectives on contemporary problems and the process by which these issues come to be socially constructed as problems. Offered alternate spring semesters. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 2611 Criminology**

*3 Credits Normal Grading Mode*

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 fall semester. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**SOC 2631 Victimology**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science.

**SOC 2901 Special Topics**

*3 Credits Normal Grading Mode*

Coverage of topics in sociology. Offered fall and spring semesters. Unlimited repeats permitted.

**SOC 2981 Independent Study in Sociology**

*1 to 3 Credits Normal Grading Mode*

Independent Study Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**SOC 3301 Sport in Modern Society**

*3 Credits Normal Grading Mode*

Sports have become an integral part of modern societies, both in the U.S. and around the world. To ignore or treat it simply as a diversion, it to ignore a fundamental element of domestic and international culture which leaves the picture of these societies incomplete. The goal of this course is to apply the critical lens of various academic disciplines (sociology, psychology, biology, business, and others) to all aspects of sports in an attempt to gain a greater understanding of these endeavors and of society as a whole. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 3461 Social Stratification**

*3 Credits Normal Grading Mode*

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 and ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science, GE\_Diverse Cultures.

**SOC 3481 Sociology of Health and Health Care**

*3 Credits Normal Grading Mode*

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. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science, GE\_Diverse Cultures, GE\_Knowledge of Human Society.

**SOC 3491 Sociology of Mental Health and Illness**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 3551 Advanced Data Analysis**

*3 Credits Normal Grading Mode*

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. Prerequisite(s):SOC 2541 Minimum Grade of C or PSYC 3401 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 3611 Delinquency & Juvenile Justice**

*3 Credits Normal Grading Mode*

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 fall semesters. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science.

**SOC 3621 Occupational Crime & Deviance**

*3 Credits Normal Grading Mode*

The various forms of criminal and deviant behavior that occur in the occupational context. A discussion of the natures, 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. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 3631 Sociology of Substance Abuse**

*3 Credits Normal Grading Mode*

The nature and extent of substance abuse in the United States. Correlates and consequences of substance use. Sociological and socio-psychological theories of substance abuse. Strategies for dealing with the problem of substance abuse (e.g., prevention, treatment, education, public policy). Offered alternate spring semesters. Course Attributes: AS-SOCSCI - Social Science, GE\_Knowledge of Human Society.

**SOC 3641 Financial Crime**

*3 Credits Normal Grading Mode*

The study of contemporary forms of financial crime and its explanations, theories, and accounts along with its investigation, adjudication, and regulation. Prerequisite(s):SOC 1001 Minimum Grade of D. Course Attributes: AS-SOCSCI - Social Science.

**SOC 3901 Special Topics in Sociology**

*3 Credits Normal Grading Mode*

Coverage of topics in sociology. Offered fall and spring semesters. Unlimited repeats permitted.

**SOC 4461 Classical Sociological Theory**

*3 Credits Normal Grading Mode*

Traces sociological theorizing from sociology's historical origins. Major theorists covered include Marx, Durkheim, Weber and Chicago School sociologists. Emphasis on building an understanding of the roots of contemporary social theory. Senior or Junior status. Offered fall semester. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Must be enrolled in one of the following Classifications: Junior, Senior.

**SOC 4471 Contemporary Sociological Theory**

*3 Credits Normal Grading Mode*

The major sociological theories developed since 1950. An examination of the critical debates in contemporary social theory. Senior or Junior status. Offered spring semester. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: AS-SOCSCI - Social Science. Must be enrolled in one of the following Classifications: Junior, Senior.

**SOC 4811 Sociology Internship**

*1 to 6 Credits Normal Grading Mode*

Supervised field placement which involves work experience related to sociology or criminal justice or work experience on a specified external research project. Only 3 internship hours may be applied to the major. Offered fall and spring semesters. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Junior, Senior.

**SOC 4821 Research Practicum in Sociology**

*1 to 4 Credits Normal Grading Mode*

A research experience in the field of sociology supervised by a faculty member. Only 3 research practicum credits may be applied to the major. Offered fall and spring semesters. Prerequisite(s):SOC 1001 Minimum Grade of C. Course Attributes: Requires Department Approval. This course is repeatable for a total of 3 hours.

**SOC 4831 Teaching Practicum in Sociology**

*1 to 4 Credits Normal Grading Mode*

A mentoring experience in instruction of undergraduates. Practicum students work with a supervising professor in preparation and presentation of instruction and course 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):SOC 1001 Minimum Grade of C. Course Attributes: Requires Department Approval. This course is repeatable for a total of 3 hours.

**SOC 4881 Senior Capstone Research 1***1 Credit Normal Grading Mode*

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. Prerequisite(s):SOC 1001 Minimum Grade of C. Corequisite(s): SOC 4461. Must be enrolled in one of the following Classifications: Junior, Senior.

**SOC 4891 Senior Capstone Research 2***2 Credits Normal Grading Mode*

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 and SOC 1001 Minimum Grade of C. Corequisite(s): SOC 4471. Course Attributes: AS-SOCSCI - Social Science. Must be enrolled in one of the following Classifications: Junior, Senior.

**SOC 4981 Independent Study in Sociology***1 to 4 Credits Normal Grading Mode*

Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Spanish (SPAN)****SPAN 1011 Elementary Spanish 1***3 Credits Normal Grading Mode*

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. Course Attributes: AS -Foreign Language.

**SPAN 1021 Elementary Spanish 2***3 Credits Normal Grading Mode*

Continuation of SPAN 1011. Prerequisite(s):SPAN 1011 Minimum Grade of D or SPAN 140 Minimum Grade of D or Spanish BYU 200. Course Attributes: AS -Foreign Language.

**SPAN 2011 Intermediate Spanish 1***3 Credits Normal Grading Mode*

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 1021 Minimum Grade of D or SPAN 142 Minimum Grade of D or Spanish BYU 250. Course Attributes: AS -Foreign Language, Diversity-Human Interaction.

**SPAN 2021 Intermediate Spanish 2***3 Credits Normal Grading Mode*

Continuation of SPAN 2011. Offered spring semester. Prerequisite(s):SPAN 2011 Minimum Grade of D or SPAN 244 Minimum Grade of D or Spanish BYU 350. Course Attributes: AS -Foreign Language, Diversity-Human Interaction.

**SPAN 3011 Spanish Conversation***3 Credits Normal Grading Mode*

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 2011 Minimum Grade of C. Course Attributes: AS -Foreign Language, Effective Comm Non-Writing.

**SPAN 3021 Spanish Composition***3 Credits Normal Grading Mode*

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 Minimum Grade of C or SPAN 246 Minimum Grade of C or Spanish BYU 400. Course Attributes: AS -Foreign Language, Critical and Creative Thinking, Integration Across Disciplines.

**SPAN 3041 Introduction to Spanish Literature***3 Credits Normal Grading Mode*

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): (SPAN 3011 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS-HUM - Humanities, GE\_Knowledge of Human Thought/Culture.

**SPAN 3201 Latin American Film***3 Credits Normal Grading Mode*

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 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS -Foreign Language, AS -Non Western Cultural, Diversity-Human Interaction.

**SPAN 3211 Latin American Civilization***3 Credits Normal Grading Mode*

Discussion in Spanish of geography, history and culture of Latin America from Mesoamerica to the present. Prerequisite(s): (SPAN 3011 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS -Foreign Language, AS -Non Western Cultural, Diversity-Human Interaction.

**SPAN 3221 Latin American Art, Music, Dance***3 Credits Normal Grading Mode*

Discussion in Spanish of Latin American art, architecture, music and dance from Mesoamerica to the present. Prerequisite(s):SPAN 3011 Minimum Grade of C. Course Attributes: AS -Foreign Language, AS -Non Western Cultural, Diversity-Human Interaction.

**SPAN 3301 Business Spanish***3 Credits Normal Grading Mode*

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 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS -Foreign Language, Diversity-Human Interaction.

**SPAN 4001 Special Topics***3 Credits Normal Grading Mode*

May be repeated as topic varies. Prerequisite(s): (SPAN 3011 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS -Foreign Language. Unlimited repeats permitted.

**SPAN 4101 Medical Spanish***3 Credits Normal Grading Mode*

Spanish for medical contexts. Prerequisite(s):SPAN 3011 Minimum Grade of C.

**SPAN 4221 20th and 21st Century Latin American Literature***3 Credits Normal Grading Mode*

Reading and discussion in Spanish of works by contemporary writers in Latin American countries. Prerequisite(s): (SPAN 3011 Minimum Grade of C or SPAN 370 Minimum Grade of C) and (SPAN 3021 Minimum Grade of C or SPAN 372 Minimum Grade of C). Course Attributes: AS -Foreign Language, AS -Non Western Cultural, AS-HUM - Humanities, Diversity-Human Interaction, GE\_Knowledge of Human Thought/Culture



**SPAN 4501 Capstone***1 Credit Normal Grading Mode*

Written or other presentational record of study abroad experience. Alternative: extensive research paper in Spanish, evaluated by department faculty. Course Attributes: Critical and Creative Thinking, Effective Comm Writing.

**SPAN 4511 Internship - Spanish for Health Care Professionals***1 Credit Normal Grading Mode*

Internship in using Spanish in Health Care Contexts. Prerequisite(s): SPAN 3011 Minimum Grade of C.

**SPAN 4901 Independent Study in Spanish***1 to 3 Credits Normal Grading Mode*

For advanced students only. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Statistics (STAT)****STAT 1311 Introduction to Statistical Reasoning***3 Credits Normal Grading Mode*

Conceptual understanding and interpreting of statistical ideas; statistical literacy; numerical and graphical descriptions of data; normal distributions; probability, correlation, estimation and hypothesis testing. Cannot be taken for credit if credit has been received for STAT 1561, STAT 1761, STAT 2501 or PSYC 2401. Two years of high school algebra required. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats. May not be enrolled in one of the following Major fields of study: Applied Mathematics, Mathematics, Statistics.

**STAT 1561 Statistics for Professionals 1***3 Credits Normal Grading Mode*

Describing data graphically and numerically; describing bivariate data; probability concepts; random variables and probability distributions (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. A student can only receive credit for one of the following courses: STAT 1561, STAT 2501 or PSYC 2401. Two years of high school algebra required. Offered fall and spring semesters. Course Attributes: AS -Mathematics & Statistics, GE\_Knowledge of Math/Stats.

**STAT 1761 Statistics for Pharmacy***3 Credits Normal Grading Mode*

Normal distribution; Sampling distributions; Statistical Inference (point estimation, confidence intervals, hypothesis testing) for single means and proportions, and the difference between two means and proportions; Simple linear regression; Chi-square GOF test and tests of association; ANOVA; Statistical study designs. A student can only receive credit for one of the following courses: STAT 1761 or STAT 2561. Two years of high school algebra required. Offered fall and spring semesters. Course Attributes: AS -Mathematics & Statistics. Must be enrolled in one of the following Colleges: Pharmacy.

**STAT 2501 Statistics for Scientists and Engineers***3 Credits Normal Grading Mode*

Descriptive statistical techniques; random variables and probability distributions (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. A student can only receive credit for one of the following courses: STAT 1561, STAT 2501 or PSYC 2401. Prerequisite(s): MATH 1641 Minimum Grade of D. Course Attributes: AS -Mathematics & Statistics.

**STAT 2561 Statistics for Professionals 2***3 Credits Normal Grading Mode*

Review of inferential statistics (point estimation, confidence intervals, hypothesis testing) for single means and the difference between two means; inferential statistics of proportions and differences between proportions; categorical data analysis (goodness-of-fit tests and tests of association contingency table analysis); simple linear regression and correlation analysis; multiple regression analysis; analysis of variance; statistical study designs. Offered spring semester. A student can only receive credit for one of the following courses: STAT 1761 or STAT 2561. Prerequisite(s): STAT 1561 Minimum Grade of C or STAT 2501 Minimum Grade of C or PSYC 2401 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 2901 Special Topics in Statistics***1 to 3 Credits Normal Grading Mode*

Formerly STAT 290. Prerequisite(s): STAT 2561 Minimum Grade of C. Course Attributes: Requires Instructor Approval.

**STAT 3361 Linear Algebra with Statistical Applications***3 Credits Normal Grading Mode*

Systems of linear equations; matrix algebra; eigenvalues and eigenvectors; linear transformations; subspaces; determinants; inner products, orthogonal projections. Statistical applications for linear models; including simple and multiple regression models and one-factor and two-factor ANOVA models. Prerequisite(s): MATH 1641 Minimum Grade of C and STAT 2561 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Statistics.

**STAT 3501 Applied Regression and Correlation Analysis***3 Credits Normal Grading Mode*

Simple linear regression and correlation data analysis methods; multiple regression methods; analysis of variance; analysis of covariance; statistical study designs. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3511 Categorical Data Analysis***3 Credits Normal Grading Mode*

Statistical inference for a single proportion and the difference between two proportions; measures of association (odds ratio and relative risk); goodness-of-fit tests, contingency table analysis, Fisher exact test, and logistic regression models. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3521 Analysis of Variance w/ Experimental Design***3 Credits Normal Grading Mode*

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. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3531 Survey Sampling Methods***3 Credits Normal Grading Mode*

Design and evaluate survey questionnaires; statistical methods pertaining to survey sampling, with an emphasis on human populations, including simple random sampling, stratified sampling, systematic sampling, and the use of demographic information to reduce margins of error. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3541 Nonparametric Statistical Methods***3 Credits Normal Grading Mode*

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. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3551 Applied Probability***3 Credits Normal Grading Mode*

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. Prerequisite(s): (STAT 1561 Minimum Grade of C or STAT 2501 Minimum Grade of C) and MATH 1641 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3571 Introduction to Statistical Computing with SAS***3 Credits Normal Grading Mode*

The SAS software system is widely used both in statistical applications and in corporate data management applications. This course covers a variety of topics in SAS, including data access and management, data analysis and interpretation, graphical displays, and computer simulation. Prerequisite(s): STAT 1761 Minimum Grade of C or STAT 2561 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 3581 Introduction to Statistical Computing with R***3 Credits Normal Grading Mode*

R is a free software. It is widely applied in data analysis, machine learning and programming. Students will learn how to perform data management and apply various statistical techniques in R environment which includes creating descriptive statistics and graphics, fitting statistical models and making inferences. Students will also learn to write simple programs to implement and test their ideas of building statistical models. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C.

**STAT 3591 Selected Topics of Statistical Methodology***3 Credits Normal Grading Mode*

This course introduces students to some selected topics in statistical methodology. These topics cover statistical methods that are designed for some special types of data, answer questions in some specific fields or are important for data analysis in general but are not systematically covered in existing courses. Prerequisite(s): STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C.

**STAT 3801 Tutorial-Actuarial Statistics***1 to 3 Credits Normal Grading Mode*

Problem solving course to prepare students for the actuarial examinations. Topics corresponding to these examinations (probability, financial mathematics, statistical modeling, and risk management) will be offered in different semesters. Must be enrolled in one of the following Major fields of study: Statistics. This course is repeatable for a total of 6 hours.

**STAT 3901 Special Topics in Statistics***1 to 3 Credits Normal Grading Mode*

Can be repeated as topics vary. Unlimited repeats permitted. Prerequisite(s): (STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C). This course may be repeated 8 times.

**STAT 4401 Model for Investments and Financial Derivatives***3 Credits Normal Grading Mode*

Introduction to financial derivatives, including the description, payoffs, and profits of forwards, futures, puts, calls, and swaps. How to use derivatives to manage risk. Topics related to pricing options in the binomial market model and Black-Scholes market model include: put-call parity, binomial trees, lognormal distribution Black-Scholes Formula, option Greeks, market making and delta hedging, exotic options, Monte Carlo valuation, and interest rate models. Mean-variance portfolio theory, asset pricing models, and measures of investment risk. This course provides the background for Exam IFM of the Society of Actuaries and Exam 3F of the Casualty Actuarial Society. Prerequisite(s): MATH 3041 Minimum Grade of C and MATH 4651 Minimum Grade of C.

**STAT 4561 Introduction to Stochastic Processes***3 Credits Normal Grading Mode*

Random variables and stochastic processes; Markov chains and their properties (discrete and continuous); other important stochastic processes and their properties; elementary stochastic calculus. Prerequisite(s): (STAT 2501 Minimum Grade of C or MATH 4651 Minimum Grade of C) and (MATH 2651 Minimum Grade of C or MATH 3261 Minimum Grade of C). Course Attributes: AS -Mathematics & Statistics.

**STAT 4571 Linear Statistical Models***3 Credits Normal Grading Mode*

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) and (MATH 3061 Minimum Grade of C or MATH 2651 Minimum Grade of C). Course Attributes: AS -Mathematics & Statistics.

**STAT 4661 Mathematical Statistics***3 Credits Normal Grading Mode*

Sampling distributions; Central Limit Theorem; Point and confidence interval estimation (bias, mean, square error, efficiency, consistency, sufficiency, UMVUE, method of moments, method of maximum likelihood, pivotal quantities); Hypothesis testing (elements of tests, power and sample size calculations, Neyman-Pearson Lemma, likelihood ratio tests). Offered alternate spring semesters. Prerequisite(s): MATH 4651 Minimum Grade of C. Course Attributes: AS -Mathematics & Statistics.

**STAT 4701 Statistics Internship***1 to 3 Credits Normal Grading Mode*

An off-campus, experiential learning experience designed to provide practical and applied professional experiences in statistics and/or actuarial science. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Major fields of study: Statistics.

**STAT 4901 Special Topics in Statistics***1 to 3 Credits Normal Grading Mode*

Can be repeated as topics vary. Unlimited repeats permitted. Course Attributes: Requires Instructor Approval.

**STAT 4971 Independent Study***1 to 4 Credits Normal Grading Mode* This course may be repeated 2 times.**Subject- Arts Administration (TAAD)****TAAD 2111 Introduction to Arts Administration***3 Credits Normal Grading Mode*

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.

**TAAD 2311 Arts Marketing/Audience Development***3 Credits Normal Grading Mode*

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.

**TAAD 2411 Grant Writing/Arts Fundraising***3 Credits Normal Grading Mode*

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.

**TAAD 2611 Arts Administration Practicum***1 Credit Normal Grading Mode*

Participation in a collaborative laboratory experience which involves audience development, educational outreach, fundraising, and/or marketing. This course may be repeated 2 times. This course is repeatable for a total of 3 hours.

**TAAD 2901 Special Topics in Arts Administration***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. This course is repeatable for a total of 24 hours.

**TAAD 2991 Independent Study in Arts Administration***1 to 3 Credits Normal Grading Mode*

A topic in arts administration that is of particular interest to the student. This course is repeatable for a total of 24 hours.

**TAAD 3351 Arts Administration Internship***2 Credits Normal Grading Mode*

Blends classroom theory with practical experience through working in an external organization. Unlimited repeats permitted.

**TAAD 4901 Special Topics in Arts Administration***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. This course is repeatable for a total of 24 hours.

**TAAD 4991 Independent Study in Arts Administration***1 to 3 Credits Normal Grading Mode*

A topic in arts administration that is of particular interest to the student. This course is repeatable for a total of 24 hours.

**Subject- Dance (TADN)****TADN 1101 Introduction to Dance***2 Credits Normal Grading Mode*

Ballet, jazz and tap presented to develop the ability to learn basic components and vocabulary of each of these forms. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture,

**TADN 1201 Ballet I***2 Credits Normal Grading Mode*

Designed for the student with little experience in ballet technique. Offered fall and spring semesters. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 1 time.

**TADN 1301 Modern Dance I***2 Credits Normal Grading Mode*

Designed for the student with little experience in modern dance technique. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 1 time.

**TADN 1401 Jazz Dance I***2 Credits Normal Grading Mode*

Designed for the student with little experience in jazz dancing. Prerequisite(s):TADN 1201 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 1501 Tap Dance I***2 Credits Normal Grading Mode*

Designed for the student with little experience in tap dancing. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 1 time.

**TADN 2111 Social Dance***1 Credit Normal Grading Mode*

Social dance course to include waltz, foxtrot, swing, polka, rhumba, tango, and cha-cha. Emphasis will be placed on rhythm, style and skill development.

**TADN 2121 Dance and Culture***3 Credits Normal Grading Mode*

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. Prerequisite(s):ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS -Non Western Cultural, AS-FINRT Fine Arts, GE\_Diverse Cultures, GE\_Knowledge of Human Thought/Culture.

**TADN 2201 Ballet II***2 Credits Normal Grading Mode*

For intermediate students with experience in ballet technique. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 1201 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 2301 Modern Dance II***2 Credits Normal Grading Mode*

For intermediate students with experience in modern technique. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 1301 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 2401 Jazz Dance II***2 Credits Normal Grading Mode*

For intermediate students with experience in jazz dance. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 1401 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 2501 Tap Dance II***2 Credits Normal Grading Mode*

Designed for intermediate students with experience in tap dancing. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 1501 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 2601 Dance Practicum***1 to 3 Credits Normal Grading Mode*

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. Offered fall and spring semesters. Unlimited repeats permitted.

**TADN 2901 Special Topics in Dance***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. This course is repeatable for a total of 24 hours.

**TADN 2991 Independent Study in Dance***1 to 3 Credits Normal Grading Mode*

A topic in arts administration that is of particular interest to the student. This course is repeatable for a total of 24 hours.

**TADN 3201 Ballet III***2 Credits Normal Grading Mode*

For students with advanced experience in ballet technique. May include pointe work for students with strong technique. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 2201 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 3301 Modern Dance III***2 Credits Normal Grading Mode*

For students with advanced experience in modern technique. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s):TADN 2301 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 3401 Jazz Dance III***2 Credits Normal Grading Mode*

For students with advanced experience in jazz dance. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s): TADN 2401 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 3501 Tap Dance III***2 Credits Normal Grading Mode*

For students with advanced experience in tap dance. Students must take the prerequisite course or have permission of the instructor. Prerequisite(s): TADN 2501 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, Requires Instructor Approval. This course may be repeated 1 time.

**TADN 3601 Dance History***3 Credits Normal Grading Mode*

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 years. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TADN 3611 Musical Theatre Dance Styles I***2 Credits Normal Grading Mode*

The study and recreation of historical musical theatre dance and related social dances influencing Broadway stage choreography. Students must meet the pre-requisites or have permission of the instructor. Prerequisite(s): TADN 1201 Minimum Grade of C or TADN 1301 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Fields of Study: Dance, Musical Theatre.

**TADN 4201 Ballet IV Pointe***2 Credits Normal Grading Mode*

Techniques of pointe work at the barre and center work. Prerequisite(s): TADN 3201 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 1 time.

**TADN 4601 Dance Composition***3 Credits Normal Grading Mode*

Principles general to choreographic compositional styles and their application via compositional projects and in-class explorations. Offered alternate years. Prerequisite(s): TADN 2201 Minimum Grade of C or TADN 2301 Minimum Grade of C or TADN 2401 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**TADN 4611 Musical Theatre Dance Styles II***2 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts. May not be enrolled in one of the following Classifications: Freshman. Must be enrolled in one of the following Fields of Study: Dance, Musical Theatre.

**TADN 4901 Special Topics in Dance***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. This course is repeatable for a total of 24 hours.

**TADN 4991 Independent Study in Dance***1 to 3 Credits Normal Grading Mode*

A topic in arts administration that is of particular interest to the student. This course is repeatable for a total of 24 hours.

**Subject- International Theatre Production (TADP)****TADP 2001 Portfolio Review I***0 Credits Grading mode is S/U*

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 degree or select another degree program in the University. Must be enrolled in one of the following Classifications: Freshman, Sophomore. This course may be repeated 1 time.

**TADP 2111 Fundamentals of Stagecraft***3 Credits Normal Grading Mode*

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 fall semesters. Course Attributes: AS-FINRT Fine Arts.

**TADP 2121 Fundamentals of Lighting and Sound***3 Credits Normal Grading Mode*

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 spring semester. Course Attributes: AS-FINRT Fine Arts.

**TADP 2131 Fundamentals of Costuming***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts.

**TADP 2151 Make-up***2 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts.

**TADP 2551 Technical Direction***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts.

**TADP 2571 Shop Practicum***1 to 3 Credits Normal Grading Mode*

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 majors. Offered fall and spring semesters. Unlimited repeats permitted.

**TADP 2601 Stage Management***3 Credits Normal Grading Mode*

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 spring semester. Course Attributes: AS-FINRT Fine Arts.

**TADP 2651 Stage Management Practicum***1 to 3 Credits Normal Grading Mode*

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 Arts majors. Offered fall and spring semesters. Unlimited repeats permitted.

**TADP 2751 Introduction to Design**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TADP 2761 Production Practicum**

*1 to 3 Credits Normal Grading Mode*

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 Arts majors. Offered fall and spring semesters. Unlimited repeats permitted.

**TADP 3351 Internship in Theatre Design and Production**

*1 to 6 Credits Normal Grading Mode*

A skills course blending classroom theory with practical experience through working in an outside organization. Offered fall and spring semesters. This course is repeatable for a total of 6 hours.

**TADP 3501 Advanced Stagecraft**

*3 Credits Normal Grading Mode*

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):TADP 2111 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**TADP 3551 Topics in Theatre Technology**

*3 Credits Normal Grading Mode*

The principle technical elements of theatre including technical problem solving, scene painting, welding, and graphic solutions to technical theatre. Offered alternate spring semesters. Prerequisite(s):TADP 2111 Minimum Grade of C and TADP 2121 Minimum Grade of C and TADP 3501 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times. This course is repeatable for a total of 9 hours.

**TADP 3751 Topics in Theatre Design**

*3 Credits Normal Grading Mode*

The principle design elements of theatre including but not limited to scenic, costume, lighting and sound. One type of design explored each semester. Prerequisite(s):TADP 2751 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture, Requires Instructor Approval. This course may be repeated 2 times. This course is repeatable for a total of 9 hours.

**TADP 3761 Advanced Production Practicum**

*1 to 3 Credits Normal Grading Mode*

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 Arts majors. Unlimited repeats permitted.

**TADP 3781 Design Practicum**

*1 to 3 Credits Normal Grading Mode*

Participation in a collaborative laboratory experience which focuses on the design of lights, sound, scenic, costumes or props for University productions. More than six hours may apply toward graduation only for Theatre Arts majors. Unlimited repeats permitted.

**TADP 4001 Portfolio Review II**

*0 Credits Grading mode is S/U*

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. Offered spring semester. Prerequisite(s):TADP 2001 Minimum Grade of S. Must be enrolled in one of the following Classifications: Junior, Senior. This course may be repeated 2 times.

**TADP 4951 Theatre Design and Production Capstone**

*2 Credits Normal Grading Mode*

An advanced production project which integrates skills and experiences acquired during the completion of the major concentration. Permission of advisor and completion of project abstract. A graduating senior survey must be completed to received credit for this course. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Classifications: Junior, Senior.

**Subject- Musical Theatre (TAMT)****TAMT 2101 Musical Theatre History & Literature**

*3 Credits Normal Grading Mode*

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.

**TAMT 2601 Musical Theatre Performance Practicum**

*1 Credit Normal Grading Mode*

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. Offered fall and spring semesters. Unlimited repeats permitted.

**TAMT 2611 Musical Theatre Pit Orchestra Practicum**

*1 Credit Normal Grading Mode*

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. Offered fall and spring semesters. Unlimited repeats permitted.

**TAMT 2951 Musical Theatre Sophomore Hearing**

*0 Credits Grading mode is S/U*

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. Offered spring semester. Prerequisite(s):MUSC 1051 Minimum Grade of C or TADN 1201 Minimum Grade of C or TADN 1301 Minimum Grade of C and MUSL 2111A Minimum Grade of C. Must be enrolled in one of the following Classifications: Sophomore, Junior. Must be enrolled in one of the following Fields of Study: Musical Theatre, Theatre.

**TAMT 3351 Internship in Musical Theatre**

*1 to 6 Credits Grading mode is S/U*

Working in an external organization having the opportunity to blend classroom theory and practical experience. Offered fall and spring semesters. Prerequisite(s):TAMT 2951 Minimum Grade of S. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Musical Theatre, Theatre. This course is repeatable for a total of 6 hours.

**TAMT 4501 Acting Styles for Musical Theatre***3 Credits Normal Grading Mode*

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. Offered spring semesters. Prerequisite(s): TATH 1411 Minimum Grade of C and TATH 2751 Minimum Grade of C. Must be enrolled in one of the following Classifications: Sophomore, Junior. Must be enrolled in one of the following Departments: Theatre Arts. Must be enrolled in one of the following Fields of Study: Musical Theatre. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**TAMT 4601 Musical Theatre Audition Techniques***2 Credits Normal Grading Mode*

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. Offered fall semester. Prerequisite(s): TAMT 2951 Minimum Grade of S and TAMT 4501 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Departments: Theatre Arts. Must be enrolled in one of the following Major fields of study: Musical Theatre. This course may be repeated 2 times. This course is repeatable for a total of 4 hours.

**TAMT 4951 Musical Theatre Capstone***2 Credits Grading mode is S/U*

The capstone experience for senior musical theatre majors centers on a practical project, which demonstrates proficiency in performance skills and preparation for graduate study or entry into the profession. Course is two semesters in length. Prerequisite(s): TAMT 2951 Minimum Grade of S. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Fields of Study: Musical Theatre, Theatre.

**Subject- Theatre Arts (TATA)****TATA 1001 Orientation***0 Credits Grading mode is S/U*

Familiarization with the departmental requirements for majors, planning a program of courses, university catalog and library. Required of departmental majors. Offered fall semester. Must be enrolled in one of the following Fields of Study: International Theatre Prod., Musical Theatre, Theatre, Theatre Design and Production.

**TATA 2901 Special Topics in Theatre Arts***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. Unlimited repeats permitted.

**TATA 2991 Independent Study in Theatre Arts***1 to 3 Credits Normal Grading Mode*

A topic in Communication and Theatre Arts that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**TATA 4991 Independent study in Theatre Arts***1 to 3 Credits Normal Grading Mode*

A topic in Communication and Theatre Arts that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Theatre (TATH)****TATH 1051 Introduction to the Performing Arts***3 Credits Normal Grading Mode*

An introduction to theatre through the study of its origin and development, and its contemporary theory and practice. For the non-major. Includes lecture, play attendance and production experience. Offered fall and spring semesters. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TATH 1411 Voice and Movement I***2 Credits Normal Grading Mode*

This class will introduce students to a range of vocal and physical techniques for creative expression in performance. Through a series of exercises, training's, and performances, students will have the opportunity to reduce habitual tensions finding maximum affect with minimum effort, connect their movement and voice to imagery and text, and increase the strength, flexibility and dynamic of the their voices and bodies in performance. Prerequisite(s): TATH 2601 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Major fields of study: Musical Theatre, Theatre. This course is repeatable for a total of 4 hours.

**TATH 1901 Special Topics in Theatre Arts***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. Unlimited repeats permitted.

**TATH 2411 Voice and Movement II***2 Credits Normal Grading Mode*

This class is a continuation of the development and conditioning of the actor's voice and body introduced in TATH 1411, with an emphasis on understanding and transforming the actor's use of his/her vocal and physical instrument toward development of characterization. Prerequisite(s): TATH 1411 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Departments: Theatre Arts. Must be enrolled in one of the following Major fields of study: Musical Theatre, Theatre. This course is repeatable for a total of 4 hours.

**TATH 2591 Acting for Non-Majors***2 Credits Normal Grading Mode*

The fundamentals of stage acting through exercises, readings, discussions and scene study, for the student not majoring in performance. Offered spring semester. Course Attributes: AS-FINRT Fine Arts. May not be enrolled in one of the following Fields of Study: Musical Theatre, Theatre.

**TATH 2601 Introduction to Acting***2 Credits Normal Grading Mode*

The fundamentals of stage acting through exercises, readings, discussion, and scene study. The beginning actor learns to play actions, utilize activity, identify objectives and obstacles, and incorporate them all into performance. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Fields of Study: Musical Theatre, Theatre. This course may be repeated 2 times. This course is repeatable for a total of 4 hours.

**TATH 2611 Theatre Performance Practicum***1 to 3 Credits Normal Grading Mode*

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. Unlimited repeats permitted.

**TATH 2751 Play Analysis***3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TATH 2901 Special Topics in Theatre Arts***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. Unlimited repeats permitted.

**TATH 2911 World Theatre History I**

*3 Credits Normal Grading Mode*

A survey of the history and social impact of the theatre in Western and non-Western cultures from ancient times to the Renaissance. Prerequisite(s): TATH 2751 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TATH 2921 World Theatre History II**

*3 Credits Normal Grading Mode*

A survey of the history and social impact of the theatre in Western and non-Western cultures from the Renaissance to the 19th Century. Prerequisite(s): TATH 2751 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TATH 2991 Independent Study in Theatre Arts**

*1 to 3 Credits Normal Grading Mode*

A topic in Theatre Arts that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**TATH 3001 Symposium**

*0 Credits Grading mode is S/U*

Workshop with visiting theatre professionals which may include stage directors, designers, choreographers, and professional performers. Repeatable with different topics. Students must complete 1 course per semester. Offered Fall and Spring semesters. Must be enrolled in one of the following Fields of Study: Arts Administration, International Theatre Prod., Musical Theatre, Theatre, Theatre Arts/Arts Admin, Theatre Arts/Intl Production, Theatre Design and Production. Unlimited repeats permitted.

**TATH 3351 Internship in Theatre**

*1 to 6 Credits Normal Grading Mode*

Blends classroom theory with practical experience through working in an external organization. Offered fall and spring semesters. May not be enrolled in one of the following Classifications: Freshman. Must be enrolled in one of the following Fields of Study: International Theatre Prod., Musical Theatre, Theatre, Theatre Design and Production. This course is repeatable for a total of 6 hours.

**TATH 3521 Dramaturgy Practicum**

*1 Credit Normal Grading Mode*

This course is a practicum experience for which a student serves as dramaturg for a University mainstage or studio theatre production with faculty advising. This course may be repeated 4 times. This course is repeatable for a total of 4 hours.

**TATH 3601 Acting II: Scene Study Intensive**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): TATH 2601 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. Must be enrolled in one of the following Fields of Study: Musical Theatre, Theatre. This course may be repeated 1 time.

**TATH 3621 Directing Practicum**

*1 to 3 Credits Normal Grading Mode*

Participation in a collaborative directorial experience that focuses on directing a University mainstage or studio theatre production with faculty advising. Prerequisite(s): TATH 3861 Minimum Grade of C. Unlimited repeats permitted.

**TATH 3651 Acting III: Shakespeare**

*3 Credits Normal Grading Mode*

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 fall semester. Prerequisite(s): TATH 1411 Minimum Grade of C and TATH 2601 Minimum Grade of C and TATH 3601 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**TATH 3731 Contemporary Multicultural Theatre**

*3 Credits Normal Grading Mode*

The study of contemporary multicultural theatre, both American and foreign. Focus is on plays by women and writers of color, supplemented by theoretical texts. Exploration of aesthetic and cultural contexts, and issues of race, gender, and class. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**TATH 3801 Topics in Theatre History/Dramatic Literature**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): TATH 2751 Minimum Grade of C and ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Diverse Cultures. This course may be repeated 2 times. This course is repeatable for a total of 9 hours.

**TATH 3821 Playwriting**

*3 Credits Normal Grading Mode*

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. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture.

**TATH 3861 Directing**

*3 Credits Normal Grading Mode*

Methods, theories, exercises, and practices in directing and presenting dramatic scenes. Prerequisite(s): TATH 2601 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts, GE\_Knowledge of Human Thought/Culture. May not be enrolled in one of the following Classifications: Freshman.

**TATH 3901 Special Topics in Theatre Arts**

*1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. Unlimited repeats permitted.

**TATH 3911 American Theatre History**

*3 Credits Normal Grading Mode*

A historical survey of American theatre and popular entertainment forms from the colonial period through the rise of realism and contemporary theatre. Prerequisite(s): TATH 2751 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**TATH 4451 Business of Theatre**

*1 Credit Normal Grading Mode*

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. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Fields of Study: Arts Administration, International Theatre Prod., Musical Theatre, Theatre.

**TATH 4601 Acting IV: Styles of Acting***3 Credits Normal Grading Mode*

A workshop style course with an emphasis on the drama and performance styles of Ancient Greece, the Commedia dell'arte of the Italian Renaissance, Restoration Comedy (complemented by French Neoclassicism and Georgian literature), and the comedy of manners. Students are introduced to the cultural milieu of the above-mentioned historical periods and the theatrical conventions in force at those times while developing historically accurate and dramatically compelling characterizations. Prerequisite(s): TATH 3601 Minimum Grade of C and TATH 1411 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts.

**TATH 4701 Acting V: Off the Fourth Wall***3 Credits Normal Grading Mode*

Students will focus on absurdist, non-traditional performance texts, contemporary non-realism, and the ensemble devising process. Students will learn to utilize non-traditional rehearsal techniques, such as the Viewpoints (with a primary focus on sourcework and composition), the devising process of Frantic Assembly, Tectonic Theatre Project's Moment Work, Grotowski, and advanced Michael Chekhov technique in the analysis, staging, interpretation, and development/creation of performance texts. Prerequisite(s): TATH 3601 Minimum Grade of C and TATH 1411 Minimum Grade of C. Course Attributes: AS-FINRT Fine Arts. This course may be repeated 2 times. This course is repeatable for a total of 6 hours.

**TATH 4901 Special Topics in Theatre Arts***1 to 3 Credits Normal Grading Mode*

Course may be repeated as topics vary, but only 24 hours will count toward graduation. Offered fall and spring semesters. Unlimited repeats permitted.

**TATH 4951 Senior Capstone***2 Credits Normal Grading Mode*

A production/performance based project that serves as the senior capstone for the Theatre major. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Fields of Study: Theatre.

**TATH 4991 Independent Study in Theatre Arts***1 to 3 Credits Normal Grading Mode*

A topic in Theatre Arts that is of particular interest to the student. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**TECH 1001 Technology and Society***3 Credits Normal Grading Mode*

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.

**Subject- Technology (TECH)****TECH 1201 Intro to Computer Aided Design***3 Credits Normal Grading Mode*

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.

**TECH 1301 Materials Science***3 Credits Normal Grading Mode*

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.

**TECH 1401 Intro to Information Systems***3 Credits Normal Grading Mode*

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.

**TECH 1421 Web Design***3 Credits Normal Grading Mode*

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.

**TECH 1601 Fundamentals of Electronics***3 Credits Normal Grading Mode*

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. Offered fall and spring semesters. ACT Math 21 or MATH 1251 Minimum Grade of C or MATH 1401 Minimum Grade of C or MATH 1431 Minimum Grade of C or MATH 1561 Minimum Grade of C or MATH 1611 Minimum Grade of C or MATH 1631 Minimum Grade of C or MATH 1641 Minimum Grade of C.

**TECH 1621 Visual Basic***3 Credits Normal Grading Mode*

An introduction to computer programming and application development using Visual Basic. Computer lab activities and assignments emphasize the development of programs for various technology applications, including the use of text files and graphics.

**TECH 1901 Special Topics in Technology***1 to 3 Credits Normal Grading Mode*

May be repeated as the topic varies. Unlimited repeats permitted.

**TECH 2011 Sustainability in Society***3 Credits Normal Grading Mode*

Sustainability has become a staple in today's society that must be understood and practiced by everyone. This course will examine the primary functions of sustainability for people, purpose, and profit. Topics will include economic, social, cultural, environmental, and responsibilities of individuals and society to foster a community of care.

**TECH 2211 Construction Design***4 Credits Normal Grading Mode*

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.

**TECH 2231 Product Design and Analysis***4 Credits Normal Grading Mode*

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.

**TECH 2301 Materials and Processes***3 Credits Normal Grading Mode*

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.



**TECH 2311 Custom Woodworking***3 Credits Normal Grading Mode*

Basic processes, tools, and materials employed in the production of custom, individually designed, and crafted wood projects. Offered summers. This course is repeatable for a total of 6 hours.

**TECH 2401 Computer Networking***3 Credits Normal Grading Mode*

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.

**TECH 2501 Construction Materials & Methods***4 Credits Normal Grading Mode*

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, safety planning, supervising, site-operation, foundation, structural elements, utilities, landscaping and personnel associated with construction activities. Offered fall semester.

**TECH 2701 Fluid and Mechanical Systems***3 Credits Normal Grading Mode*

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.

**TECH 2901 Special Topics***1 to 3 Credits Normal Grading Mode*

May be repeated as the topic varies. Unlimited repeats permitted.

**TECH 2971 Independent Study***1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student in Technological Studies. May be repeated as the topic varies. Must be enrolled in one of the following Classifications: Freshman, Sophomore. Must be enrolled in one of the following Fields of Study: Construction Management, Manufacturing Technology, Technology, Technology Education. Unlimited repeats permitted.

**TECH 3111 Product Manufacturing***3 Credits Normal Grading Mode*

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 spring semester. Prerequisite(s):TECH 2301 Minimum Grade of C or BIZ 2331 Minimum Grade of C.

**TECH 3211 Digital Manufacturing***3 Credits Normal Grading Mode*

Design of mechanical parts and products for manufacturing using 3D solid/parametric CAD modeling. Applications of computer simulations for analysis of assembly processes and robotics production improvements. Overview of digital manufacturing technologies, product data and product life-cycle management systems. Prerequisite(s):TECH 2231 Minimum Grade of C.

**TECH 3221 Manufacturing Simulation***3 Credits Normal Grading Mode*

Application of sophisticated computer simulation software for ergonomic analysis of manufacturing operations and processes. Learn uses of server-based and cloud-computing applications to permit secure data sharing and collaborations for design of products and processes. Conduct a team project with a local industrial company to analyze a production operation utilizing manufacturing simulation, including presentation of results to the company management. Prerequisite(s):TECH 3211 Minimum Grade of C.

**TECH 3411 Wide Area Networking***3 Credits Normal Grading Mode*

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.

**TECH 3421 Database Management and Applications***3 Credits Normal Grading Mode*

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.

**TECH 3461 Digital Photography***3 Credits Normal Grading Mode*

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.

**TECH 3511 Applications of Soils and Foundations***3 Credits Normal Grading Mode*

Principles of soil mechanics as it relates to general construction and foundation systems including footings, piles, caissons, cofferdams, structural concrete, concrete emplacements 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. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**TECH 3521 Construction Specifications and Methods***3 Credits Normal Grading Mode*

This course is designed to provide knowledge of construction documents and contracts as they relate to a residential and commercial construction project. The student will understand the documentation process from pre design to post design phases of construction through the interpretation of a set of construction documents including contracts, specifications in CSI master format, working drawings, regulatory codes, and any sustainability concepts that apply. Prerequisite(s):TECH 2501 Minimum Grade of C and TECH 2211 Minimum Grade of C.

**TECH 3551 Project Controls and Management***3 Credits Normal Grading Mode*

The management of costing methods associated with construction projects concerning budget controls, scheduling controls forecasting, and the overall management of financial elements contained in a project.

**TECH 3611 Applied Controls 1***4 Credits Normal Grading Mode*

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.

**TECH 3631 Applied Controls 2***3 Credits Normal Grading Mode*

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/work-holders, 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.

**TECH 3801 Professional Practice in Technological Studies***1 Credit Grading mode is S/U*

Study and professional experience in a technological studies related occupation in an industrial enterprise, consulting firm, or governmental agency. Daily reports, midterm and final report on the assignment and employer's evaluation are required. Minimum 2.50 accumulative GPA. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior. This course is repeatable for a total of 4 hours.

**TECH 3901 Special Topics***1 to 3 Credits Normal Grading Mode*

May be repeated as the topic varies. Unlimited repeats permitted.

**TECH 4121 Manufacturing Management***3 Credits Normal Grading Mode*

Manufacturing management principles and applications applied in mass production industries. Includes safety, process planning and design, quality assurance, maintenance, materials handling, inventory and production control, lean manufacturing, and globalization. Quality topics include Statistical Process Control, TQM, Six Sigma, and ISO/QS/TS quality systems. Work measurement topics include methods engineering and traditional time studies. Offered fall semester. Prerequisite(s):TECH 2301 Minimum Grade of C or BIZ 2331 Minimum Grade of C.

**TECH 4341 Advanced Robotics 1***2 Credits Normal Grading Mode*

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 Fall semester. Prerequisite(s):TECH 3611 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

**TECH 4351 Advanced Robotics 2***2 Credits Normal Grading Mode*

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.

**TECH 4521 Construction Estimating and Scheduling***3 Credits Normal Grading Mode*

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.

**TECH 4621 Programming in Embedded Systems***4 Credits Normal Grading Mode*

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.

**TECH 4801 Technical Education Foundations***3 Credits Normal Grading Mode*

Elements of technical instruction, scope and sequence, training program development, and the philosophical underpinnings regarding a successful learning environment. Provides the development of planning, organizing, and administering technical laboratories for those planning careers in the teaching/training in industry and vocational/technical secondary and post-secondary schools. Prerequisite(s):PSYC 1001 Minimum Grade of D or PSYC 2151 Minimum Grade of D.

**TECH 4811 Educational Technologies for Technical Education***3 Credits Normal Grading Mode*

Design and develop technology-enhanced learning for teaching and training for adult learners at the post-secondary level. Focus is on the alternatives for supporting technical instruction with educational technology multimedia and instructional design. Students explore concepts and findings identified in adult literature and apply to designing successful learning systems. Corequisite(s): TECH 4801.

**TECH 4821 Tests, Measurement, and Assessment in Technical Education***3 Credits Normal Grading Mode*

The consideration of methodological, theoretical, and ethical problems involved in test construction and use. Topics which are covered include learning styles, multiple intelligences, elements of validity and reliability related to tests and measures, and how to use results to improve instruction and course procedures. Corequisite(s): TECH 4801.

**TECH 4831 Instructional Design: Strategies in Technical Education***3 Credits Normal Grading Mode*

The study of the systematic way of designing, developing, implementing, and evaluating the processes of learning and teaching with specific objectives based on research in human learning and communication in the Teaching/Learning process in Technical Education. Specific attention will be given to developing appropriate strategies for delivery of different types of technical content for efficient learning. Prerequisite(s):TECH 4801 Minimum Grade of C.

**TECH 4841 Internship***3 to 6 Credits Normal Grading Mode*

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. Three credit hours required to satisfy a capstone, with one credit hour for each 100 hours of documented work experience. A maximum of 6 hours to count toward graduation. Minimum 2.50 accumulative GPA. Must be enrolled in one of the following Classifications: Junior, Senior. This course is repeatable for a total of 6 hours.

**TECH 4951 Senior Project***1 Credit Normal Grading Mode*

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.

**TECH 4961 Tour of Industries***1 Credit Grading mode is S/U*

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. Offered spring semester. This course is repeatable for a total of 4 hours.

**TECH 4971 Independent Study**

*1 to 4 Credits Normal Grading Mode*

Individual study of a topic of particular interest to the student in Technological Studies. May be repeated as the topic varies. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**TECH 4991 Senior Capstone**

*1 Credit Grading mode is S/U*

Written and oral report, poster 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. Prerequisite(s): TECH 4841 Minimum Grade of C or TECH 3801 Minimum Grade of C or TECH 4951 Minimum Grade of C or TECH 4351 Minimum Grade of C or EDUC 4721 Minimum Grade of C. Concurrency allowed. Prerequisite(s): TECH 3801 Minimum Grade of C or TECH 4351 Minimum Grade of C or TECH 4841 Minimum Grade of C or TECH 4951 Minimum Grade of C or EDUC 4721 Minimum Grade of C or TECH 4951 Minimum Grade of C.

**Subject- Transitions Experience (TRES)**

*See course sections for specific attributes.*

**TRES 1001 - Transitions Experience**

*3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Colleges: Arts and Sciences. Must be enrolled in one of the following Classifications: First-year. Course Attributes: GE\_Critical and Creative Thinking.

**Subject- Writing and Multimedia Studies (WAMS)****WAMS 1001 Introduction to Writing and Multimedia Studies**

*3 Credits Normal Grading Mode*

Use rhetorical principles to examine professional communication in business, journalism, science, and technical contexts. Engage in analyzing, drafting, revising, and presenting communication in a range of formats.

**WAMS 1201 Adaptive Media Production**

*3 Credits Normal Grading Mode*

This course begins with an overview of how we got to where we are today in a convergent media world as compared to the past century of journalism. This class combines theory and practical experience while providing students with the basic production technology necessary to design and create multimedia, primarily audio recording and editing and video shooting and editing.

**WAMS 2101 Writing for Action**

*3 Credits Normal Grading Mode*

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. Prerequisite(s): ENGL 1221 Minimum Grade of C or ENGL 1231 Minimum Grade of C or ENGL 1421 Minimum Grade of C or ENGL 1521 Minimum Grade of C or HONR 1221 Minimum Grade of C or HONR 1231 Minimum Grade of C.

**WAMS 2201 The Digital Newsroom**

*3 Credits Normal Grading Mode*

The focus of this course is the expansion of the basics of reporting, including interviewing techniques and other methods of newsgathering, organizing information, and copyediting. The course is designed to help you develop and improve your basic writing and reporting skills. Assignments in this course will require you to gather, analyze and organize information into a coherent story. Most of the writing in this class will distinguish the different types of journalistic content and workflows.

**WAMS 2301 Layout and Design**

*3 Credits Normal Grading Mode*

Design principles used in the printing industry and on the web, as well as coverage of basic headline and outline writing skills. Practical application of software publication tools in a computer classroom setting.

**WAMS 3001 Cultural Studies and Media Analysis**

*3 Credits Normal Grading Mode*

Introduction to the techniques and practices of media analysis. Designed to provide critical skills to understand media products for the messages embedded within them, the different interpretations that various audience members or users take away from them, and how those products can change or not in a global culture. This course is an advanced undergraduate examination of mass communication theory and criticism, with the primary goal of showing how theory drives research, and how research helps us understand mass media. Course Attributes: GE\_Knowledge of Human Society.

**WAMS 3201 Writing for Advocacy and Activism**

*3 Credits Normal Grading Mode*

Study the history of character of social movements with a focus on race, gender, sexuality, age, and class. Produce genres of writing used by advocates and activists, including policy briefs, posters, fliers, memes, press releases, and social media posts.

**WAMS 3211 Memes and Society**

*3 Credits Normal Grading Mode*

The structure of the course will be in the form of the analysis of memetic communication (using the more modern definition of the term) using visual communication theory, mass communication theory, and interdisciplinary approaches to attempt to deconstruct means and understand how to effectively communicate in the often noisy arena of communication known as the internet.

**WAMS 3221 Freelance Journalism**

*3 Credits Normal Grading Mode*

This course offers students a hands-on opportunity to work in a multimedia newsroom, where they will report for the various forms of media. Students will be introduced to the basics of using content management system for the purpose of developing cohesive platforms for journalistic content. Prerequisite(s): WAMS 1201 Minimum Grade of D and CAMS 2101 Minimum Grade of D.

**WAMS 3301 Narrative Photography**

*3 Credits Normal Grading Mode*

Focuses on the art of narrative photography, and covers basic instruction in photography and lighting, as well as the types of photography found in the variety of platforms and outlets. Camera provided. There is an additional fee for this course.

**WAMS 3501 Internship**

*1 Credit Grading mode is S/U*

Provides practical experience outside the classroom and enhances the students professional interests. Courses appropriate for the internship required. Offered fall and spring semesters. Must be enrolled in one of the following Classifications: Junior, Senior. This course is repeatable for a total of 6 hours.

**WAMS 4101 Advanced Professional Writing***3 Credits Normal Grading Mode*

Advanced study and practice of the kinds of internal and external writing used in different organizations—utilities, for-profit corporations, non-profit organizations, and others. May include practice in the researching, writing, and editing of advertising copy, fundraising materials, surveys, reports, market analyses, promotions, product descriptions, grants, proposals, etc. Relevant ethical issues will be included. Prerequisite(s): ENGL 2051 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior, Junior.

**WAMS 4211 Data Journalism and Infographics***3 Credits Normal Grading Mode*

The fundamentals of data journalism using public documents, records and or databases in order to gather, organize, and evaluate data in order to write objective reports and create infographics in accepted journalistic style across several media platforms.

**WAMS 4501 Capstone Project***3 Credits Normal Grading Mode*

Develop a multimedia portfolio, written article, and presentation to showcase your writing and multimedia skills and their application to a specialized field of study.

**WAMS 4961 Independent Study WAMS***1 to 3 Credits Normal Grading Mode*

A topic in Writing and Multimedia Studies that is of particular interest to the student. This course is repeatable for a total of 24 hours.

**Subject- Youth Ministry (YMIN)****YMIN 11 Youth Ministry Observation 1***0 Credits Grading mode is S/U*

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.

**YMIN 21 Youth Ministry Observation 2***0 Credits Grading mode is S/U*

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.

**YMIN 31 Youth Ministry Observation 3***0 Credits Grading mode is S/U*

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.

**YMIN 41 Internship: Group Reflection***0 Credits Grading mode is S/U*

Group reflection on issues pertaining to students' internships. Must be enrolled in one of the following Fields of Study: Youth Ministry.

**YMIN 2531 Youth Ministry Issues and Settings***3 Credits Normal Grading Mode*

Exploration of various settings for youth ministry, including weekly youth meetings, camps, mission trips, Sunday School, and community service. Offered alternate years. Prerequisite(s): YMIN 0011 Minimum Grade of S and YMIN 0021 Minimum Grade of S and YMIN 0031 Minimum Grade of S. Must be enrolled in one of the following Fields of Study: Youth Ministry.

**YMIN 4101 Youth Ministry Internship***1 to 3 Credits Normal Grading Mode*

Internship in youth ministry in various possible settings: congregation, camp, mission trip, etc. Each credit hour requires 45 hours of practicum experience. Prerequisite(s): YMIN 0011 Minimum Grade of C or YMIN 0021 Minimum Grade of C or YMIN 0031 Minimum Grade of C. Corequisite(s): YMIN 0041. Must be enrolled in one of the following Fields of Study: Youth Ministry. This course is repeatable for a total of 6 hours.

**YMIN 4531 Principles of Christian Education***3 Credits Normal Grading Mode*

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. Must be enrolled in one of the following Fields of Study: Youth Ministry.



THE JAMES F. DICKE COLLEGE OF

# **Business Administration**

# Business Administration

John C. Navin, *Dean*

**Professors** Christopher, Navin (*Dean*), Woods; **Associate Professors** Agozzino, Hofman, Kim, Kutch, McClough, McHugh, Savino, Schakett, Wen; **Assistant Professors** Beaschler (*Assistant Dean*), Bittner, Crowley, Ernst, Foster, Franquesa, Jung, Lee, Wilson; **Visiting Assistant Professor** Mofield

## George Willard Patton Chair

The George Willard Patton Chair of Business and Economics, endowed by the Richard King Mellon Charitable Trust of Pittsburgh, Pennsylvania, was established in the 1973-1974 academic year. The 2020-2021 recipient of this endowed professorship is Dr. David Savino, associate professor of management.

## James F. Dicke Endowed Professorships

Three James F. Dicke Endowed Professorships were established in 2016. The purpose of these three-year renewable professorships is to honor and retain business faculty who demonstrate the highest level of excellence in teaching, research, and service. The faculty members currently holding these professorships are Dr. Jill Christopher, Professor of Accounting; Dr. Dong Hyun Kim, Associate Professor of Finance, and Dr. David McClough, Associate Professor of Economics.

## Roger D. Young Endowed Professorship

The Roger D. Young Endowed Professorship in Accounting was established in the 2017-2018 academic year. The purpose of the professorship is to honor the legacy of Roger D. Young by fostering teaching excellence through attracting and retaining exceptional faculty in the field of accounting. The 2020-2023 recipient of this three-year endowed professorship is Dr. Dexter Woods, Professor of Business Administration.

## Mission Statement

The Dicke College of Business Administration engages students in high-impact learning experiences to develop professional leaders with an ethical, analytical, and global mind-set.

## Student Learning Outcomes

- SLO1: Graduates will be able to demonstrate effective professional business communication.
- SLO2: Graduates will be able to effectively apply analytical skills to research, analyze, and integrate complex data.
- SLO3: Graduates will be able to work effectively in teams.
- SLO4: Graduates will demonstrate professional aptitude in general business and their major field.
- SLO5: Graduates will demonstrate knowledge of content of international business as well as global sensitivity.
- SLO6: Graduates will have developed a strong ethical and value decision-making base.

## Admissions Standards

Candidates seeking admission to the 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. Scores on the American College Test or the College Entrance Examination Board Test may also be submitted.

## Transfer Students

The Dicke College of Business Administration welcomes students from other accredited colleges and universities. Applications for transfer will be considered only if the student has a prior minimum 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 3000 or 4000 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.

## 3+3 BSBA and JD Dual Degree Path

The 3+3 Business Law Program, jointly sponsored by the Dicke College of Business Administration and the Pettit College of Law, allows outstanding students to complete all requirements for both a Bachelors of Science in business administration and the Juris Doctor Degree in six years, as opposed to the traditional seven-year period of study. Students with an ACT composite of 27 or higher (or equivalent SAT score) and a high school cumulative GPA of 3.60 or higher are eligible to apply for the 3+3 Program. Qualified and interested students should contact the Dicke College Dean's office ([business@onu.edu](mailto:business@onu.edu)) prior to Summer orientation to express interest in the 3+3 Program. A student must declare a qualifying major on entry into the College. Qualifying majors offered in this accelerated program are Accounting, Finance, Management, and Marketing. Students apply for admission to the Pettit College of Law during their third year. The first semester of the Law program provides the final 15 credit hours required of the BSBA degree. For more information, see the complete description on page 23.

## Pre-law Program

Information concerning the Pre-law Program appears on page 24 of this catalog.

## Three Year BSBA Express Path

Qualified students can opt to participate in the Dicke College's 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 Express Path program. Qualified and interested students should contact the Dicke College Dean's office ([business@onu.edu](mailto:business@onu.edu)) prior to Summer orientation to express interest in the Express Path Program. A student must declare a qualifying major on entry into the College. Qualifying majors offered in this accelerated program are Accounting, Finance, Management, and Marketing. Students opting for 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 Degree Programs

Information concerning dual degree programs involving the College of Business Administration appears on page 23 of this catalog. Students may receive further details in the Dicke College Dean's office.

## Bachelor of Science in Business Administration (BSBA) 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, business analytics, 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 120 credit hours of study including general education requirements, general business 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 21 of this catalog. Some of the general education requirements will be satisfied by the general business requirements and business administration core courses below.

### General Business Requirements

The below specific courses are required for students pursuing a Bachelor of Science in Business Administration:

CAMS 1301	Presentational Speaking	3 hrs.
STAT 1561	Statistics for Professionals 1	3 hrs.
ABUS 2011	Personal Computer Applications	3 hrs.
ENGL 2021	Business Writing	3 hrs.

### Business Administration Core (BIZ Core) Courses

The Dicke College of Business Administration core curriculum provides an integrated four-year experience culminating in a year-long integrated business senior capstone experience that is interdisciplinary in nature.

BIZ 1001	TREX for Business Students	3 hrs.
BIZ 1201	Ethical Leadership	3 hrs.
BIZ 2001	Principles of Business Analytics	3 hrs.
BIZ 2021	Principles of Microeconomics	3 hrs.
BIZ 2031	Principles of Macroeconomics	3 hrs.
BIZ 2101	Principles of Accounting	3 hrs.
BIZ 2131	Legal Environment	3 hrs.
BIZ 2331	Principles of Management	3 hrs.
BIZ 2401	Information Systems	3 hrs.
BIZ 2511	Principles of Marketing	3 hrs.
BIZ 2801	Career Planning	3 hrs.
BIZ 3621	Principles of Finance	3 hrs.
BIZ 3631	Advanced Business Analytics	3 hrs.
BIZ 3641	Operations Management	3 hrs.
BIZ 3951	Strategic Analysis & Formulation	3 hrs.
BIZ 4811	Capstone Project	3 hrs.

And a professional engagement experience appropriate to the major:

BIZ 4901	Internship in Public Relations	1 - 6 hrs.
BIZ 4911	Internship in Accounting	1 - 6 hrs.
BIZ 4921	Internship in Finance	1 - 6 hrs.
BIZ 4941	Internship in Management	1 - 6 hrs.
BIZ 4951	Internship in Marketing	1 - 6 hrs.
BIZ 4961	Internship in Pharmaceutical & Healthcare Bus.	1 - 6 hrs.
BIZ 4981	Internship in Sport Management	1 - 6 hrs.

## Specific Majors and Major Course Requirements

Beyond the general education requirements and the BIZ Core, students must also complete specific requirements in their major areas.

The College of Business Administration offers seven major areas of study: accounting, finance, management, marketing, pharmaceutical and healthcare business, public relations, and sport management.

### Bachelor of Science in Business Administration Accounting Major

The accounting major offers a four-year (120 semester hour) degree program that prepares students for many entry-level accounting and auditing positions. Depending on selected elective courses, students completing the accounting major may have the necessary educational requirements for the Certified Management Accountant (CMA) and the Certified Internal Auditor (CIA) examinations.

The Accounting Major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above), plus the following coursework:

ACCT 2201	AIS and the Accounting Cycle	3 hrs.
ACCT 3011	Intermediate Financial Accounting 1	3 hrs.
ACCT 3021	Intermediate Financial Accounting 2	3 hrs.
ACCT 3141	Intermediate Managerial Accounting 1	3 hrs.
ACCT 3151	Intermediate Managerial Accounting 2	3 hrs.
ACCT 3871	Taxation 1	3 hrs.
ACCT 4011	Auditing 1	3 hrs.

Select 3 elective credit hours of the following:

ACCT 3000:4999		
FINC 3611	Investments	3 hrs.
FINC 3691	Intermediate Finance	3 hrs.
ECON 3831	Managerial Economics	3 hrs.

Students interested in pursuing a CMA designation should select the Accounting Elective from the following courses: Managerial Economics (ECON 3831), Intermediate Finance (FINC 3691), or Investments (FINC 3611). Students interested in pursuing the CMA designation are strongly encouraged to also complete the Finance minor.

Students interested in pursuing a CPA license should select the Accounting Elective from the following courses: Current Topics in Accounting (ACCT 4021), Auditing II (ACCT 4041) or Taxation II (ACCT 4871), and are encouraged to use the two electives not selected as general electives.

### CPA Program

In many states, including Ohio, students planning to sit for the Certified Public Accountant (CPA) examination will have to earn 150 semester hours of academic credit; have course coverage in specified accounting areas; and complete a specified number of upper-level accounting courses or pursue the Dicke College's Master of Science in Accounting (MSA) degree. MSA program details can be found below. Students should consult with their academic advisors and their State Boards of Accountancy for specific course and degree requirements for the CPA exam.

### Bachelor of Science in Business Administration Finance Major

The Finance Major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above) plus finance specific coursework. By combining a unique set of finance electives, students can focus their studies in areas such as corporate finance or risk management (below).

FINC 3611	Investments	3 hrs.
FINC 3691	Intermediate Finance	3 hrs.
FINC 4601	Financial Markets and Institutions	3 hrs.

Select 6 credit hours from the following:

FINC 3000:4999		
FINC 2101	Personal Finance	3 hrs.

Select 6 credit hours from the following:

ACCT 3000:4999		
FINC 3000:4999		
ECON 4301	Econometrics	3 hrs.

### Bachelor of Science in Business Administration Management Major

The Management Major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above) plus management specific coursework. By combining a unique set of management electives, students can focus their studies in areas such as human resources, business intelligence, or operations management (below).

MGMT 3341	Organizational Behavior	3 hrs.
MGMT 3631	Human Resource Management	3 hrs.
MGMT 3751	Model-Based Decision Making	3 hrs.
MGMT 4861	International Management	3 hrs.

Select 9 elective credit hours of the following:

MGMT 3000:4999		
CAMS 2321	Group Dynamics and Team Interaction	3 hrs.
TECH 3111	Product Manufacturing	3 hrs.
TECH 3421	Database Management	3 hrs.
MRKT 3541	GeoAnalytics	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
TECH 4121	Manufacturing Management	3 hrs.
ECON 4301	Econometrics	3 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.

### Bachelor of Science in Business Administration Marketing Major

The Marketing Major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above), plus marketing specific coursework. By combining a unique set of marketing electives, students can focus their studies in areas such as marketing analytics, integrated marketing communications, or customer relationship management (below).

MRKT 3521	Consumer Behavior	3 hrs.
MRKT 3631	Product Design and Innovation	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.
MRKT 4991	Advanced Marketing Strategies	3 hrs.

Select 6 elective credit hours of the following:

MRKT 3000:4999		
PR 1201	Principles of Public Relations	3 hrs.
DSGN 1201	Introductory Visual Communication Design	3 hrs.
PR 1401	Principles of Social Media	3 hrs.
TECH 1421	Web Design	3 hrs.
WAMS 2301	Layout and Design	3 hrs.
CAMS 2151	Multimedia Writing	3 hrs.
TECH 3421	Database Management and Applications	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
ECON 4301	Econometrics	3 hrs.

### Bachelor of Science in Business Administration Pharmaceutical and Healthcare Business Major

The Pharmaceutical and Healthcare Business Major prepares students for careers in the field of healthcare. The curriculum for the major includes the General Education requirements (above), general business requirements (above), the BIZ Core courses (above), pharmaceutical and healthcare business required courses (below), and courses for one of four concentration areas: accounting, business analytics, management, marketing, or public relations.

Classes required of all Pharmaceutical and Healthcare Business majors:

BIOL 1131	Principles and Concepts of Human Biology	4 hrs.
BIOL 2331	Anatomy and Physiology 1	4 hrs.
CHEM 1201	Chemistry for Health Sciences	5 hrs.
PHBU 2011	Introduction to Healthcare Systems	3 hrs.
PHBU 3021	Healthcare Policy and Regulation	3 hrs.
PHBU 3051	Introduction to Health Sciences for Bus. Pro.	3 hrs.
PHBU 4011	Healthcare Economics and Finance	3 hrs.

Additional courses for pharmaceutical and healthcare business majors pursuing the accounting concentration include:

ACCT 2201	AIS and the Accounting Cycle	3 hrs.
ACCT 3011	Intermediate Financial Accounting 1	3 hrs.
ACCT 3021	Intermediate Financial Accounting 2	3 hrs.
ACCT 3871	Taxation 1	3 hrs.
ACCT 4011	Auditing 1	3 hrs.

Select 3 elective credit hours of the following:

ACCT 3000:4999

Additional courses for pharmaceutical and healthcare business majors pursuing the business analytics concentration include:

MGMT 3751	Model-Based Decision Making	3 hrs.
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Select 15 elective credit hours of the following:

TECH 3421	Database Management and Applications	3 hrs.
MRKT 3541	GeoAnalytics	3 hrs.
STAT 3571	Introduction to Statistical Computing with SAS	3 hrs.
STAT 3581	Introduction to Statistical Computing with R	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
ECON 4301	Econometrics	3 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.

Additional courses for pharmaceutical and healthcare business majors pursuing the management concentration include:

MGMT 3341	Organizational Behavior	3 hrs.
MGMT 3631	Human Resource Management	3 hrs.
MGMT 3751	Model-Based Decision Making	3 hrs.
MGMT 4121	Healthcare Management	3 hrs.
MGMT 4861	International Management	3 hrs.

Select 3 elective credit hours of the following:

MGMT 3000:4999		
TECH 3111	Product Manufacturing	4 hrs.
TECH 4121	Manufacturing Management	4 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.

Additional courses for pharmaceutical and healthcare business majors pursuing the marketing concentration include:

MRKT 3521	Consumer Behavior	3 hrs.
MRKT 3631	Product Design and Innovation	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
MRKT 4711	Sales and Customer Relationship Management	3 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.

Select 3 elective credit hours of the following:

MRKT 3000:4999		
PR 1201	Principles of Public Relations	3 hrs.
DSGN 1201	Introductory Visual Communication Design	3 hrs.
PR 1401	Social Media Principles	3 hrs.
TECH 1421	Web Design	3 hrs.
WAMS 2301	Layout and Design	3 hrs.
CAMS 2151	Multimedia Writing	3 hrs.
TECH 3421	Database Management and Applications	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
ECON 4301	Econometrics	3 hrs.

Additional courses for pharmaceutical and healthcare business majors pursuing the public relations concentration include:

PR 1201	Principles of Public Relations	3 hrs.
PR 1401	Principles of Social Media	3 hrs.
PR 2261	PR Practicum (1 semester at 1 credit hour)	1 hr.
PR 3201	Advance PR Writing	3 hrs.
PR 3211	Public Relations Issues	3 hrs.
OR		
PR 3221	Case Studies	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
PR 4401	Social Media Strategies and Campaigns	3 hrs.

### Bachelor of Science in Business Administration 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.

The Public Relations major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above), plus the following:

PR 1201	Principles of Public Relations	3 hrs.
PR 1401	Principles of Social Media	3 hrs.



PR 2261	PR Practicum (1 hr x 4 semesters)	4 hrs.
PR 3201	Advanced PR Writing	3 hrs.
PR 3221	Case Studies	3 hrs.
Or		
PR 3211	Public Relations Issues	
PR 4401	Social Media Strategies & Campaign	3 hrs.
MRKT 3821	Marketing Research	3 hrs.

Select 3 elective credit hours of the following:

PR 3000:4999	except PR 3401	
TECH 1421	Web Design	3 hrs.
CAMS 2321	Group Dynamics and Team Interaction	3 hrs.
CAMS 3301	Interviewing	3 hrs.
CAMS 4311	Political Communications and Campaigns	3 hrs.

### Bachelor of Science in Business Administration Sport Management Major

The Sport Management Major curriculum includes the general education requirements (above), general business requirements (above), the BIZ Core courses (above), plus the following:

SPMG 1001	Introduction to Sport Management	3 hrs.
SPMG 2101	Social Issues in Sport	3 hrs.
SPMG 2301	Facility/Event Management	3 hrs.
SPMG 3051	Team Promotion Practicum	1 hr.
SPMG 4021	Case Studies in Sport	3 hrs.
SPMG 4031	Leadership in Sport Seminar	4 hrs.

Select 3 elective credit hours from the following:

PR 1201	Principles of Public Relations	3 hrs.
SPMG 3021	Minorities in Sport	3 hrs.
MGMT 3341	Organizational Behavior	3 hrs.

Select 3 elective credit hours from the following:

MRKT 3521	Consumer Behavior	3 hrs.
MRKT 4601	Integrated Marketing Communications	3 hrs.
MRKT 4711	Sales	3 hrs.

## Minors and Minor Course Requirements

The Dicke College of Business Administration offers minors in business administration, business analytics, entrepreneurship, finance, management, and marketing.

### Minor in Business Administration

The Business Administration minor is available only to non-business majors. A "C" grade or higher is required in all courses. Non-business majors are advised that one course in BIZ 2001, STAT 2561, or STAT 1761 is a prerequisite for BIZ 3621 (required) and BIZ 3641 (elective).

BIZ 2101	Principles of Accounting	3 hrs.
BIZ 2331	Principles of Management	3 hrs.
BIZ 2511	Principles of Marketing	3 hrs.
BIZ 3621	Principles of Finance	3 hrs.

Select 6 elective credit hours of the following:

ABUS 2221	Principles of Entrepreneurship	3 hrs.
BIZ 2001	Principles of Business Analytics	3 hrs.
BIZ 2021	Principles of Microeconomics	3 hrs.
BIZ 2031	Principles of Macroeconomics	3 hrs.
BIZ 2131	Legal Environment	3 hrs.
BIZ 2401	Information Systems	3 hrs.
BIZ 3641	Operations Management	3 hrs.
TOTAL		18 hrs.

### Minor in Business Analytics

The Business Analytics minor is available to both business and non-business majors. It is required for non-business majors to have STAT 1561 and either STAT 2561 or BIZ 2001 prior to registering for any of the below courses. For non-business majors, the prerequisites of BIZ 2021, BIZ 2031, BIZ 2331, and BIZ 2511 will be waived. A grade of "C" or higher is required in all of the courses.

Business majors pursuing this minor are required to complete the following coursework plus 15 credit hours below:

MGMT 3751	Model-Based Decision Making	3 hrs.
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Non-business majors pursuing this minor are required to complete the following coursework plus 9 credit hours below:

BIZ 3631	Advanced Business Analytics	3 hrs.
BIZ 3641	Operations Management	3 hrs.
(Prerequisite to BIZ 3641 includes either BIZ 2001 or STAT 2561)		
MGMT 3751	Model-Based Decision Making	3 hrs.

Business majors must select 15 elective credit hours and non-business majors must select 9 elective credit hours of the following:

TECH 3421	Database Management and Applications	3 hrs.
MRKT 3541	GeoAnalytics	3 hrs.
STAT 3571	Introduction to Statistical Computing with SAS	3 hrs.
STAT 3581	Introduction to Statistical Computing with R	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
ECON 4301	Econometrics	3 hrs.
MRKT 4731	Logistics and Supply Chain Management	3 hrs.
TOTAL		18 hrs.

### Minor in Entrepreneurship

The Entrepreneurship minor is available to both business and non-business majors with an interest in the value creation process and its benefits to society and the entrepreneur. The elective courses will be related to the student's entrepreneurial interests and will complement his/her academic background. Students who are required to take either BIZ 2101 or FINC 2101 as part of their major requirements must take the alternate option for their entrepreneurship minor requirement. ABUS 4441 is the final requirement and must be taken last.

BIZ 2101	Principles of Accounting	
OR		
FINC 2101	Personal Finance	3 hrs.
ABUS 2221	Principles of Entrepreneurship	3 hrs.
BIZ 2331	Principles of Management	3 hrs.
BIZ 2511	Principles of Marketing	3 hrs.
ABUS 4441	New Venture Creation	3 hrs.

Select 3 credit hours of the following:

AERO 3110*	Air Force Management 1	3 hrs.
ARMY 4010*	Unit Management and Officer Development	3 hrs.
CAMS 2011	Ethics of International Aid	3 hrs.
CAMS 4501	Multimedia Management	3 hrs.
DSGN 4601	Professional Practices in Design	3 hrs.
EDUC 4401**	Educational Psychology and Instructional Practices	3 hrs.
NURS 3051**	Leadership and Management in Nursing Care for the Registered Nurse	3 hrs.
MRKT 3631	Product Design and Innovation	3 hrs.
MGMT 4121	Health Care Management	3 hrs.
MGMT 4571	Project Management	3 hrs.
MGMT 4741	Small Business Management	3 hrs.
MGMT 4771	Nonprofit Management	3 hrs.
MRKT 4701	Retailing	3 hrs.
SPMG 2201**	Promotions/Marketing in Sport	3 hrs.
SPMG 2301**	Facility/Event Management in Sport	3 hrs.
SPMG 3201**	Finance/Economics in Sport	3 hrs.
TADP 2601	Stage Management	3 hrs.
TECH 3111	Product Manufacturing	4 hrs.
TECH 4121	Manufacturing Management	4 hrs.

\* Requires Department Approval

\*\* Must be enrolled in certain field of study

TOTAL		18 hrs.
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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. Students are advised that BIZ 2001 (or STAT 1761 or STAT 2561), BIZ 2101, and ACCT 2201 are prerequisites for ACCT 3011, 3141, and BIZ 3621.

FINC 3611	Investments	3 hrs.
BIZ 3621	Principles of Finance	3 hrs.
FINC 3691	Intermediate Finance	3 hrs.
FINC 4601	Financial Markets	3 hrs.

Choose 6 credit hours of the following:

FINC 2101	Personal Finance	3 hrs.
FINC 3000:4999		
ACCT 3000:4999		
ECON 4301	Econometrics	3 hrs.
TOTAL		18 hrs.

#### 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. Non-business majors are advised that STAT 2561 or its equivalent is a prerequisite for BIZ 3641.

BIZ 2331	Principles of Management	3 hrs.
BIZ 3641	Operations Management	3 hrs.
MGMT 3341	Organizational Behavior	3 hrs.
MGMT 3631	Human Resource Management	3 hrs.

Choose 6 credit hours of the following:

MGMT 3000:4999		
TOTAL		18 hrs.

#### 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.

BIZ 2511	Principles of Marketing	3 hrs.
MRKT 3521	Consumer Behavior	3 hrs.
MRKT 3631	Product Design and Innovation	3 hrs.

Select 9 credit hours of the following:

MRKT 3000:4999		
PR 1201	Principles of Public Relations	3 hrs.
DSGN 1201	Introductory Visual Communication Design	3 hrs.
PR 1401	Principles of Social Media	3 hrs.
TECH 1421	Web Design	3 hrs.
WAMS 2301	Layout and Design	3 hrs.
CAMS 2151	Multimedia Writing	3 hrs.
TECH 3421	Database Management and Applications	3 hrs.
ECON 3831	Managerial Economics	3 hrs.
ECON 4301	Econometrics	3 hrs.
TOTAL		18 hrs.

#### Minor in Public Relations

The Public Relations minor is available to both business and non-business majors. A grade of "C" or higher is required in all of the courses

PR 1201	Principles of Public Relations	3 hrs.
PR 1401	Principles of Social Media	3 hrs.
PR 3201	Advanced Public Relations Writing	3 hrs.
MRKT 3821	Marketing Research	3 hrs.
PR 3221	Case Studies	
OR		
PR 3211	PR Issues	3 hrs.
PR 4401	Social Media Strategy and Campaigns	3 hrs.
TOTAL		18 hrs.

#### Minor in Social Media

The Social Media minor is available to both business and non-business majors. A grade of "C" or higher is required in all of the courses.

PR 1401	Principles of Social Media	3 hrs.
CAMS 2151	Multimedia Writing	3 hrs.
PR 3401	Digital Branding	3 hrs.
MRKT 3541	GeoAnalytics	3 hrs.
PR 4401	Social Media Strategy & Campaigns	3 hrs.

Choose 3 credit hours from the following:

WAMS 1201	Adaptive Media Production	3 hrs.
PR 1201	Principles of Public Relations	3 hrs.
ABUS 2221	Principles of Entrepreneurship	3 hrs.
TOTAL		18 hrs.

## Degree Requirements for the Bachelor of Science in Business Administration

### Bachelor of Science in Business Administration

It is the student's responsibility to ensure that all of the graduation requirements for the degree and major(s) sought are satisfied:

1. The university general education requirements.
2. The general business requirements.
3. BIZ Core requirements.
4. The specific major requirements and electives.
5. Satisfactory completion and presentation of a minimum of 10 credit hours of appropriate course work for the specific major(s).
6. A minimum of 18 credit hours of required business courses at the 3000 or 4000 level to be completed at Ohio Northern University with at least 12 of these hours taken in the student's major.
7. A minimum 2.00 grade point average.
8. A letter grade of "C" or better in all but one course specified in (3) and (4) above.

## GENERAL REGULATIONS FOR UNDERGRADUATE STUDENTS IN THE DICKE COLLEGE OF BUSINESS ADMINISTRATION

1. A student may not register for more than 19 credit hours of academic course work without the dean's written approval. A normal program consists of 12 to 19 credit hours. See page 11 for overload charges beyond 19 credit hours.
2. All students are expected to participate in college program assessment activities.
3. All students are expected to participate in selected college sponsored service activities that contribute to professional development.
4. A student indicates his/her major choice by completing a declaration of major form available from the Registrar's web page. Faculty advisors assist the student in the planning of his/her major.
5. 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).
6. With the written permission of the instructor and the Dean, course prerequisites may be waived.
7. 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.
8. 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.
9. Students must have junior standing or higher to enroll in 3000 and 4000 level College of Business Administration courses without instructor and Dean's approval.
10. Non-College of Business Administration majors may not accumulate more than 30 credit hours in business courses without the written approval of the Dean of the College of Business Administration.

### 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 8 credit hours of credit in varsity sports, applied music and music performance courses may be counted for graduation.

### Classification of Students

For purposes of classification, the requirements for each class standing is below:

- First year standing: below 30 credit hours of completed academic work.
- Sophomore standing: a minimum of 30 credit hours of completed academic work.
- Junior standing: a minimum of 60 credit hours of completed

academic work including the following courses or their articulated equivalents: BIZ 2021 and 2031; BIZ 2101; STAT 1561.

Senior standing: a minimum of 90 credit hours of completed academic work 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 cumulative grade point average falls below 2.00, the student 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 cumulative grade point average will have their 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 1.00 or lower may be placed on probation or suspended.

## Professional Engagement Experience (Internship) Program

Each student must complete a professional engagement experience. Three forms of professional engagement qualify to satisfy this requirement:

1. Internship or Co-Op. The student participates in an internship or co-op within the student's profession. The profession is defined by the declared major. An internship is the most common way to satisfy the professional engagement requirement. The Dicke College has established a nation-wide network of internship opportunities. A student may also propose an internship with an organization outside of the College's established network. The internship or co-op is facilitated and supervised by the Director of Experiential Learning. Junior class standing and approval of the Director of Experiential Learning are required.
2. International experience with a professional project. The student participates in a significant University-sponsored international experience or study abroad program. While participating in this experience the student will network with an organization within their profession as defined by their major. The student will also complete a research project. Students who want to complete their professional experience requirement via an international experience with a professional project must declare their intent, and gain approval from the Director of Experiential Learning, prior to the end of the second semester in the College. See page 22 for a listing of University Study Abroad.
3. Previous professional experience. A student who enters the University with significant prior professional experience can, on enrollment, petition the Dean's office to have that prior professional experience qualify as their required professional engagement. (For example, individuals with military experience or international students as part of an articulation agreement or exchange program.)

The professional engagement experience may be pursued during the academic year or during the summer. Most students schedule their professional engagement experience to occur during the summer between their junior and senior years. Most professional engagement experiences are paid. The professional engagement experience may be full or part-time.

One credit hour of professional engagement is required for the BSBA degree. A minimum of 100 hours of recorded professional engagement experience is required per credit hour. Up to six (6) credit hours may be earned. Students must be registered for professional engagement credit during the term in which the experience occurs.

Students pursuing two or more majors in the Dicke College of Business Administration must complete a distinct professional engagement experience for each major.

# COLLEGE OF BUSINESS ADMINISTRATION

## Subject- General Business (ABUS)

### ABUS 1901 - Special Topics in Business

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

### ABUS 2011 - Personal Computer Applications for Business

3 Credits Normal Grading Mode

Business applications for microcomputers using Microsoft Office products. Introductory level use of software for productivity, word processing, and presentations. Enhanced focus on spreadsheets to analyze and present data. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Business Administration.

### ABUS 2221 - Principles of Entrepreneurship

3 Credits Normal Grading Mode

This course explores the process through which value is created in society. In this course, the role of the entrepreneur as the agent of change and the risk bearer in society will be explored, both from a micro and a macro level. Course Attributes: GE\_Knowledge of Human Society.

### ABUS 2901 - Special Topics in Business

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

### ABUS 3901 - Special Topics in Business

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

### ABUS 3991 - Independent Study in General Business

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Unlimited repeats permitted. Course Attributes: Requires Department Approval.

### ABUS 4441 - New Venture Creation

3 Credits Normal Grading Mode

This course concludes the study of entrepreneurship and is required for the Entrepreneurship minor. In this course, the student will develop a hypothetical new venture, develop a business plan to support a feasible and viable launch of the new venture, and effectively and persuasively present their new venture to a review panel. Prerequisite(s): ABUS 2221 Minimum Grade of C. Requires Instructor Approval.

### ABUS 4452 - International Business and Culture

3 Credits Normal Grading Mode

An international experience that offers company tours, factory visits, cultural activities and the opportunity to interact with students and faculty at local universities. The program has been designed to enhance international business understanding while immersing students in different cultures. The course is taught in seminar format and students will be reviewed based on the value they add to the course. Students will be required to attend 3 to 4 pre-trip class meetings and 1 post-trip meeting. Course requirements include an oral presentation, personal journal, papers, and professional, responsible behavior. Prerequisite(s): ENGL 1221 Minimum Grade of C or HONR 1221 Minimum Grade of C or ENGL 1521 Minimum Grade of C. Course Attributes: GE\_Diverse Cultures. Must be enrolled in one of the following Campuses: Business Administration. Must be enrolled in one of the following Classifications: Junior, Senior.

### ABUS 4901 - Special Topics in Business

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ABUS 4991 - Independent Study in General Business**

*1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Unlimited repeats permitted. Course Attributes: Requires Department Approval.

**Subject- Accounting (ACCT)****ACCT 1901 - Special Topics in Accounting**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ACCT 2201 - AIS and the Accounting Cycle**

*3 Credits Normal Grading Mode*

Enhanced coverage of generally accepted accounting principles (GAAP), financial transaction processing, and financial statement reporting and analysis for accounting majors. Training toward user certification in SAP and Quickbooks Online. Prerequisite(s):BIZ 2101 Minimum Grade of C.

**ACCT 2901 - Special Topics in Accounting**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ACCT 3011 - Intermediate Financial Accounting 1**

*3 Credits Normal Grading Mode*

Financial accounting functions and theory, including enriched knowledge of generally accepted accounting principles, and practical applications of financial accounting and reporting concepts. Also covered is an introduction to FASB research and the preparation of financial statements and disclosure footnotes. Spring semester only. Prerequisite(s):ACCT 2201 Minimum Grade of C.

**ACCT 3021 - Intermediate Financial Accounting 2**

*3 Credits Normal Grading Mode*

Continuation of ACCT 3011. Prepare and analyze financial statements with emphasis in working capital, operational assets, investments, long-term liabilities, (bonds and pensions), accounting for income taxes, leases, accounting changes/errors corrections, and owners equity. Also covered are several FASB research projects involving more complex application of accounting theory. Fall semester only. Prerequisite(s):ACCT 3011 Minimum Grade of C.

**ACCT 3141 - Intermediate Managerial Accounting 1**

*3 Credits Normal Grading Mode*

Emphasis on accounting information for internal decision making. Cost behavior pattern analysis. Cost-Volume-Profit analysis. Job order costing system. Budgeting procedures. Standard costs and variance analysis. Variable costing and responsibility accounting for management reporting. Decision models. Capital budgeting techniques. Fall semester only. Prerequisite(s):ACCT 2201 Minimum Grade of C.

**ACCT 3151 - Intermediate Managerial Accounting 2**

*3 Credits Normal Grading Mode*

Continuation of ACCT 3141. Cost allocation: service department costs and joint costs. Process costing system. Accounting for defective units and scrap. Pricing decisions. Sales variance analysis. Balanced Scorecard and responsibility accounting. Transfer pricing. Spring semester only. Prerequisite(s):ACCT 3141 Minimum Grade of C.

**ACCT 3871 - Taxation 1**

*3 Credits Normal Grading Mode*

The role of taxation in business decisions for individuals and entities, including tax compliance, tax research, tax planning, professional standards and ethics, and the interrelationships and differences between financial and tax accounting. Spring semester only. Prerequisite(s):ACCT 2201 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

**ACCT 3901 - Special Topics in Accounting**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Prerequisite(s):BIZ 2101 Minimum Grade of C. Unlimited repeats permitted.

**ACCT 3991 - Independent Study in Accounting**

*1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Requires Departmental Approval. Unlimited repeats permitted.

**ACCT 4011 - Auditing 1**

*3 Credits Normal Grading Mode*

Auditor's professional standards and ethics as well as legal liability. Business processes and internal control structure, including 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 and the audit of cash. Also covered are various corporate fraud case studies involving the lack of internal controls. Fall semester only. Prerequisite(s):ACCT 3011 Minimum Grade of C.

**ACCT 4021 - Current Topics in Accounting**

*3 Credits Normal Grading Mode*

Accounting and reporting for not-for-profit organizations including state and local governments and college/universities (public and private). Emphasis given to Comprehensive Annual Financial Report (CAFR). In addition, other current topics in Accounting will be covered as deemed appropriate. Prerequisite(s):ACCT 3021 Minimum Grade of C.

**ACCT 4041 - Auditing 2**

*3 Credits Normal Grading Mode*

Continuation of ACCT 4011, includes statistical sampling in auditing, audit of the balance sheet including auditing assets, liabilities, and equity, as well as current issues and problems in auditing. Spring semester only. Prerequisite(s):ACCT 3031 Minimum Grade of C or ACCT 4011 Minimum Grade of C.

**ACCT 4871 - Taxation 2**

*3 Credits Normal Grading Mode*

Continuation of ACCT 3871. Includes advanced treatment of the federal taxation of entities and consideration of multi-jurisdictional taxation. Prerequisite(s):ACCT 3871 Minimum Grade of C.

**ACCT 4901 - Special Topics in Accounting**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ACCT 4991 - Independent Study in Accounting**

*1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject-Core (BIZ)****BIZ 1001 - TREN for Business Students**

*3 Credits Normal Grading Mode*

The first module of this course provides students with the skills and knowledge needed for success in the business college. Primary focus will be placed on the ability to develop critical thinking skills; inspire students to be life-long learners; and encourage engagement in the University and local community. Topics will include: time management, self-knowledge, active learning, effective reading, note taking, business writing, APA formatting, case study, and academic integrity policies. The second module of the course introduces students to principles and functions of business in a global context, including economic systems, business communication, entrepreneurship, marketing, management, accounting, and personal finance. Course Attributes: GE\_Critical and Creative Thinking. Must be enrolled in one of the following Colleges: Business Administration.

**BIZ 1201 - Ethical Leadership***3 Credits Normal Grading Mode*

Systematic examination of alternative ethical decision making approaches and the application of ethics to current business problems. Emphasis is placed on the key role a leader plays in creating and maintaining responsible business conduct in their work group and organization based on their collaboration and interaction with others. Students will use case studies, their own experiences, and current events to examine actions leaders have taken and consequences faced when confronted with ethical dilemmas. From these exercises and discussions, students will have an opportunity to clarify their own values and develop a personal model for ethical leadership. Prerequisite(s): BIZ 1001 Minimum Grade of D. Course Attributes: GE\_Knowledge, Principles of Civics/Ethics. Must be enrolled in one of the following Colleges: Business Administration.

**BIZ 2001 - Principles of Business Analytics***3 Credits Normal Grading Mode*

This course covers fundamental probabilistic concepts, essential decision models, and strategic metrics that form the cornerstone of business analytics. Using the insights gained in the course, students can predict future status of the market to boost the success of business (e.g., return on investment). The course emphasizes analytical ability and hands-on learning experience with Excel so students can immediately apply the tools and techniques in their future careers. Prerequisite(s): STAT 1561 Minimum Grade of D and ABUS 2011 Minimum Grade of D. Must be enrolled in one of the following Colleges: Business Administration.

**BIZ 2021 - Principles of Microeconomics***3 Credits Normal Grading Mode*

This course introduces the fundamentals of economic analysis of individual, business, and industry choices in a market economy. Topics include the price mechanism, supply and demand, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. This course covers both the benefits that free markets provide to society and their limitations in dealing with certain problems. Course Attributes: GE\_Knowledge of Human Society.

**BIZ 2031 - Principles of Macroeconomics***3 Credits Normal Grading Mode*

National income, fluctuations in unemployment and price level, monetary and fiscal policy with emphasis on consequences and ethical implications for society. Course Attributes: GE\_Knowledge of Human Society.

**BIZ 2101 - Principles of Accounting***3 Credits Normal Grading Mode*

Introduction to accounting as an information system that serves internal and external stakeholders. Planning and evaluating activities related to the management cycle from a financial (external reporting) perspective and a managerial (internal reporting) perspective. Balanced scorecard analysis of business decisions through the lens of the four major business processes—organizations and strategy, operations, capital resources, and performance measurement and management.

**BIZ 2131 - Legal Environment***3 Credits Normal Grading Mode*

Legal environment concepts and tort, contract, agency, employment, business organization, regulatory, and property law. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**BIZ 2331 - Principles of Management***3 Credits Normal Grading Mode*

A study of modern management concepts with an emphasis on the major management functions of planning, organizing, leading, and controlling and the activities performed by a manager. The foundations of the management discipline are studied through the various historical perspectives. Organizations are examined as part of a context based on elements related to environment, strategy, structure, culture, decision-making processes, people and outputs.

**BIZ 2401 - Information Systems***3 Credits Normal Grading Mode*

The development, design and implementation of information systems for business planning. Terminology, concepts, and trends in computer hardware and software.

**BIZ 2511 - Principles of Marketing***3 Credits Normal Grading Mode*

Product design and planning, promotional activities, pricing strategy, aspects of physical distribution, retailing, market research, buyer behavior, ethics and global marketing.

**BIZ 2801 - Career Planning***3 Credits Normal Grading Mode*

Career development from résumé writing to negotiating job offers. Development of written, electronic, and oral communication skills in employment search. Critiques of résumés, cover letters, and interview styles. Career and industry exercises. Must be enrolled in one of the following Colleges: Business Administration.

**BIZ 3621 - Principles of Finance***3 Credits Normal Grading Mode*

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. Prerequisite(s): BIZ 2001 Minimum Grade of D or STAT 2561 Minimum Grade of D or STAT 1761 Minimum Grade of D and BIZ 2101 Minimum Grade of D.

**BIZ 3631 - Advanced Business Analytics***3 Credits Normal Grading Mode*

This course covers advanced data analytics in gaining key business insight from data to drive better decision making and improve productivity and profitability in the business. This course focuses on learning how to use various data analytic tools including classification and prediction in the context of most common applications in business – sales, marketing, and customer relationship management (CRM). Students are expected to use state-of-the-art analytic techniques with Excel and SPSS to analyze business data and make strategic recommendations for managerial actions. Prerequisite(s): BIZ 2001 Minimum Grade of D or STAT 2561 Minimum Grade of D or BIZ 3001 Minimum Grade of D.

**BIZ 3641 - Operations Management***3 Credits Normal Grading Mode*

This course focuses on the analytical problem solving techniques in the field of operations management. Topics covered include operations strategy, forecasting, capacity planning, inventory management and material requirements planning (MRP), enterprise resource planning (ERP), quality management and project management. Students will gain exposure to quantitative methodologies and analysis that support operations decisions using case studies, simulation games, spreadsheet models, SAP ERP software, and SAP predictive analytics tools. Prerequisite(s): BIZ 2331 Minimum Grade of D and (STAT 2561 Minimum Grade of D or BIZ 2001 Minimum Grade of D).

**BIZ 3951 - Strategic Analysis and Formulation***3 Credits Normal Grading Mode*

Presentation, discussion and application of strategic management theory, concepts and analytical tools. The course also takes the perspective of a practitioner general manager, plus it assumes a working knowledge of the different functional business disciplines as well as economics. As such, it provides an opportunity to integrate knowledge and abilities cultivated throughout the BIZ core curriculum. Case study is emphasized, to promote deep understanding and to develop strategic and analytical thinking skills. Offered spring semester. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Junior, Senior.

**BIZ 3981 - Independent Study in Core Business***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**BIZ 3991 - Strategic Analysis***1 Credit Normal Grading Mode*

Preparation for senior capstone project by introducing and providing opportunities to practice some of the analytical techniques used in BIZ 4852. Cultivates synthesis of BIZ core curriculum courses. Prerequisite(s): BIZ 3641 Minimum Grade of D. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**BIZ 4811 - Capstone Project***3 Credits Normal Grading Mode*

Completion of a senior level team-based project, involving a real-life business problem. Student teams work with client organizations on a project and present results to a panel of client personnel and faculty. Students are assigned a team, project, and faculty advisor. Includes participation in required DCBA program assessment activities. Offered fall semester. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Senior.

**BIZ 4871 - Strategic Management***2 Credits Normal Grading Mode*

Integrates tools and concepts from business core courses. Develops strategic thinking and analysis. Case study is emphasized. Taken concurrently with BIZ 4881. Prerequisite(s): BIZ 2101 Minimum Grade of D and BIZ 2511 Minimum Grade of D and BIZ 2801 Minimum Grade of D and BIZ 3621 Minimum Grade of D and BIZ 3641 Minimum Grade of D and BIZ 3991 Minimum Grade of D. Corequisite(s): BIZ 4881. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**BIZ 4881 - Capstone Project 1***1 Credit Normal Grading Mode*

Initiation of team-based capstone project, involving a real-life business problem of a strategic nature. Assignment of team, project, external client, and advisor. Background analysis of situation, as well as college required program assessment activities. Taken concurrently with BIZ 4871. Corequisite(s): BIZ 4871. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

**BIZ 4891 - Capstone Project 2***1 Credit Normal Grading Mode*

Continuation of BIZ 4881. Completion of capstone project as a team effort. Development of strategic alternatives and preparation of a business plan for chosen solution. Prerequisite(s): BIZ 4871 Minimum Grade of D and BIZ 4881 Minimum Grade of D. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Junior, Senior.

**BIZ 4901 Internship in Public Relations***1 to 6 Credits Normal Grading Mode*

Field experience in public relations. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Public Relations. This course is repeatable for a total of 6 hours.

**BIZ 4911 - Internship in Accounting***1 to 6 Credits Normal Grading Mode*

Field experience in accounting. Consult advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Fields of Study: Accounting. This course is repeatable for a total of 6 hours.

**BIZ 4921 - Internship in Finance***1 to 6 Credits Normal Grading Mode*

Field experience in Finance. Consult advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Fields of Study: Finance. This course is repeatable for a total of 6 hours.

**BIZ 4941 - Internship in Management***1 to 6 Credits Normal Grading Mode*

Field experience in Management. Consult advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Fields of Study: Management. This course is repeatable for a total of 6 hours.

**BIZ 4951 - Internship in Marketing***1 to 6 Credits Normal Grading Mode*

Field experience in marketing. Consult advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Fields of Study: Marketing. This course is repeatable for a total of 6 hours.

**BIZ 4961 - Internship in Pharmaceutical Business***1 to 6 Credits Normal Grading Mode*

Field experience in pharmaceutical business. Consult advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Fields of Study: Pharmaceutical/Healthcare Bus. This course is repeatable for a total of 6 hours.

**BIZ 4981- Internship in Sports Management***1 to 6 Credits Normal Grading Mode*

Field experience in sports management. Consult Advisor. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Sport Management. This course is repeatable for a total of 6 hours.

**BIZ 4991 - Independent Study in Core Business***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Requires Departmental Approval. Unlimited repeats permitted.

**Subject- Economics (ECON)****ECON 1901 - S/T- Economics***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semester. Unlimited repeats permitted.

**ECON 2901 - S/T- Economics***1 to 3 Credits Normal Grading Mode*

Can be repeated as topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ECON 3831 - Managerial Economics***3 Credits Normal Grading Mode*

Application of economic theory and statistics to managerial decision making. Topics include cost and demand analysis, forecasting, market structure, risk management, and regulation. Prerequisite(s): BIZ 2021 Minimum Grade of C and BIZ 2031 Minimum Grade of C.

**ECON 3871 - International Economics***3 Credits Normal Grading Mode*

Examines economic motivation and implications of resource and output flows across national borders. Topics include: international trade, trade policy, foreign exchange, exchange rates, and impact of fiscal and monetary policy. Prerequisite(s): BIZ 2021 Minimum Grade of C and BIZ 2031 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECON 3901 - S/T- Economics***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ECON 3991 - Independent Study in Economics***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Requires Departmental Approval. Unlimited repeats permitted.

**ECON 4301 - Econometrics***3 Credits Normal Grading Mode*

Introduction to basic econometrics concepts and methods. Application of econometric methods to economic, business, and social science topics. Prerequisite(s):BIZ 2021 Minimum Grade of C and BIZ 2031 Minimum Grade of C.

**ECON 4901 - S/T- Economics***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**ECON 4971 - I/S - Economics***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Finance (FINC)****FINC 1901 - Special Topics in Finance***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**FINC 2101 - Personal Finance***3 Credits Normal Grading Mode*

This course will introduce students to the basics of financial planning; retirement investing, residential real estate investment, budgeting and goal setting, calculating income taxes, mortgage loans and student loans, etc. Special focus will be given to historical cases (i.e. the global financial crisis) to build a well-rounded understanding of avoidable pitfalls in personal investing

**FINC 2901 - Special Topics in Finance***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**FINC 3111 - Risk Management Insurance***3 Credits Normal Grading Mode*

Principles of risk management. Topics include the identification and measurement of risk exposure, the analysis of risk control and risk financing techniques at both individual and enterprise levels. Discussion of traditional insurance and the new scope of enterprise risk management are both emphasized. Prerequisite(s):STAT 2561 Minimum Grade of C or STAT 1761 Minimum Grade of C or STAT 2501 Minimum Grade of C or BIZ 2001 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Finance.

**FINC 3611 - Investments***3 Credits Normal Grading Mode*

The risk-return trade off and distinctive characteristics of different vehicles of financial investment including equities; debt and derivatives (futures and options); portfolio management; the functioning and regulation of securities markets. The Efficient Markets Hypothesis receives special attention. Foundations for corporate as well as personal investment decisions. Prerequisite(s):BIZ 3621 Minimum Grade of C.

**FINC 3691 - Intermediate Finance***3 Credits Normal Grading Mode*

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, real options, lease financing, bankruptcy, mergers, and acquisitions, and capital structure analysis. Prerequisite(s):BIZ 3621 Minimum Grade of C.

**FINC 3901 - Special Topics in Finance***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**FINC 3991 - Independent Study in Finance***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Requires Departmental Approval. Unlimited repeats permitted.

**FINC 4411 - Derivatives***3 Credits Normal Grading Mode*

This course explores how forward, futures, option, and swap contracts are used by investors including hedgers, speculators, and arbitrageurs and how they manage risk associated with changes in interest rates, exchange rates, and asset prices. This course focuses on application of financial derivatives for valuation, portfolio management, and risk management. Prerequisite(s):FINC 3611 Minimum Grade of C.

**FINC 4511 - Portfolio Management***3 Credits Normal Grading Mode*

This course introduces the concepts and evidence relevant to the strategic and tactical management of investment portfolios. We will cover topics in international diversification, asset allocation, portfolio optimization, factor models, the asymmetric relation between risk and return, trading, passive (e.g., index-fund) and active (e.g., hedge-fund, long-short) strategies, performance evaluation, long-horizon investing, simulation, and cryptocurrencies (e.g., bitcoin). Prerequisite(s):FINC 3611 Minimum Grade of C.

**FINC 4601 - Financial Markets and Institutions***3 Credits Normal Grading Mode*

This course will introduce students to monetary policy and its effects on asset prices and economic performance. The quantitative theory of money will be emphasized; identifying the relationship between money creation, GDP growth, and inflation of both consumer prices and varying asset classes. We will offer a critique of a central bank's role in the economy, the tools it uses, how these tools affect the economy and how effective these policies have been in a historical context with emphasis on both domestic and international financial crises. Prerequisite(s):BIZ 3621 Minimum Grade of C.

**FINC 4631 - Corporate Risk Management***3 Credits Normal Grading Mode*

Examines the enterprise's risk management process - identification of the loss exposures, analysis of risk controls and financing techniques available to manage exposures, decision-making under uncertain conditions, and control mechanisms to monitor results. Prerequisite(s):FINC 3611 Minimum Grade of C.

**FINC 4671 - International Finance***3 Credits Normal Grading Mode*

An exploratory overview of the macro drivers of economic and asset performance across countries - applicable to the global 'macro' investor as well as the multi-national corporate manager. An international flows of funds framework will be emphasized, connecting the different classes across the world, and their performance; International Balance of Payments, Current Account, Capital Flows, Demographic Trends, Determination of Exchange Rates, Purchasing Power, and Interstate Rate parities. Conventional topics will be covered as well; Country Risk Analysis, Economic, Translation and Exchange Rate Exposures and Hedging, International Arbitrage, the Carry Trade, and others. Prerequisite(s):BIZ 3621 Minimum Grade of C.

**FINC 4901 - Special Topics in Finance***1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**FINC 4991 - Independent Study in Finance***1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

## **Subject- Management (MGMT)**

### **MGMT 1901 - Special Topics in Management**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

### **MGMT 2901 - Special Topics in Management**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

### **MGMT 3101 - Training and Development**

*1 Credit Normal Grading Mode*

Course that focuses on key concepts of on boarding, educating, and retaining new employees. Students will examine areas that are common for new employees to seek information, manners in which to disseminate information to new employees, and effective techniques in which to lead employees through the on boarding process. Students will participate in live exercises to implement these techniques with TRES students, including taking responsibility for managing a small group of new students throughout the semester. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior. This course is repeatable for a total of 3 hours.

### **MGMT 3201 - Peer Mentor**

*1 Credit Normal Grading Mode*

This course will provide students hands on experience in mentoring by pairing them with a group of entering freshmen whom they will mentor for the year. Emphasis will be placed on mentoring skills and reflection. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

### **MGMT 3251 - Employment Law**

*3 Credits Normal Grading Mode*

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 or employment, and retirement. Prerequisite(s):BIZ 2131 Minimum Grade of C and BIZ 2331 Minimum Grade of C.

### **MGMT 3271 - Leadership Skills and Development**

*3 Credits Normal Grading Mode*

This course will provide a survey of the major theoretical topics in leadership with an emphasis on team leadership. Students will work within a team to enhance their individual leadership skills by developing and leading a semester long project. Prerequisite(s):BIZ 2331 Minimum Grade of C.

### **MGMT 3341 - Organizational Behavior**

*3 Credits Normal Grading Mode*

Overview of human behavior in work organizations examined from individual, interpersonal, group, and organizational perspectives. Students will develop a better understanding of how people and groups in organizations perceive, interpret, and react to events and how that knowledge can be used to increase performance and satisfaction in an organizational setting. An experiential and case-based approach will be used to give students hands on experience in the management of organizational behavior. Prerequisite(s):BIZ 2331 Minimum Grade of C.

### **MGMT 3631 - Human Resource Management**

*3 Credits Normal Grading Mode*

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. Prerequisite(s):BIZ 2331 Minimum Grade of C

### **MGMT 3751 - Model-Based Decision Making**

*3 Credits Normal Grading Mode*

This course introduces management science techniques to develop skills for decision-making and complex business problem solving. Management science techniques focus on linear, integer and non-linear programming, network optimization, simulation, decision analysis, predictive analytics, data analysis, visualization, and reporting. The course presents state-of-the-art decision support technologies required to solve real business problems primarily using spreadsheets and SAP business analytics tools. Prerequisite(s): (BIZ 2001 Minimum Grade of C or STAT 2561 Minimum Grade of C) and BIZ 3641 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

### **MGMT 3901 - Special Topics in Management**

*1 to 3 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. This course may be repeated 6 times. This course is repeatable for a total of 6 hours.

### **MGMT 3991 - Independent Study in Management**

*1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

### **MGMT 4121 - Health Care Management**

*3 Credits Normal Grading Mode*

Special management issues in the health sector: governance, human resources, financial statements and resource seeking, and performance assessments. Prerequisite(s):BIZ 2331 Minimum Grade of C.

### **MGMT 4151 - Compensation Management**

*3 Credits Normal Grading Mode*

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. Prerequisite(s):MGMT 3631 Minimum Grade of C.

### **MGMT - 4201 Peer Mentor Program Coordinator**

*2 Credits Normal Grading Mode*

This course will provide students hands on experience in leadership. Students will work withing a team to enhance their individual leadership skills by planning and leading all aspects of the DCBA Peer Mentor Program. Emphasis will be placed on reflection, feedback, and team leadership. Course Attributes: Requires Instructor Approval. This course may be repeated 2 times.

### **MGMT 4571 - Project Management**

*3 Credits Normal Grading Mode*

Managerial planning and control. Tools and techniques involved in managing projects. Exercises in decision making and critical thinking. Prerequisite(s):BIZ 2331 Minimum Grade of C.

### **MGMT 4741 - Small Business Management**

*3 Credits Normal Grading Mode*

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 Minimum Grade of C or ABUS 2221 Minimum Grade of C or BIZ 2331 Minimum Grade of C.

### **MGMT 4771 - Nonprofit Management**

*3 Credits Normal Grading Mode*

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. Prerequisite(s):BIZ 2331 Minimum Grade of C.



**MGMT 4775 - Executive Classroom: Leadership Realities**

3 Credits Normal Grading Mode

Develop leadership skills for students who will work in interdisciplinary teams shortly after graduation. There is an additional fee for this course. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Business Administration. Must be enrolled in one of the following Classifications: Junior, Senior.

**MGMT 4811 - Hospitality and Tourism Management**

3 Credits Normal Grading Mode

This course is an exploration of the hospitality and tourism industries. Focus is on general principles of hospitality and tourism with particular emphasis on lodging, restaurants, cruises, attractions, and event planning. Prerequisite(s):BIZ 2331 Minimum Grade of C.

**MGMT 4861 - International Management**

3 Credits Normal Grading Mode

The application of management concepts and techniques in a multinational context. Key issues that arise when organizations venture across borders and in the management of the multinational enterprise, as well as tool and constructs used to frame and solve these problems in practice. A focus on relevant business simulations and/or cases. Prerequisite(s):BIZ 2331 Minimum Grade of C.

**MGMT 4901 - Special Topics in Management**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**MGMT 4981 - Independent Study in Management**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**Subject- Marketing (MRKT)****MRKT 1901 - Special Topics in Marketing**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**MRKT 2901 - Special Topics in Marketing**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**MRKT 3521 - Consumer Behavior**

3 Credits Normal Grading Mode

Examining consumer decision-making, information processing, external and internal influences and business effects on consumer decision patterns. Applying qualitative research techniques on analyses of the psychological, social and economic influences on consumption. Prerequisite(s):BIZ 2511 Minimum Grade of C.

**MRKT 3541 - GeoAnalytics**

3 Credits Normal Grading Mode

Improved decision making utilizing location-based and powerful analytics tools. Basic inquiry related to spatial trends and temporal analysis. Intuitive map-based applications and data-mining techniques.

**MRKT 3631 - Product Design & Innovation**

3 Credits Normal Grading Mode

Examining the critical role of innovations in the success of an organization and exploring the design/development and marketing process of innovations in new products and services. Prerequisite(s):BIZ 2511 Minimum Grade of C.

**MRKT 3821 - Marketing Research**

3 Credits Normal Grading Mode

Continuation of MRKT 3521. Development of basic skills in conducting and evaluating marketing research projects. Focuses on research design, data collection methods, sampling, and quantitative data analysis techniques. Examines the role of marketing research in the formulation and solution of marketing problems. Prerequisite(s):BIZ 2001 Minimum Grade of C or STAT 2561 Minimum Grade of C.

**MRKT 3901 - Special Topics in Marketing**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**MRKT 3991 - Independent Study in Marketing**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Requires Departmental Approval. Unlimited repeats permitted.

**MRKT 4701 - Retailing**

3 Credits Normal Grading Mode

Retail store formats, trading area analysis, store location and design, inventory evaluation and management, pricing strategies, sales promotion, merchandise planning, procurement and selling functions. Prerequisite(s):BIZ 2511 Minimum Grade of C.

**MRKT 4711 - Sales**

3 Credits Normal Grading Mode

This course provides students with aspects of the behavioral approach to selling in the context of the marketing concept and selling techniques that build long-term customer relationships. This includes prospecting, ethics, qualifying, presenting, product demonstrations, handling objections, closing, and follow up techniques, and customer relationship management. Prerequisite(s):BIZ 2511 Minimum Grade of C.

**MRKT 4731 - Logistics and Supply Chain Management**

3 Credits Normal Grading Mode

This course focuses on the critical logistics capabilities that a supply chain system must develop to support the business strategy of a firm. The course covers planning, designing, and the techniques for managing the distribution of products and services, warehousing, facility location decisions, inventory control, transportation, collaboration and coordination of the key supply chain players, and the role of information sharing in managing supply chains effectively and efficiently. Students will gain knowledge of the role of technology in managing the supply chain through case studies, in-class activities, simulation games and hands-on experience in SAP enterprise resource planning (ERP) software. Prerequisite(s):BIZ 3641 Minimum Grade of C. Must be enrolled in one of the following Classifications: Junior, Senior.

**MRKT 4811 - Integrated Marketing Communications**

3 Credits Normal Grading Mode

This course is an exploration of advertising from an integrated marketing communications (ICM) perspective. Focus is on general principles and broad perspectives with particular emphasis on strategy and the role of advertising in an integrated program. Students will examine consumer motivation, planning and development, the creative process and campaign execution and evaluation. Prerequisite(s):BIZ 2511 Minimum Grade of C.

**MRKT 4901 - Special Topics in Marketing**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**MRKT 4961 - Independent Study in Marketing**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**MRKT 4991 - Advanced Marketing Strategies**

3 Credits Normal Grading Mode

Integrative course 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. Must be enrolled in one of the following Classifications: Junior, Senior.

**Subject- Pharmaceutical and Healthcare Business (PHBU)****PHBU 1901 - Special Topics in Pharmaceutical and Healthcare Business**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**PHBU 2011 - Introduction to the Healthcare System**

3 Credits Normal Grading Mode

An introduction to the primary and secondary aspects of the health care system. Major topics covered include health data, hospitals and health systems, physicians and clinical services, health insurance, pharmaceuticals and medical devices, health information technology, long-term care, health care supply chain, and health care entrepreneurship. The primary focus is on the US health care system, but it will include an international comparison component. This course also will include an experiential component. Must be enrolled in one of the following Fields of Study: Pharmaceutical/Healthcare Bus.

**PHBU 2901 - Special Topics in Pharmaceutical and Healthcare Business**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**PHBU 3021 - Healthcare Policy and Regulation**

3 Credits Normal Grading Mode

The roles of markets, legislation, and the courts in shaping the Healthcare system. Emphasis on the impact of significant legislative through history and the policy as it relates to the Healthcare system. Additional professional and ethical issues are highlighted. Prerequisite(s):PHBU 2011 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmaceutical/Healthcare Bus.

**PHBU 3051 - Introduction to Health Sciences for Business Professionals**

3 Credits Normal Grading Mode

Basic and pharmaceutical sciences including medical terminology, pharmacology, medicinal chemistry, pharmaceuticals, diagnosis and treatment. This course includes the role of pharmaceutical sciences in the healthcare system as it relates to the business professional. Prerequisite(s):BIOL 1131 Minimum Grade of D and (BIOL 2331 Minimum Grade of D or BIOL 2311 Minimum Grade of D) and CHEM 1201 Minimum Grade of D. Must be enrolled in one of the following Fields of Study: Pharmaceutical/Healthcare Bus. Must be enrolled in one of the following Classifications: Junior, Senior.

**PHBU 3901 - Special Topics in Pharmaceutical Business**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**PHBU 3961 - Independent Study in PHBU**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Course Attributes: Requires Department Approval. Unlimited repeats permitted.

**PHBU 4011 - Healthcare Economics and Finance**

3 Credits Normal Grading Mode

An introduction to the role of markets and governments to allocate and finance Healthcare. Major topics addressed include health insurance (private and public), the structure and function of health systems, regulation in the pharmaceutical and medical device industries, and health outcomes. Prerequisite(s):PHBU 2011 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmaceutical/Healthcare Bus.

**PHBU 4901 - Special Topics in Pharmaceutical Business**

1 to 3 Credits Normal Grading Mode

Can be repeated as the topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

**PHBU 4961 - Independent Study in PHBU**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Course Attributes: Requires Department Approval.

**Subject- Public Relations (PR)****PR 1201 - Principles of Public Relations**

3 Credits Normal Grading Mode

The role, function, and responsibilities of the public relations practitioner within organizations. Course Attributes: GE\_Knowledge of Human Society.

**PR 1401 - Principles of Social Media**

3 Credits Normal Grading Mode

Introductory course provides an overview of social media concepts, technologies and implementation. This course will highlight evolution, theory, technology and impact of social media in a hands-on approach.

**PR 2261 - Public Relations Practicum**

1 to 3 Credits Normal Grading Mode

Course provides students the opportunity to experience public relations firsthand through professional involvement with service and non-profit projects. Offered fall and spring semesters. This course is repeatable for a total of 6 hours.

**PR 3201 - Advanced Public Relations Writing**

3 Credits Normal Grading Mode

The course presents opportunities for research, identifying and writing public affairs columns, editorials, features, and position papers for use in the public relations arena. Offered fall semester. Prerequisite(s):ENGL 2021 Minimum Grade of C or CAMS 2201 Minimum Grade of C.

**PR 3211 - Issues in Public Relations**

3 Credits Normal Grading Mode

Current topics in the field including but not limited to: the role of public relations in organizational decision making, ethics, and special practice areas.

**PR 3221 - Public Relations Case Studies**

3 Credits Normal Grading Mode

Public relations case studies concerning problems in industry, business, education, government, social welfare, and trade associations.

**PR 3401 - Digital Branding**

3 Credits Normal Grading Mode

Building on previous semesters work, creating a fully functional website integrating components of previous social media work (i.e. podcasts, YouTube videos, info-graphs). Focus will be on application of social media concepts and application, creating brand strategy with heavy reliance on social media as the foundation way of building and maintaining relationships. Offered spring semester. Prerequisite(s):PR 1401 Minimum Grade of C or CAMS 1401 Minimum Grade of C.

**PR 3991 - Independent Study in Public Relations**

1 to 3 Credits Normal Grading Mode

An in-depth exploration of a subject of special interest. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**PR 4291 - Public Relations Special Topic**

3 Credits Normal Grading Mode.

Special Topics in Public Relations. This course is repeatable for a total of 12 hours.

**PR 4401 - Social Media Strategy and Campaigns**

3 Credits Normal Grading Mode

Students will create and implement a social media campaign from planning and strategizing stage to measuring and evaluation stage. Students will set goals and objectives while determining and matching social media strategies and tactics with prioritized key publics. Offered fall semester. Prerequisite(s): PR 1401 Minimum Grade of C or CAMS 1401 Minimum Grade of C.

**Subject- Sport Management (SPMG)****SPMG 1001 - Introduction to Sport Management**

3 Credits Normal Grading Mode

Initial introduction to basic concepts, career preparation, professional opportunities, and professional skills necessary to be successful in sport management are explored. Offered spring semester. Open to non-Sport Management majors with the permission of the instructor. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 2101 - Social Issues in Sport**

3 Credits Normal Grading Mode

Analysis of the 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 explored in-depth. Offered fall semester. Open to non-Sport Management majors with the permission of the instructor. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 2301 - Facility/Event Management in Sport**

3 Credits Normal Grading Mode

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 fall semester. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 2901 - Independent Study**

1 to 4 Credits Normal Grading Mode

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: First-year, Sophomore. Unlimited repeats permitted.

**SPMG 3021 - Minorities in Sport**

3 Credits Normal Grading Mode

Focus on social structures as evidenced in class, gender, status, physical ability, orientation and race in sport. Interrelationship that social history, values and power structures both inside of sport and outside of sport influence beliefs, attitudes and practices in sport and sport organizations. Offered spring semester, even numbered years. Prerequisite(s): SPMG 1201 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 3051 - Team Promotions Practicum**

1 Credit Normal Grading Mode

Designed to give Sport Management majors the opportunity to acquire promotional experience through involvement with a sport team at the University. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 4021 - Case Studies in Sport**

3 Credits Normal Grading Mode

Sport management case studies concerning diverse issues in professional, amateur, youth, educational or government entities involved in sport. Opportunity to evaluate complex real life issues on a multitude of levels. Offered fall semester. Prerequisite(s): SPMG 1201 Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 4031 - Leadership in Sport**

4 Credits Normal Grading Mode

Examination of sport management professionals as leaders, organizers and motivators in a variety of sport organizations and settings. Personal leadership styles, values, and actions as influences on an organization. Exploration of effective techniques for leading groups, team building, crisis management and problem solving. Opportunity to mentor incoming freshman in to the major. Offered spring semester. Prerequisite(s): SPMG 1201 Minimum Grade of C. Must be enrolled in one of the following Classifications: Senior. Must be enrolled in one of the following Major fields of study: Sport Management.

**SPMG 4901 - Independent Study**

1 to 4 Credits Normal Grading Mode

Individual study of a topic of particular interest to the student. May be repeated as the topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**MASTER OF SCIENCE IN ACCOUNTING (MSA) PROGRAM**

**Graduate Faculty: Professors** Christopher, Woods, **Assistant Professor** Cadotte

**Student Learning Outcomes**

- SLO1: Graduates will be prepared for career advancement and professional certifications.
- SLO2: Graduates will be able to research, analyze, integrate, and communicate complex information through the use of technology in order to facilitate a higher level of management decision making.
- SLO3: Graduates will be able to apply sophisticated analytical, creative, and critical thinking to enhance their independent problem-solving skills.
- SLO4: Graduates will demonstrate in-depth knowledge in areas of forensic accounting and auditing.

**Admission Standards**

Admissions criteria for entry into the MSA program include the following General Minimum Application and Admissions Requirements:

1. Bachelor's degree in Accounting or the equivalent in course work to include:
  - Intermediate Financial Accounting I and II
  - Auditing
  - Taxation
2. One or more of the following:
  - Two or more years of work experience in Accounting or related field
  - Cumulative undergraduate GPA of 3.25 or higher
  - Cumulative undergraduate GPA of at least 3.0 and a GMAT score of 500 or higher
  - Undergraduate Accounting GPA of 3.25 or higher<sup>1</sup>
  - Undergraduate Accounting GPA of at least 3.0 and a GMAT score of 500 or higher<sup>1</sup>
  - Admission into ONU's College of Law
  - Other Admissions Requirements

<sup>1</sup> Accounting GPA is calculated using upper-level Accounting courses and does not include Principles or Introductory courses.

- TOEFL score, if applicable, of 600 for paper-based, 250 for computer-based, or 100 for Internet-based
- Completion of on-line application form, including all requested documentation, and payment of \$200 deposit

Applicants with cumulative or Accounting and upper-level GPAs of 3.0-3.24 may be admitted provisionally (on academic probation) without a GMAT score, at the discretion of the Director of the MSA Program.

Admissions decisions are made by the Director of the MSA Program. If denied, applicants may appeal the decision to the Dean of the Dicke College of Business Administration.

### Master of Science in Accounting Degree Requirements

The Master of Science in Accounting (MSA) degree is a 30 semester hour graduate degree program. The MSA program offers a Forensic Accounting and Audit Services (FAAS) Track. The FAAS Track provides a blended on-line curriculum focused on facets of forensic accounting, internal/external auditing and business valuation. Interested students are advised to contact the Director of the MSA Program for additional program information. The required professional experience (150 contact hours minimum) may be completed anytime while enrolled in the program. Degree requirements can be completed in one calendar year if the program is pursued full time.

### Tuition Rate

The 2020-21 tuition rate for the MSA program is \$975 per credit hour.

### MSA Core Courses

MSA 5101	Professional Ethics and Sarbanes Oxley Compliance	3 hrs.
MSA 5201	Corporate Governance and Risk Management	3 hrs.
MSA 5301	Accounting Information Systems	2 hrs.
MSA 5801	Professional Experience	1 hr.
MSA 5901	Advanced Topics in Accounting	3 hrs.
	Required FAASTrack Courses (6 courses)	18 hrs.
TOTAL		30 hrs.

### FAASTrack (Forensic Accounting and Auditing Services) Course Requirements

The FAASTrack requires the MSA core courses listed above plus the six courses (18 credit hours) listed below. All FAASTrack courses are delivered in either a blended or full on-line eight week format.

FAAS 5701	Forensic Audits & Investigation	3 hrs.
FAAS 5341	Fraud Examination	3 hrs.
FAAS 5421	Internal Auditing	3 hrs.
FAAS 5601	Business Valuation	3 hrs.
PHBU 3021	Healthcare Policy and Regulation	3 hrs.
FAAS 5841	Data Analytics	3 hrs.
FAAS 5881	Advanced Topics in Auditing	3 hrs.

### Concurrent J.D./MSA Degree Program

Students with an interest in taxation can earn both their law degree and a Masters of Science in Accounting through a concurrent degree program offered by the Pettit College of Law and the Dicke College of Business Administration. Students admitted to the program can earn both degrees within three academic years.

Concurrent degree students begin their studies with the standard first year curriculum of the College of Law. In the summer following their first year, students will take federal income taxation and an elective course. Following a second academic year of specialized courses and electives, students will be placed in a summer externship for credit that will offer a field experience in tax accounting. The students will then complete a third year of study and earn both the J.D. and M.S.A. in the spring.

For more detailed information about the academic programs in the College of Law, consult the College of Law catalog. Copies are available on-line or can be requested from the Law Admissions Office.

## General Regulations of the MSA Program

- All students are expected to participate in college program assessment activities.
- Each student enrolled in the College of Business Administration MSA Program is expected to make consistent progress toward completion of the degree requirements of his/her program(s).
- Students are required to maintain a minimum cumulative GPA of 3.0. A minimum GPA of 3.0 is required for graduation from the program.
- Students earning a grade of "D" or "F" in any course will be referred to the Director of the MSA Program for possible academic suspension.
- MSA students must satisfactorily complete 30 semester hours of required course work for the specific concentration for graduation.
- Credit hours earned in repeated courses may be counted only once in the total hours required for graduation.
- 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.
- All course requirements must be completed within three years of enrollment.

### Academic Standing

A student who earns a grade of C or below in two graduate courses or whose GPA falls below 3.0 will be placed on academic probation. A student who earns a grade of C in three courses or a grade of D or F in any course will be reviewed by the Director of the MSA Program and may be placed on academic suspension from the program. Graduate students must earn a grade of C or higher in all courses and maintain a minimum GPA of 3.0 to avoid suspension from the program.

Graduate students will be evaluated each 8-week term. This evaluation shall take into account the standards listed above. On the basis of this evaluation the student may be:

- Recommended for continuation in the graduate program,
- Placed on probationary status, or
- Suspended from the Program and the Graduate School.

### Academic Probation

Probations and suspensions can be appealed by petition, according to the procedures laid out below.

Students admitted in regular status will automatically be placed in probationary status after completion of any 8-week term during which their cumulative graduate grade point average drops below a 3.0 or they receive the second grade of C or below. Students will continue in probationary status until the end of the subsequent 8-week term. At the end of that period, the following actions may be taken:

- Student remains in probationary status
- Student is suspended if their cumulative grade point average remains below 3.0, or
- Student's probationary status is removed if their cumulative grade point average is 3.0 or higher.

A probationary letter is issued to the student indicating the conditions that must be met and outlining an appropriate time frame in which to regain good academic standing in the graduate program. The outcome that will result if the conditions are not met must also be included in the probationary letter. Probationary letters will be made in writing by the Director of the MSA Program at the end of the term during which the student earned the second grade of "C", earned a grade below "C", or cumulative GPA dropped below 3.0, and will indicate the terms of the probation and its removal. After the specified time frame outlined in the probation letter, the student must be sent a letter removing the probationary status, a dismissal letter, or a second probationary letter with a new set of conditions for regaining good academic standing.

Graduate students not meeting the written terms of their academic probation may be academically suspended from the program by the Director of the MSA Program. Such suspensions shall be done in a timely fashion but no later than three weeks after the completion of the term.

### **Repeating a Course**

Students are permitted to repeat for credit a graduate course in which they earned a grade of C or lower. This option is contingent on approval by the Director of the MSA Program. A course may be repeated only once. However, because tuition scholarships are merit-based, a tuition scholarship award does not cover repeated courses. When a course is repeated, the original course and grade remain on the transcript; however, the last grade and units earned replace the original and are the only ones used in computing the overall grade point average. Students who have been dropped from the degree program may not use the course repeat process to gain readmission into the degree program.

### **Reinstatement**

A graduate student who has been officially suspended and who seeks reinstatement shall submit a formal request for reinstatement, along with a supporting statement of explanation, to the Dean of the Dicke College of Business Administration.

### **Transfer Credit for Graduate Program**

1. A maximum of six credits of high-quality graduate work done at an AACSB accredited institution may be applied toward the requirements for the graduate degree. However, credits earned to complete a previous master's degree may not be applied to a second master's degree.
2. Approval to apply any transferred credits toward a degree program is considered on a case-by-case basis and must be granted by the Director of the MSA Program.
3. Transfer credits must meet the following criteria:
  - Must have been earned at an AACSB accredited institution;
  - Must be of "A" or "B" grade value (pass-fail grades are not transferable);
  - Must appear on an official graduate transcript;
  - Must be earned within the three years prior to the date of registration.
4. If transferring credits from a university/college that is on quarter hours, quarter hours must be converted to semester hours. In order to convert quarter hours credit to equivalent semester hours credit, multiply the number of quarter hours by two-thirds.

### **Leave of Absence**

A leave of absence for a period of time no longer than one calendar year may be granted because of medical necessity, full-time employment, receipt of an external award, or other acceptable reasons. The student should submit a request for a leave of absence to the Director of the MSA Program. A student is eligible to request a leave of absence only after having completed at least one semester in the program. Time limitations which pertain to the various degrees and the completion of courses on which a grade of I (incomplete) was earned are not waived.

### **Subject- Forensic Accounting and Auditing (FAAS)**

#### **FAAS 5341 - Fraud Examination**

*3 Credits Normal Grading Mode*

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. Ohio Northern University is an educational partner with the Association of Certified Fraud Examiners. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **FAAS 5421 - Internal Auditing**

*3 Credits Normal Grading Mode*

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, internal controls, and emerging issues. 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. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **FAAS 5601 - Business Valuation**

*3 Credits Normal Grading Mode*

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. Ohio Northern University is an educational partner with the NACVA. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **FAAS 5701 - Forensic Audits & Investigation**

*3 Credits Normal Grading Mode*

This course integrates auditing and fraud investigative skills to develop and implement a plan to investigate financial irregularities. Using a case study, students practice planning an investigation, interviewing persons of interest, collecting and storing evidence, and communicating the results of the investigation. The course will culminate in a mock trial during which students will practice testifying as an expert witness. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **FAAS 5841 - Data Analytics**

*3 Credits Normal Grading Mode*

This course covers the skills needed to use technology to conduct audits, fraud investigations, and data analysis for decision-making oversight. Students will learn to use tools such as presentation and reporting tools, data analysis programs, data visualization, and spreadsheet programs. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **FAAS 5881 - Advanced Topics in Auditing**

*3 Credits Normal Grading Mode*

This is a seminar course which covers current issues in auditing. Content varies each year. Must be enrolled in one of the following Programs: Master of Science in Accounting.

### **Subject- Master of Science in Accounting (MSA)**

#### **MSA 5101 - Professional Ethics and Sarbanes Oxley Compliance**

*3 Credits Normal Grading Mode*

Ethical reasoning, integrity, objectivity, independence and other core values as defined by the American Institute of Certified Public Accountants and other accounting codes of conduct 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. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **MSA 5201 - Corporate Governance and Risk Management**

*3 Credits Normal Grading Mode*

The course provides a study of the structured system of policies and processes established and maintained by the board of directors to oversee an organization's strategic activities, assessment and management of risk, accountability and openness in conducting its activities for the long term. Focus on boards of trustees; committees; rights, relationship with shareholders; policies and procedures related to accounting, auditing, executive compensation and financial reporting; and identification of risk and strategies to manage risk. Previously listed as FAAS 5201 and TAX 5201. Must be enrolled in one of the following Programs: Master of Science in Accounting.

#### **MSA 5301 - Accounting Information Systems**

*2 Credits Normal Grading Mode*

This course explores accounting information systems and their role in the accounting environment and business enterprise. It focuses on the nature and flow of accounting information in organizations and the use of contemporary information technology and applications in decision-making. Content varies each year. Must be enrolled in one of the following Programs: Master of Science in Accounting.

**MSA 5801 - Professional Experience**

*1 to 3 Credits Normal Grading Mode*

Internship in Accounting. Must be enrolled in one of the following Programs: Master of Science in Accounting. This course is repeatable for a total of 3 hours.

**MSA 5901 - Advanced Topics in Accounting**

*3 Credits Normal Grading Mode*

A seminar course which covers advanced topics and emerging issues in accounting. Content varies each year. Must be enrolled in one of the following Programs: Master of Science in Accounting.

**MSA 5991 - Independent Study - Masters of Science in Accounting**

*1 to 3 Credits Normal Grading Mode*

An in-depth exploration of a subject of special interest. Can be repeated as topic varies. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Programs: Master of Science in Accounting. Unlimited repeats permitted.



THE THOMAS JEFFERSON SMULL COLLEGE OF  
**Engineering**

# THE THOMAS JEFFERSON SMULL COLLEGE OF

# Engineering

John-David S. Yoder, *Dean*

## Accreditation and Association

Bachelor degree programs in civil, computer, electrical and mechanical engineering as well as engineering education are accredited by the Engineering Accreditation Commission of ABET and the computer science program is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>. 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 1881 with its first graduate in 1892, 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 6,200 engineers and computer scientists have graduated from the Thomas Jefferson Smull College of Engineering. All programs continue to meet the highest standards of engineering excellence.

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 2020-21 recipient of the chair is Dr. Firas Hassan, Associate Professor of Electrical and Computer Engineering.

**Centennial Alumni Chair of Engineering** established in 1983 by donations from engineering alumni and friends in celebration of the college's centennial year. The 2020-21 recipient of the chair is Dr. Lauren Logan, Assistant Professor of Civil and Environmental Engineering.

**Leroy H. Lytle Distinguished Professorship in Mechanical Engineering** established in 1983 from the estate of Leroy H. Lytle, 1923 graduate of ONU. The 2020-21 recipient of the chair is Dr. J. Blake Hylton, Assistant Professor of Mechanical Engineering.

## Departments

There are three departments in the College of Engineering: civil and environmental engineering, electrical & computer engineering and computer science, and mechanical engineering.

## Mission Statement

The mission of the College of Engineering of Ohio Northern University is to engage students through personal relationships and high impact educational experiences to maximize their success.

## Core Values

The College of Engineering values personal relationships, engagement, opportunity, and the development and success of individuals.

## 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 [www.onu.edu/admissions](http://www.onu.edu/admissions).

In addition to the general requirements for admission to the University stated in this catalog, it is highly recommended that high school graduates 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. Scores on the American College Test or the College Entrance Examination Board Test may also be submitted.

Prospective students who do not meet the minimum requirement for admission to the college as first year students 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 first 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 hrs. 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 the general education requirements. The requirements include specific and elective courses including Writing Seminar, Professional Ethics, Business Elective (Microeconomics, Macroeconomics or Principles of Entrepreneurship), and General Education Electives (5).

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 with, and approved by, the academic advisor.

A current compilation of all general education courses is available on the internal university website.

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

##### First Year

Calculus 1 and 2 (MATH 1631, 1641)	8 hrs.
Chemistry 1 and Lab (CHEM 1501 and 1551)	4 hrs.
Physics 1 and Lab (PHYS 2311, 2341)	4 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
Engineering Orientation (ENGR 1001)	0 hrs.
Foundations of Design 1, 2 (ENGR 1041, 1051)	6 hrs.
Principles of Entrepreneurship (ABUS 2221)	3 hrs.
CEE Computer Applications (CE 1021)	3 hrs.
General Education Electives	3 hrs.
TOTAL	34 hrs.

##### Sophomore Year

Calculus 3 (MATH 2631)	4 hrs.
Differential Equations (MATH 2651)	4 hrs.
Physics 2 (PHYS 2321)	3 hrs.
Geology and Lab (GEOL 2801, 2811)	4 hrs.
Statics (ENGR 2131)	3 hrs.
Strength of Materials (ENGR 2231)	3 hrs.



Surveying (CE 2711)	3 hrs.
Fluid Mechanics (CE 2621)	3 hrs.
Material Science (ME 1411)	3 hrs.
General Education Elective	3 hrs.
TOTAL	33 hrs.

*Junior Year*

Structural Analysis (CE 3411)	4 hrs.
Transportation Engineering (CE 3511)	3 hrs.
Water Resources Engineering (CE 3811)	3 hrs.
Geotechnical Engineering (CE 3311)	3 hrs.
Environmental Engineering (CE 3211)	3 hrs.
General Education Elective	3 hrs.
Reinforced Concrete (CE 3421)	4 hrs.
CE/Technical Electives	9 hrs.
TOTAL	32 hrs.

*Senior Year*

Capstone Design Experience 1,2 (ENGR 4011, 4021)	3 hrs.
Diverse Cultures Seminar	3 hrs.
Statics for Science and Engineering (STAT 2501)	3 hrs.
CE Design Seminar 1, 2 (CE 4111, 4121)	4 hrs.
CE Fundamentals (CE 4101)	1 hrs.
CE/Technical Electives	9 hrs.
Professional Ethics (PHIL 2401)	3 hrs.
General Education Elective	3 hrs.
TOTAL	29 hrs.

**Bachelor of Science in Computer Engineering Curriculum**

*First Year*

Calculus 1, 2 (MATH 1631, 1641)	8 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
Engineering Orientation (ENGR 1001)	0 hrs.
Foundations of Design 1, 2 (ENGR 1041, 1051)	6 hrs.
Programming 1, 2 (ECCS 1611, 1621)	8 hrs.
Digital Logic (ECCS 1721)	4 hrs.
Principles of Entrepreneurship (ABUS 2221)	3 hrs.
Science Elective	4 hrs.
TOTAL	36 hrs.

*Sophomore Year*

Discrete Mathematics (MATH 3061)	3 hrs.
Physics 1 & Lab (PHYS 2311, 2341)	4 hrs.
Physics 2 & Lab (PHYS 2321, 2351)	4 hrs.
Electric Circuits (ECCS 2311)	4 hrs.
Digital Signal Processing (ECCS 2331)	3 hrs.
Electronics (ECCS 2341)	4 hrs.
Maker Engineering (ECCS 2381)	1 hr.
Data Structures & Algorithms 1 (ECCS 2671)	3 hrs.
Professional Ethics (PHIL 2401)	3 hrs.
Math Elective	3 hrs.
TOTAL	32 hrs.

*Junior Year*

Real-Time Embedded Applications (ECCS 3351)	4 hrs.
Networks and Data Communication (ECCS 3631)	4 hrs.
Operating Systems (ECCS 3661)	3 hrs.
Computer Architecture (ECCS 3611)	4 hrs.
Embedded Hardware-Software Codesign (ECCS 3241)	4 hrs.
Computer Security (ECCS 3411)	3 hrs.
Project Development (ECCS 3781)	2 hrs.
Statistics for Sci. & Engr. (STAT 2501)	3 hrs.
General Education Elective	3 hrs.
TOTAL	30 hrs.

*Senior Year*

Capstone Design Experience 1,2 (ENGR 4011, 4021)	3 hrs.
Computer Engineering Technical Electives	9 hrs.
Engineering Elective	3 hrs.
Math/Science Elective	3 hrs.
General Education Electives	12 hrs.
TOTAL	30 hrs.

**Bachelor of Science in Electrical Engineering Curriculum**

*First Year*

Calculus 1, 2 (MATH 1631, 1641)	8 hrs.
Science Elective	4 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
Engineering Orientation (ENGR 1001)	0 hrs.
Foundations of Design 1, 2 (ENGR 1041, 1051)	6 hrs.
Programming 1 (ECCS 1611)	4 hrs.
Digital Logic (ECCS 1721)	4 hrs.
Principles of Entrepreneurship (ABUS 2221)	3 hrs.
TOTAL	32 hrs.

*Sophomore Year*

Calculus 3 (MATH 2631)	4 hrs.
Differential Equations (MATH 2651)	4 hrs.
Physics 1 & Lab (PHYS 2311, 2341)	4 hrs.
Physics 2 & Lab (PHYS 2321, 2351)	4 hrs.
Electric Circuits (ECCS 2311)	4 hrs.
Digital Signal Processing (ECCS 2331)	3 hrs.
Electronics (ECCS 2341)	4 hrs.
Maker Engineering (ECCS 2381)	1 hour
Professional Ethics (PHIL 2401)	3 hrs.
TOTAL	31 hrs.

*Junior Year*

Applied Electromagnetics (ECCS 3111)	3 hrs.
Machines and Power Electronics (ECCS 3121)	4 hrs.
Signals and Systems (ECCS 3131)	4 hrs.
Control & Automation (ECCS 3141)	4 hrs.
Communication Systems (ECCS 3191)	4 hrs.
Real-Time Embedded Applications (ECCS 3351)	4 hrs.
Project Development (ECCS 3781)	2 hrs.
Statistics for Sci. & Engr. (STAT 2501)	3 hrs.
General Education Electives	6 hrs.
TOTAL	34 hrs.

*Senior Year*

Capstone Design Experience 1,2 (ENGR 4011, 4021)	3 hrs.
Networks and Data Communications (ECCS 3631)	4 hrs.
Power Systems (ECCS 4111)	3 hrs.
Electrical Engineering Technical Electives	9 hrs.
Engineering Elective	3 hrs.
General Education Electives	9 hrs.
TOTAL	31 hrs.

**Bachelor of Science in Mechanical Engineering Curriculum**

*First Year*

Calculus 1 and 2 (MATH 1631, 1641)	8 hrs.
Chemistry and Lab (CHEM 1501, 1551)	4 hrs.
Physics 1 and Lab (PHYS 2311, 2341)	4 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
Engineering Orientation (ENGR 1001)	0 hrs.
Foundations of Design 1,2 (ENGR 1041, 1051)	6 hrs.
Engineering Material Science (ME 1411)	3 hrs.
General Education Elective	3 hrs.
Business Elective	3 hrs.
TOTAL	34 hrs.

*Sophomore Year*

Differential Equations (MATH 2651)	4 hrs.
Physics 2 (PHYS 2321)	3 hrs.
Statics (ENGR 2131)	3 hrs.
Dynamics (ENGR 2141)	3 hrs.
Strength of Materials (ENGR 2231)	3 hrs.
Electric Circuits (ECCS 2311)	4 hrs.
Computer Applications (ME 2511)	3 hrs.
Thermodynamics (ME 2311)	3 hrs.
Math/Science elective	3 hrs.
General Education Elective	3 hrs.
TOTAL	32 hrs.

### Junior Year

Mechanical Design 1 and 2 (ME 3111, 3121)	6 hrs.
Dynamic Systems 1 and 2 (ME 3211, 3221)	7 hrs.
Fluid Mechanics (ME 3311)	3 hrs.
Heat Transfer (ME 3321)	3 hrs.
Thermal Sciences Lab (ME 3331)	1 hr.
Mechanical Engineering Elective	3 hrs.
Professional Ethics	3 hrs.
Statistics for Scientists and Engineers (STAT 2501)	3 hrs.
Experimental Methods (ME 3511)	2 hrs.
Manufacturing Laboratory (ME 3411)	1 hr.
TOTAL	32 hrs.

### Senior Year

Capstone Design Experience 1, 2 (ENGR 4011, 4021)	3 hrs.
Process of Design (ME 4011)	3 hrs.
Engineering Analysis (ME 4511)	3 hrs.
Technical Electives	6 hrs.
General Education Electives	9 hrs.
Mechanical Engineering Elective	3 hrs.
Science/Math Elective	3 hrs.
TOTAL	30 hrs.

### Bachelor of Science - Engineering Education Curriculum

#### First Year

Engineering Orientation (ENGR 1001)	0 hrs.
Calculus 1 and 2 (MATH 1631, 1641)	8 hrs.
Physics 1 and Physics Laboratory 1 (PHYS 2311, 2341)	4 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
Foundations of Design 1, 2 (ENGR 1041, 1051)	6 hrs.
Communication in the Classroom (CAMS 1311)	3 hrs.
Culture and Schooling (EDUC 1151) (20 field hrs.)	3 hrs.
Exceptional Learners (EDUC 2101) (20 field hrs.)	3 hrs.
General Education Elective	3 hrs.
TOTAL	33 hrs.

#### Sophomore Year

Calculus 3 (MATH 2631)	4 hrs.
Differential Equations (MATH 2651)	4 hrs.
Electric Circuits (ECCS 2311)	4 hrs.
Statics (ENGR 2131)	3 hrs.
Computer Applications (ME 2511)	3 hrs.
Dynamics (ENGR 2141)	3 hrs.
Development Across the Lifespan (PSYC 2151)	3 hrs.
Curriculum and Assessment (EDUC 2681) (20 field hrs.)	3 hrs.
Literacy Across the Content Areas (EDUC 3451)	3 hrs.
Engineering Education Methods (ENGR 3101)	3 hrs.
TOTAL	33 hrs.

#### Junior Year

Foundations of Analysis (MATH 2691)	3 hrs.
Statistics for Scientists and Engineers (STAT 2501)	3 hrs.
Integrated Mathematics Methods (EDUC 4541) (20 field hrs.)	3 hrs.
Educ. Psych. & Instr. Practices (EDUC 4401) (20 field hrs.)	3 hrs.
Engineering Technical Electives 1, 2, 3, 4, and 5	15 hrs.
General Education Elective	3 hrs.
TOTAL	30 hrs.

#### Senior Year

Foundations of Geometry (MATH 4211)	3 hrs.
Capstone Design Experience 1,2 (ENGR 4011, 4021)	3 hrs.
Abstract Algebra 1 (MATH 3411)	3 hrs.
The Teaching Profession (EDUC 4201)	1 hr.
Leadership Seminar in Education (EDUC 4451)	2 hrs.
Student Teaching - Adolescent (EDUC 4721)	12 hrs.
Engineering Technical Electives 6, 7, and 8	8 hrs.
TOTAL	32 hrs.

### 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.

#### First Year

Calculus 1, 2 (MATH 1631, 1641)	8 hrs.
Writing Seminar (ENGL 1221)	3 hrs.
General Education Elective	3 hrs.
Engineering Orientation (ENGR 1001)	0 hr.
Foundations of Design 1 (ENGR 1041)	3 hrs.
Programming 1, 2 (ECCS 1611, 1621)	8 hrs.
Digital Logic (ECCS 1721)	4 hrs.
Principles of Entrepreneurship (ABUS 2221)	3 hrs.
TOTAL	32 hrs.

#### Sophomore Year

Discrete Mathematics (MATH 3061)	3 hrs.
Science Electives & Labs	8 hrs.
Data Structures and Algorithms 1, 2 (ECCS 2671, 2681)	6 hrs.
Software Design Patterns (ECCS 2411)	3 hrs.
Mobile App Development (ECCS 2431)	3 hrs.
Web Development (ECCS 2441)	3 hrs.
Statistics for Scientists and Engineers (STAT 2501)	3 hrs.
Professional Ethics (PHIL 2401)	3 hrs.
TOTAL	32 hrs.

#### Junior Year

Computer Security (ECCS 3411)	3 hrs.
Software Engineering (ECCS 3421)	3 hrs.
User Interface Design (ECCS 3451)	3 hrs.
Networks and Data Communication (ECCS 3631)	4 hrs.
Operating Systems (ECCS 3661)	3 hrs.
Databases (ECCS 3481)	3 hrs.
Computer Architecture (ECCS 3611)	4 hrs.
Project Development (ECCS 3781)	2 hrs.
Technical Writing (ENGL 2031)	3 hrs.
General Education Elective	3 hrs.
Free Elective	3 hrs.
TOTAL	34 hrs.

#### Senior Year

Capstone Design Experience 1,2 (ENGR 4011, 4021)	3 hrs.
Programming Languages (ECCS 4411)	3 hrs.
Theory of Computation (ECCS 4431)	3 hrs.
Computer Science Technical Electives	6 hrs.
Math/Stat Elective	3 hrs.
General Education Electives	9 hrs.
Free Electives	3 hrs.
TOTAL	30 hrs.

### 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.

## Student Outcomes

By the time of graduation, students majoring in the college's engineering programs will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Graduates of the computer science program will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

## Concentrations

The College of Engineering offers an Advanced Energy concentration for students who are pursuing degrees in computer engineering, electrical engineering or mechanical engineering. The Advanced Energy concentration builds on a strong foundation in these programs coupled with cross-discipline courses that integrate concepts prevalent within the advanced energy industry.

The college offers a Robotics concentration for students who are pursuing degrees in computer engineering, computer science, electrical engineering or mechanical engineering. The concentration requires a course in robotics and allows students to choose from a variety of electives to complete the program.

The college offers an Environmental Engineering concentration for students who are pursuing a degree in civil engineering. This concentration includes classes in ecology, environmental ethics, environmental engineering and science, water and wastewater treatment, and two additional environmental electives to prepare civil engineering majors for both advanced education and careers in environmental engineering.

The college offers an Aerospace Engineering concentration for students who are pursuing a degree in mechanical engineering. This concentration includes classes in aircraft design, advanced thermodynamics, computational fluid mechanics, and others. The concentration is designed to prepare mechanical engineering majors for both advanced education and careers in aerospace engineering.

The college offers a Biomedical concentration for students who are pursuing a degree in mechanical engineering. This concentration includes classes in human biology, anatomy and physiology, biomaterials and medical devices, biomechanics, and others. The concentration is designed to prepare mechanical engineering majors for both advanced education and careers in biomedical.

Please contact the appropriate department office for the specific plan of study for each concentration.

## 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 hrs. 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 credits, whichever is larger. The dean, upon recommendation of the student's advisor, may permit a student to enroll for extra credits at an additional charge. See page 11 for overload charges beyond 19 credit hrs. 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 hrs. of completed academic work; for junior standing, 60 semester credit hrs.; and for senior standing, 90 semester credit hrs.

## 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 continued probation cannot participate in competitive activities of individuals, teams, or other groups officially designated as representing the University.

Any student on probation whose term grade point average for the following semester is below a 2.00 will have his/her record reviewed by the appropriate department chair 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.

## 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 engineering degree. ONU senior engineering students are strongly encouraged to take the Fundamentals of Engineering (FE) 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 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 24 of this catalog.

## Dual Degree Programs

Information concerning dual degree programs involving the College of Engineering appears on page 23 of this catalog. Students may receive further details from the academic dean.

## Cooperative Education Program

The cooperative education program is designed to integrate classroom study with planned and supervised work experiences. Engineering and computer science co-op students normally are employed in semi-professional capacities in research, development, manufacturing, and engineering departments of industrial companies, consulting firms, and in federal and state agencies. The employment sessions begin in the summer following the sophomore year and include a contracted three to five terms of co-op experience. This five-year program is optional and currently available for all students in the College of Engineering.

## Engineering Education

### Program Educational Objectives

Graduates of the Engineering Education program will:

1. Demonstrate success in their chosen profession
2. Contribute to an expansion of knowledge of both engineering and education through professional development opportunities and community service
3. Develop and cultivate identities as "engineering educators" by functioning at the intersection of engineering and education

## GENERAL ENGINEERING COURSES

### Subject- Engineering (ENGR)

#### ENGR 1001 - Engineering Orientation

*0 Credits Grading mode is S/U*

Student introduction to the College of Engineering, introduction to the profession, and a forum for first-year advising. Offered fall semester. Must be enrolled in one of the following Colleges: Engineering.

#### ENGR 1041 - Foundations of Design 1

*3 Credits Normal Grading Mode*

An introduction to engineering design, modeling, analysis, and skill building, including identification of design specifications, generation and reduction of design solutions through the application of standard engineering techniques, computer-aided design, construction and testing of engineering prototypes, mathematical modeling and engineering analysis, and communication in various formats. Offered fall semester. Course Attributes: GE\_Critical and Creative Thinking. Must be enrolled in one of the following Colleges: Engineering.

#### ENGR 1051 - Foundations of Design 2

*3 Credits Normal Grading Mode*

Application of the engineering design process through a team-based conceptual design project and an exploration of surrounding contexts, including project management, teaming, ethics, and broader impacts of engineering decision-making. Includes a focus on communication via formal and informal presentations to various audiences. Offered spring semester. Prerequisite(s): ENGR 1041 Minimum Grade of D. Course Attributes: GE\_Effective Spoken Communication. Must be enrolled in one of the following Colleges: Engineering.

#### ENGR 1211 - Engineering in an International Context

*3 Credits Normal Grading Mode*

The history of technology and the engineering profession, with emphasis on a location outside the United States. The course will include a faculty-led trip to a foreign destination in order to visit sites of historical and technological significance. Offered Spring semester. Course Attributes: Requires Instructor Approval.

#### ENGR 1221 - International Experience in Engineering

*1 Credit Grading mode is S/U*

A faculty-led trip to a foreign destination in order to visit sites of historical and technological significance. There is an additional fee for this course. Offered Spring Semester. Course Attributes: Requires Instructor Approval. This course may be repeated 3 times. This course is repeatable for a total of 3 hours.

#### ENGR 1511 - Career Exploratory

*1 Credit Grading mode is S/U*

Exploration of experiential employment in a non-engineering position that could be applicable to a student's long-term career goals. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Departments: Engineering. This course is repeatable for a total of 2 hours.

#### ENGR 1901 - Special Topics

*1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in general engineering. May be repeated as topic varies. Offered fall and spring semesters. Unlimited repeats permitted.

#### ENGR 1951 - Independent Study

*1 to 3 Credits Normal Grading Mode*

Individual study of topic of particular interest to the student and instructor in general engineering. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: First-year, Sophomore. Unlimited repeats permitted.

#### ENGR 2131 - Statics

*3 Credits Normal Grading Mode*

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): (MATH 1631 Minimum Grade of D or MATH 1621 Minimum Grade of D) and PHYS 2311 Minimum Grade of D.

#### ENGR 2141 - Dynamics

*3 Credits Normal Grading Mode*

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 and MATH 1641 Minimum Grade of D.

#### ENGR 2231 - Strength of Materials

*3 Credits Normal Grading Mode*

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 Minimum Grade of D.

#### ENGR 2501 - Introduction to Career Development

*1 Credit Grading mode is S/U*

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 an engineering or computer science student for the industrial experience. Offered fall and spring semester. Must be enrolled in one of the following Colleges: Engineering.

### **ENGR 2601 - EPICS**

#### *1 Credit Normal Grading Mode*

A service-learning design course in which teams of students work together on long-term projects that address the engineering and/or computing needs of a community partner. Must be enrolled in one of the following Colleges: Engineering. This course may be repeated 8 times.

### **ENGR 2901 - Special Topics**

#### *1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in general engineering. May be repeated as topic varies. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Engineering. May not be enrolled in one of the following Classifications: First-year. Unlimited repeats permitted.

### **ENGR 2951 - Independent Study**

#### *1 to 3 Credits Normal Grading Mode*

Individual study of topic of particular interest to the student and instructor in general engineering. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Classifications: Sophomore, Junior. Unlimited repeats permitted.

### **ENGR 3201 - Technology and Engineering Education Methods**

#### *3 Credits Normal Grading Mode*

Exploration of best practices in middle/high school engineering-focused classrooms. Topics include standards-aligned activity plan design and facilitation, the engineering design process, project-based learning and assessment, teaching to diverse populations, and fabrication tools.

### **ENGR 3501 - Professional Practice**

#### *1 Credit Grading mode is S/U*

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. CUM GPA of 2.5 minimum required. Offered fall, spring and summer semesters. Prerequisite(s): ENGR 2501 Minimum Grade of S. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Classifications: Junior, Senior. This course may be repeated 5 times.

### **ENGR 3611 - Interdisciplinary Design Experience**

#### *3 Credits Normal Grading Mode*

This interdisciplinary course is an immersive design experience aimed at improving student knowledge and application across engineering disciplines. The course focuses upon developing a growth mindset, improving communication skills, facilitating collaboration, and generating, evaluating, and selecting concepts from multiple design alternatives. The course's learning outcomes include: problem identification, problem decomposition, design progression and articulation, prototyping, and critical reflection. This hands-on course will guide students through a design-build-test-refine model of engineering design.

### **ENGR 3901 - Special Topics**

#### *1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in general engineering. May be repeated as topic varies. Offered fall and spring semester. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Unlimited repeats permitted.

### **ENGR 4011 - Capstone Design Experience 1**

#### *1 Credit Normal Grading Mode*

Experiential portion of the capstone design that is common to all majors in the college. Student teams demonstrate project management skills through use of effective communication techniques, including advisor/client meetings and written progress updates, oral presentations, and written reports. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Major fields of study: Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Engineering Education, Mechanical Engineering. Must be enrolled in one of the following Classifications: Senior. Unlimited repeats permitted.

### **ENGR 4021 - Capstone Design Experience 2**

#### *2 Credits Normal Grading Mode*

Continuation of the experiential portion of the capstone design that is common to all majors in the college. Student teams demonstrate project management skills through use of effective communication techniques, including advisor/client meetings and written progress updates, oral presentations, and written reports. Prerequisite(s): ENGR 4011 Minimum Grade of D. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Major fields of study: Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Engineering Education, Mechanical Engineering. Must be enrolled in one of the following Classifications: Senior. Unlimited repeats permitted.

## **DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

**Professors** Boulanger (*Chair*); **Associate Professors** Johnstone, Ye; **Assistant Professors** France, Logan, and Zechman (*Assistant Dean for Academic and Student Affairs*), **Visiting Assistant Professor** Rabiee

### **Mission Statement**

The mission of the civil and environmental 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:

- 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.
- Provide for areas of concentration, minors, and an opportunity for work experience through a cooperative education program.
- Provide for a student body of appropriate quality and size that is active in the university community.
- Provide a faculty who excel in undergraduate scholarship and who are active in their profession.
- Provide state-of-the-practice physical facilities, including classrooms, laboratories, and support areas.
- Provide for institutional commitment for support in the areas of administration, financial resources, and institutional facilities.

### **Program Educational Objectives**

We expect the alumni of our civil engineering program to attain;

1. Advancement to a professional position within civil engineering by virtue of their knowledge, skills, and attitude;
2. Recognition for solving engineering problems and developing design solutions that consider aesthetics, safety, and sustainability;
3. A reputation for conducting professional endeavors in a responsible and ethical manner; and
4. Professional development through a commitment to career-long learning.

### **Subject- Civil Engineering (CE)**

#### **CE 1021 - CEE Computer Applications**

##### *3 Credits Normal Grading Mode*

Introduction to methods of problem solving. Introduction to 2D and 3D computer aided drafting. Offered spring semester. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Major fields of study: Civil Engineering. Must be enrolled in one of the following Classifications: First-year.

#### **CE 2621 - Fluid Mechanics**

##### *3 Credits Normal Grading Mode*

Principles of fluid mechanics; engineering properties of fluids, fluid statics, fluid dynamics by continuity, momentum and energy principles; steady flow in pipes, flow measurement, dimensional analysis and similitude. Offered spring semester. Prerequisite(s): ENGR 2131 Minimum Grade of D.

**CE 2711 - Surveying***3 Credits Normal Grading Mode*

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 Minimum Grade of D or MATH 1631 Minimum Grade of D.

**CE 3211 - Environmental Engineering***3 Credits Normal Grading Mode*

Introduction to air quality, water quality, water supply treatment and distribution, and wastewater collection and treatment. Offered fall semester. Prerequisite(s):CHEM 1501 Minimum Grade of D.

**CE 3311 - Geotechnical Engineering***3 Credits Normal Grading Mode*

Physical characteristics, index properties, classification, and compaction of soils. Principles of mechanics of soils, settlement, and consolidation. The course will focus on both theory and real-world applications. Offered fall semester.

**CE 3411 - Structural Analysis***4 Credits Normal Grading Mode*

Analyses of determinate beams, trusses and frames and indeterminate beams and frames. Topics include deflections, principle of superposition, influence lines, cables and arches, slope deflection method, and moment distribution method. There is an additional fee for this course. Offered fall semester. Prerequisite(s):ENGR 2231 Minimum Grade of D.

**CE 3421 - Reinforced Concrete***4 Credits Normal Grading Mode*

Mechanics of structural concrete and method for design of reinforced concrete (RC) beams, columns, and slabs. In addition, laboratory on concrete testing. There is an additional fee for this course. Offered spring semester. Prerequisite(s):CE 3411 Minimum Grade of D.

**CE 3511 - Transportation Engineering***3 Credits Normal Grading Mode*

Introduction to components of transportation systems, traffic flow modeling, geometric design of highways, horizontal and vertical curves, highway capacity and level of service, traffic control devices, signalized intersection analysis and design. Offered fall semester. Prerequisite(s):CE 2711 Minimum Grade of D.

**CE 3811 - Water Resources Engineering***3 Credits Normal Grading Mode*

Pump design, water hammer; distribution system analysis and storm sewer design; Open channel flow and stream flow data measurement and analysis, water surface profiles; hydrographs and runoff predictions, NRCS and Rational methods, and unit hydrographs. A design term project is required. Offered fall semester. Prerequisite(s):CE 2621 Minimum Grade of D.

**CE 3901 - Special Topics***1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in civil engineering. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**CE 3921 - Sustainable Building Design***3 Credits Normal Grading Mode*

An introduction to energy efficiency and environmentally friendly practices for residential buildings. Topics include: solar orientation, passive heating, daylighting, CAD Modeling, HVAC analysis, building energy simulation, sustainable materials. Prerequisite(s):ENGR 1051 Minimum Grade of D.

**CE 3951 - Independent Study***1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in civil engineering. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

**CE 4101 - CEE Fundamentals***1 Credit Normal Grading Mode*

A comprehensive review covering the breadth of civil and environmental engineering topics as well as an introduction to engineering topics not specifically covered within the required CEE curriculum. Additional topics include computational tools, construction, dynamics, and economics. Offered fall semester. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Civil Engineering. Must be enrolled in one of the following Classifications: Senior.

**CE 4111 - CEE Design Seminar 1***2 Credits Normal Grading Mode*

Engineering design process; engineering economy; capstone project planning, design alternatives, and proposal. Offered fall semester. Must be enrolled in one of the following Major fields of study: Civil Engineering. Must be enrolled in one of the following Classifications: Senior.

**CE 4121 - CEE Design Seminar 2***2 Credits Normal Grading Mode*

Engineering design process and capstone design support. Offered spring semester. Must be enrolled in one of the following Major fields of study: Civil Engineering. Must be enrolled in one of the following Classifications: Senior.

**CE 4221 - Environmental Systems***3 Credits Normal Grading Mode*

Introduction to principles of environmental systems and sustainability. The course serves to connect students to the characteristics and functions of natural systems. The course has a focus on sustainability and challenges a student's approach to engineering design in order to improve the impacts of development on society. Offered alternating spring semesters. Prerequisite(s):CE 3211 Minimum Grade of D.

**CE 4231 - Environmental Design***3 Credits Normal Grading Mode*

Advanced topics in environmental engineering treatment technologies and systems with a project focus. Offered alternating spring semesters. Prerequisite(s):CE 3211 Minimum Grade of D.

**CE 4321 - Water-Energy-Society Infrastructure Nexus***3 Credits Normal Grading Mode*

This course will integrate several disciplines to create a holistic experience of the water-energy-society nexus. Topics will include the power grid, water distribution systems, and societal and policy implications of the nexus. Empirically-based, self-selected projects will enhance student understanding of today's engineering grand challenges. Offered alternating spring semesters.

**CE 4331 - Watershed Management***3 Credits Normal Grading Mode*

This course will integrate engineering and social aspects of watersheds for application in water resources planning and management. Topics will include stakeholder involvement, cost-benefit analysis, and multi-level decision-making. Course will include a group project and role-playing activities. Offered alternating spring semesters. Prerequisite(s):CE 3811 Minimum Grade of D.

**CE 4421 - Timber Design***3 Credits Normal Grading Mode*

Determination of gravity and lateral loads, properties and grades of sawn lumber and glulam, beam design, design of members subjected to axial forces and combined bending and axial forces, diaphragms, and shear walls. Offered alternating spring semesters. Prerequisite(s):CE 3411 Minimum Grade of D.

**CE 4431 - Steel Design***3 Credits Normal Grading Mode*

Introduction to load and resistance factor design (LRFD) concept. Analysis and design of tension members, compression members, beams, and beams-columns. Offered alternating spring semesters. Prerequisite(s):CE 3411 Minimum Grade of D.

### **CE 4521 - Advanced Technology in Transportation Systems**

*3 Credits Normal Grading Mode*

Introduction to advanced technology in transportation systems, including Geographic Information Systems (GIS) and autonomous/connected vehicle technologies. The course focuses on the application of GIS in roadway safety analysis and the opportunities and challenges which autonomous vehicles bring into transportation systems. Offered alternating spring semesters. Prerequisite(s):CE 3511 Minimum Grade of D.

### **CE 4531 - Design of Roadway Infrastructure**

*3 Credits Normal Grading Mode*

Introduction to the principles of roadway infrastructure design and management, including components of transportation planning, and concrete/flexible pavement design for transportation facilities. Students will also learn to use Microstation for design. Offered alternating spring semesters. Prerequisite(s):CE 3511 Minimum Grade of D.

### **CE 4621 - Ground and Surface Water Hydrology**

*3 Credits Normal Grading Mode*

Project based analysis of surface and groundwater movement. Topics include hydrologic processes, probability and frequency analysis, surface runoff, reservoir and stream flow routing, detention design, groundwater movement, groundwater and well hydraulics including contamination. Offered alternate spring semesters. Prerequisite(s):CE 3811 Minimum Grade of D.

### **CE 4631 - Water Quality Modeling**

*3 Credits Normal Grading Mode*

Introduction to and application of various hydrologic modeling software. The course familiarize students with surface water quality models and their application to modeling pollutants and specific parameters. Offered alternating spring semesters. Prerequisite(s):CE 3811 Minimum Grade of D.

### **CE 4901 - Special Topics**

*1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in civil engineering. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

### **CE 4951 - Independent Study**

*1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in civil engineering. Course Attributes: Requires Instructor Approval. Unlimited repeats permitted.

## **DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING AND COMPUTER SCIENCE**

**Professors** Al-Olimat, Estell, Hassan, Hurtig (*Interim Provost and Vice President for Academic Affairs*), Vemuru (*Chair*); **Associate Professors** LeBlanc, Youssfi; **Assistant Professors** Al-Haj, Khan, **Visiting Assistant Professors** Ammar, Coffman-Wolph

### **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 are expected to attain the following attributes:

- success in their chosen career.
- engagement in continuing professional development.
- a predisposition toward practicing the professional, ethical and moral responsibilities of computer scientists.
- readiness to accept challenging assignments and responsibilities.

## **COMPUTER ENGINEERING**

### **Program Educational Objectives**

Graduates of the Computer Engineering program are expected to attain the following attributes:

- success in their chosen career.
- engagement in continuing professional development.
- a predisposition toward practicing the professional, ethical and moral responsibilities of computer engineers.
- readiness to accept challenging assignments and responsibilities.

## **ELECTRICAL ENGINEERING**

### **Program Educational Objectives**

Graduates of the Electrical Engineering program are expected to attain the following attributes:

- success in their chosen career.
- engagement in continuing professional development.
- a predisposition toward practicing the professional, ethical and moral responsibilities of electrical engineers.
- readiness to accept challenging assignments and responsibilities.

### **Subject- Electrical & Computer Engineering and Computer Science (ECCS)**

#### **ECCS 1011 - Python and Problem Solving**

*4 Credits Normal Grading Mode*

Programming and problem solving using Python. Topics include iteration and recursion, basic data structures, sorting and searching, elementary analysis of algorithms, and an introduction to object-oriented programming. Special emphasis on working with data in order to connect course material with applications in other disciplines. Integrated laboratory experience. Unlimited repeats permitted.

#### **ECCS 1611 - Programming 1**

*4 Credits Normal Grading Mode*

Use of a high-level programming language in a modern integrated development environment to produce small-scale programs that meet written specifications. Simple and aggregate data types. Input/output. Arithmetic and Boolean expressions. Fundamentals of sequence, selection, and iteration. Functions. Files. Introduction to object-oriented programming. Recommended background: College Algebra (MATH 1251). Offered fall semester. Course Attributes: Critical and Creative Thinking, GE\_Critical and Creative Thinking. Must be enrolled in one of the following Classifications: First-year, Sophomore, Junior, Senior.

#### **ECCS 1621 - Programming 2**

*4 Credits Normal Grading Mode*

Continuation of Programming 1. Coverage of the object-oriented programming paradigm, graphical user interfaces and their fundamental widgets and event-driven programming. Offered spring semester. Prerequisite(s):ECCS 1611 Minimum Grade of D. Must be enrolled in one of the following Classifications: First-year, Sophomore, Junior, Senior.

#### **ECCS 1721 - Digital Logic**

*4 Credits Normal Grading Mode*

Analysis and design of combinational circuits. Analysis and design of sequential systems. Design using standard combination and sequential modules. Computer arithmetic and organization. Application of VHDL and Xilinx software design tools. Verification of digital systems in FPGAs and ModelSim simulation. Offered spring semester. Must be enrolled in one of the following Colleges: Engineering.

### **ECCS 2011 - Introduction to Data Science**

#### *3 Credits Normal Grading Mode*

Introduction to the world of data science and its myriad application domains. Learning the basic tools and technology of data science. An applied approach to data analytics methods such as classification, regression prediction, association rules, feature selection, and empirical modeling setup. Applications across different scientific domains using open-source data science software packages. Offered spring semester only. Prerequisite(s): STAT 1561 Minimum Grade of D or STAT 1761 Minimum Grade of D or STAT 2501 Minimum Grade of D or PSYC 2401 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior. Unlimited repeats permitted.

### **ECCS 2021 - Machine Learning**

#### *3 Credits Normal Grading Mode*

Introduction to concepts, methods and algorithms in machine/statistical learning. Topics include supervised learning: regression and linear classification methods, variable/feature selection and regularization methods, tree-based methods, model performance evaluation, basic model averaging methods; and unsupervised learning; principle component analysis, factor analysis and cluster analysis. Other topics include mixture models, re-sampling and rejection-sampling. Offered spring semesters. Prerequisite(s): (STAT 3581 Minimum Grade of D or STAT 2501 Minimum Grade of D) and (ECCS 1011 Minimum Grade of D or ECCS 1611 Minimum Grade of D). Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2311 - Electric Circuits**

#### *4 Credits Normal Grading Mode*

DC and AC circuits. Basic laws, analysis techniques, and circuit theorems. Op amps, first-order circuits, sinusoids and phasors, ac power analysis. Circuit applications of diodes, MOSFET and BJT transistors. Computer simulation. Integrated laboratory experience. Offered fall semester. Prerequisite(s): MATH 1631 Minimum Grade of D or MATH 1621 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2331 - Digital Signal Processing**

#### *3 Credits Normal Grading Mode*

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. Integrated laboratory experience. Offered fall semester. Prerequisite(s): MATH 1641 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2341 - Electronics**

#### *4 Credits Normal Grading Mode*

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 Minimum Grade of D and ECCS 1721 Minimum Grade of D. May not be enrolled in one of the following Classifications: First-year.

### **ECCS 2381 - Maker Engineering**

#### *1 Credit Normal Grading Mode*

Creative design skills and hands-on prototyping including wiring, advanced soldering, laying out printed circuit boards, proper usage of machine tools, computer aided design, hardware/software integration, and user-centered problem solving. Students design and implement their own projects. Prerequisite(s): ECCS 2311 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Computer Engineering, Electrical Engineering. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2411 - Software Design Patterns**

#### *3 Credits Normal Grading Mode*

Named problems occurring in object-oriented software design featuring the 23 fundamental Gang of Four design patterns, applications and use. Introduction to UML diagrams used for illustrating design patterns. Offered fall semester. Prerequisite(s): ECCS 1621 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2431 - Mobile App Development**

#### *3 Credits Normal Grading Mode*

Introduction to mobile app development with a focus on Java-based Android platform for mobile phones and tablets. Topics include Android development environment, emulator-android virtual device, basic building blocks, user interface design, menus and grids, fragments, data storage with SQLite, styles and themes, tabs, communications components, threads, third-party widgets, GPS coding, touch gestures, multimedia, networking and sensors, debugging and testing. Open source IDE such as Android Studio for app development. Offered spring semester. Prerequisite(s): ECCS 1621 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2441 - Web Development**

#### *3 Credits Normal Grading Mode*

Software development languages, tools and techniques for web development. Topics include HTTP, HTML, CSS, JavaScript, jQuery, PHP, and client-side scripting. Introduction to server-side scripting and relational databases for data-centric interactive web sites. Offered spring semester. . May not be enrolled in one of the following Classifications: First-year.

### **ECCS 2671 - Data Structures & Algorithms 1**

#### *3 Credits Normal Grading Mode*

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 1611 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2681 - Data Structures & Algorithms 2**

#### *3 Credits Normal Grading Mode*

Continuation of Data Structures and Algorithms 1. Advanced techniques for algorithm analysis and creation. Greedy algorithms. Amortized analysis. Dynamic programming. Fibonacci heaps. Graph-based data structures and algorithms. Offered spring semester. Prerequisite(s): ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Sophomore, Junior, Senior.

### **ECCS 2991 - Research Experience**

#### *1 to 3 Credits Grading mode is S/U*

A planned learning experience involving participation in an approved research project. A paper and an oral presentation regarding the research experience are required. Course Attributes: Requires Department Approval, Requires Instructor Approval. This course may be repeated 4 times.

### **ECCS 3021 - Data Mining**

#### *3 Credits Normal Grading Mode*

Basic and applied solutions in Data Mining. Topics include data wrangling, feature engineering, data quality, association rules, unsupervised learning, semi-supervised learning, meta-based learning, evolutionary computing, fuzzy-logic computing, artificial neural networks, text mining, and introduction to deep learning. Applied learning involves interdisciplinary problems, and usage of commonly-used data mining tools and languages. Prerequisite(s): ECCS 2021 Minimum Grade of D and ECCS 3481 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

### **ECCS 3031 - Big Data Analytics**

#### *3 Credits Normal Grading Mode*

Common big data frameworks, Apache Hadoop and Apache Spark, and utilizing them for big data analytics tasks from different disciplines. Key topics include business importance of big data analytics, different dimensions of big data complexity, learn and apply the Apache big data frameworks, implementing machine learning solutions for big data, implementing data storage and retrieval for big data, data quality problems in big data, and deep learning in big data analytics. Prerequisite(s): ECCS 2021 Minimum Grade of D and ECCS 3481 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.



**ECCS 3111 - Applied Electromagnetics***3 Credits Normal Grading Mode*

Analysis and applications 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 Minimum Grade of D and MATH 2631 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3121 - Machines and Power Electronics***4 Credits Normal Grading Mode*

Electric machines and power electronics. Three-phase circuits. 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):PHYS 2321 and ECCS 2311 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3131 Signals and Systems***4 Credits Normal Grading Mode*

Signal and system analysis in the time and frequency domains. Frequency domain analysis using LaPlace transform, Fourier series, and Fourier transform. System modeling and analog filter design. Integrated laboratory experience. Offered fall semester. Prerequisite(s) ECCS 2311 Minimum Grade of D and MATH 2651 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3141 - Control and Automation***4 Credits Normal Grading Mode*

Fundamental concepts of control and automation systems. Control systems architecture and design process. Transient-response and steady-state error analysis, root-locus, stability analysis, sensitivity analysis. Frequency domain design and compensation techniques. PID controllers. Computer simulation. Integrated laboratory experience including Programmable Logic Controllers (PLCs). Offered spring semester. Prerequisite(s):ECCS 3131 Minimum Grade of D or ME 3211 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3191 - Communication Systems***4 Credits Normal Grading Mode*

Analog and digital communication systems; modulation and demodulation techniques. Noise and bandwidth requirements. Optimum receiver design. System design and performance analysis. Integrated laboratory experience. Curiosity Connection, and Creating Value in Communication systems. Offered spring semester. Prerequisite(s):ECCS 3131 Minimum Grade of D and STAT 2501 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3241 - Embedded Hardware-Software CoDesign***4 Credits Normal Grading Mode*

UML and model-based embedded system specification, microprocessor/digital signal processor/network processor instruction sets, bus-based system design, embedded computing platform, program design and analysis, hardware-software partitioning, hardware accelerators, networks an distributed embedded architectures, and systems design techniques, multicore embedded systems; integrated laboratory experimental activities. Offered spring semester. Prerequisite(s):ECCS 3351 Minimum Grade of D or ECCS 3611 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3351 - Embedded Real-Time Applications***4 Credits Normal Grading Mode*

Design of microcontroller-based embedded system, microcontroller organization, machine language execution and C language programming, input/output, interrupt, multitasking and synchronization, interfacing from both a hardware and software perspective, including audio, data acquisition, control, and communication; operating systems for embedded real-time applications. Labs include designing and building hands-on projects. Offered fall semester. Prerequisite(s):ECCS 1611 Minimum Grade of D and (ECCS 1721 Minimum Grade of D or ECCS 2721 Minimum Grade of D). Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3411 - Computer Security***3 Credits Normal Grading Mode*

Security goals, secure design principles, social engineering, authentication, cryptography, access control, intrusion detection systems, software vulnerabilities, malicious software, security management and risk analysis, attack methodologies. Offered spring semester. Prerequisite(s):ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3421 - Software Engineering***3 Credits Normal Grading Mode*

A project-based coverage of the SDLC, including requirements, analysis, design, implementation, testing, deployment, and maintenance of software, with primary focus on object-oriented systems. Topics include state-of-the-art software engineering principles and practice used in industry. Agile software development principles and practices will also be introduced. Offered fall semester. Prerequisite(s) ECCS 1621 Minimum Grade of D and MATH 3061 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3451 - User Interface Design***3 Credits Normal Grading Mode*

Human-Computer Interaction design topics as related to the user interfaces and experiences encountered with digital products. Goal-directed design process: research methodologies, personas, scenarios. Gestalt principles of visual perception and their applications. Aesthetic impressions and behavioral effects of layouts, fonts colors, icons, and images. Design values and principles for good behavior and form. Coverage of accessibility, globalization, inclusion, localization, typography, and usability issues. Offered fall semester. Prerequisite(s):ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3481 - Databases***3 Credits Normal Grading Mode*

Overview of data models and applications, database design with a focus on Relational Databases. Relational Algebra. Structured Query Language (SQL). Introduction to non-relational databases. Security issues. Offered spring semester. Prerequisite(s):ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3611 - Computer Architecture***4 Credits Normal Grading Mode*

Performance evaluation, instruction set architecture and microarchitecture. Physical and virtual memory, caches and cache design. Interrupts and exceptions. Pipelining, branch prediction, and other performance enhancements. Design trade-offs. Multiprocessor architectures. Case studies of commercial microprocessors. Integrated laboratory includes completing the behavioral-level design of a microarchitecture. Offered fall semester. Prerequisite(s):ECCS 1721 Minimum Grade of D or ECCS 2721 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3631 - Networks & Data Communications***4 Credits Normal Grading Mode*

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 1611 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3661 - Operating Systems***3 Credits Normal Grading Mode*

Operating systems principles, interrupts, processes, threads, scheduling, concurrency, mutual exclusion and deadlock, memory hierarchy management, virtual memory and paging systems. Concepts of parallel and distributed computing. Integrated multithreaded and multicore programming exercises. Offered spring semester. Prerequisite(s):ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 3781 - Project Development***2 Credits Normal Grading Mode*

Design process and project management to prepare students for their Capstone experience. Topics include design specifications and constraints, project planning, testing, reliability, learning from failure, innovation and creativity, and ethical and legal issues. Decision making based on criteria of economic factors such as present worth, future worth, rate of return, depreciation, and taxes. Must be enrolled in one of the following Classifications: Junior, Senior. Must be enrolled in one of the following Departments: Electrical & Comp Engineering and Computer Science.

**ECCS 3951 - Independent Study***1 to 3 Credits Normal Grading Mode*

Individual study of topic in electrical or computer engineering or computer science of particular interest to the ECCS student. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. 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, Electrical Engineering. Must be enrolled in one of the following Classifications: Junior, Senior. Unlimited repeats permitted.

**ECCS 3991 - External Research Experience***1 to 3 Credits Grading mode is S/U*

A planned learning experience involving participation in an approved research project. A paper and an oral presentation regarding the research experience are required. Course Attributes: Requires Department Approval, Requires Instructor Approval.

**ECCS 4111 - Energy Systems 2***3 Credits Normal Grading Mode*

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 3121 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4121 - Advanced Power***3 Credits Normal Grading Mode*

Selected advanced topics in power engineering. Offered spring semester. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4131 - Wireless Communications and Networks***3 Credits Normal Grading Mode*

Fundamentals of cellular system and coverage of 5G system. History of wireless communication systems 1G through 4G, and LTE system. Multipath channel models and Synchronization of wireless communication signals. Spread spectrum system, multicarrier transmission, MIMO communication, cooperative communication, cognitive radio networks and spectrum sharing. Integrated hands-on projects. Offered spring semester. Prerequisite(s):ECCS 3191 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4141 - Information Science***3 Credits Normal Grading Mode*

Introduction to information theory; channel coding techniques and their trade-offs; compression techniques of voice, image, and video; encryption and decryption techniques. Offered spring semester. Prerequisite(s):ECCS 2721 Minimum Grade of D and STAT 2501 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4161 - Advanced Controls***3 Credits Normal Grading Mode*

Selected advanced topics in control systems. Offered spring semester. Prerequisite(s):ECCS 3141 Minimum Grade of D or ME 3221 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4191 - System Design***1 Credit Normal Grading Mode*

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. Offered fall semester. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4211 - VLSI System Design***3 Credits Normal Grading Mode*

VLSI Fabrication Process, CMOS logic gate implementations, combination logic networks, delay, power, interconnects, subsystem design, floor-planning and layout, architecture design, testing and verification. Computer simulation, integrated lab experience. Offered fall semester. Prerequisite(s):(ECCS 1721 Minimum Grade of D or ECCS 2721 Minimum Grade of D) and ECCS 3331 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4311 - Advanced DSP***3 Credits Normal Grading Mode*

Selected topics in Digital Signal Processing techniques and their applications in 1-D and 2-D spaces. Offered fall semester. Prerequisite(s):ECCS 3311 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4321 - Advanced Network Security***3 Credits Normal Grading Mode*

Mainly focuses on network layer security. Covers in-depth understanding of securing routing protocols, securing LAN, and securing access to network devices with hands-on projects. Advanced coverage with hands-on projects of firewalls, intrusions prevention system, and network address translation. Offered spring semester. Prerequisite(s):ECCS 3631 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 4331 - Photovoltaic and Power Devices***3 Credits Normal Grading Mode*

Characteristics of Sunlight; Semiconductor and Electric Transport; Solar Cell: Properties and Design, PV cell interconnection and modules, Remoted PV-Battery System Design, Stand-alone Photovoltaic Systems; Grid-Connected Photovoltaic Systems, Utility-scale PV systems, Power Devices and Components. Offered fall semester. Prerequisite(s):ECCS 3121 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4341 - Advanced Electronics***3 Credits Normal Grading Mode*

Advanced topics in electronics. Offered spring semester. Prerequisite(s):ECCS 3331 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4351 - Smart Grid***3 Credits Normal Grading Mode*

Smart Grid for efficient Power System; Communication Technology for Smart Grid, Information Technology and Cybersecurity for Smart Grid; Demand Response; Smart Components in Transmission Systems; Smart Components and Control in Distribution Systems, Power Electronics Integration; Microgrids. Offered spring semester. Prerequisite(s):ECCS 4111 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

**ECCS 4361 - Digital Image Processing***3 Credits Normal Grading Mode*

Digital image fundamentals: Spatial and frequency filtering; Image restorations, compression and segmentation. Offered fall semester. Must be enrolled in one of the following Classifications: Junior, Senior.

**ECCS 4391 - Engineering Economy***1 Credit Normal Grading Mode*

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. Must be enrolled in one of the following Classifications: Senior. Unlimited repeats permitted.

**ECCS 4411 - Programming Languages***3 Credits Normal Grading Mode*

Constructs of programming languages in different programming paradigms: syntax analysis, lexical and syntactic analysis, semantic analysis. Names and Types. Memory management. Offered fall semester. Prerequisite(s):ECCS 2671 Minimum Grade of D. Must be enrolled in one of the following Classifications: Senior.

### **ECCS 4431 Theory of Computation**

#### *3 Credits Normal Grading Mode*

A mathematical approach to the theory of computation with implications of theoretical approaches to the computing discipline. Topics include Finite Automata, Determinism and Nondeterminism, Regular Expressions, Grammar and Languages, Context-Free and Non-Context-Free Languages, Turing Machines, Pushdown Automata, Chomsky's Normal Form, NP-Complete and NP-Hard. Offered fall semester. Prerequisite(s):MATH 3061 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior

### **ECCS 4441 - Applied Computer Security**

#### *3 Credits Normal Grading Mode*

Latest practices in computer security applications. Hands-on experience in secure design principles and applications. Building secure applications such as Internet of Things and Smart Home Systems using Raspberry Pi. Application of cryptography, firewalls and intrusion detection systems. Identification of potential vulnerabilities and threats at multiple design levels, and proposing appropriate security measures. Offered in fall semester. Prerequisite(s):ECCS 3411 Minimum Grade of D.

### **ECCS 4901 - Special Topics**

#### *1 to 3 Credits Normal Grading Mode*

Selected topics in electrical or computer engineering or computer science of current interest. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. 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, Electrical Engineering. Must be enrolled in one of the following Classifications: Senior. Unlimited repeats permitted.

### **ECCS 4951 - Independent Study**

#### *1 to 3 Credits Normal Grading Mode*

Individual study of topic in electrical or computer engineering or computer science of particular interest to the ECCS student. Offered fall and spring semesters. Course Attributes: Requires Instructor Approval. 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, Electrical Engineering. Must be enrolled in one of the following Classifications: Senior. Unlimited repeats permitted.

### **ECCS 4991 - Research Experience**

#### *1 to 3 Credits Grading mode is S/U*

A planned learning experience involving participation in an approved research project. A paper and an oral presentation regarding the research experience are required. Course Attributes: Requires Department Approval, Requires Instructor Approval. This course may be repeated 2 times.

## **DEPARTMENT OF MECHANICAL ENGINEERING**

**Professors** Marquart, Mikesell (Chair), Rider, Sawyers, Shen, Yoder (Dean); **Associate Professor** DiBerardino; **Assistant Professors** Funke, Hylton, Laird (Director of Corporate and Alumni Relations), Mehta

### **Mission Statement**

The mechanical engineering department enables students to acquire the skills needed for lifelong success and be prepared for professional practice and further studies.

### **Program Educational Objectives**

Graduates of the Mechanical Engineering program will attain:

1. Success in their chosen profession.
2. Recognition as effective communicators and collaborators with people of various backgrounds.
3. Respect by working in a dedicated, competent, and ethical manner.
4. Professional development through continued studies.

## **Subject- Mechanical Engineering (ME)**

### **ME 1411 - Engineering Material Science**

#### *3 Credits Normal Grading Mode*

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.

### **ME 1901 - Special Topics**

#### *1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in mechanical engineering. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

### **ME 1951 - Independent Study**

#### *1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in mechanical engineering. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

### **ME 2311 - Thermodynamics**

#### *3 Credits Normal Grading Mode*

Fundamentals of classical thermodynamics. Work, heat transfer, and thermodynamic properties. The First and Second Law of Thermodynamics. Application to power and refrigeration cycles, humidity and air conditioning. Offered spring semesters. Prerequisite(s):PHYS 2311 Minimum Grade of D.

### **ME 2511 - Computer Applications**

#### *3 Credits Normal Grading Mode*

Mechanical Engineering applications of computer software, including programmatic problem solving, programming of microcontrollers, and 3D modeling. Prerequisite(s):ENGR 1051 Minimum Grade of D.

### **ME 2901 - Special Topics**

#### *1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in mechanical engineering. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

### **ME 2951 - Independent Study**

#### *1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in mechanical engineering. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

### **ME 3111 - Mechanical Design 1**

#### *3 Credits Normal Grading Mode*

Introduction to mechanical design with the computer used as a tool for design. Synthesis and analysis of linkages along with gear train and cam design. Offered fall semester. Prerequisite(s):ENGR 2141 Minimum Grade of D.

### **ME 3121 - Mechanical Design 2**

#### *3 Credits Normal Grading Mode*

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 Minimum Grade of D and ENGR 2231 Minimum Grade of D.

### **ME 3131 - 3-D Modeling and Design**

#### *3 Credits Normal Grading Mode*

Introduction to mechanical design applications with the computer used as a tool. Emphasis on solid modeling, simulation, design layout, and geometric dimensioning and tolerancing. Must be enrolled in one of the following Classifications: Junior, Senior.

**ME 3211 - Dynamic Systems 1***3 Credits Normal Grading Mode*

Fundamentals of dynamic system behavior. Mathematical modeling of mechanical, fluid, and electrical systems; analytical and computer solution methods. Laplace transforms, transfer function and state variable methods. Free and forced vibration analysis, vibration suppression, multiple DOF systems. Offered fall semester. Prerequisite(s):MATH 2651 Minimum Grade of D and ENGR 2141 Minimum Grade of C and ECCS 2311 Minimum Grade of D.

**ME 3221 - Dynamic Systems 2***4 Credits Normal Grading Mode*

Modeling, analysis and design of linear feedback control systems. Transfer function and state space methods. Frequency response. Digital logic and controls. Laboratory work in digital logic design and performance studies of real systems. Prerequisite(s):ME 3211 Minimum Grade of D.

**ME 3231 - Automotive Engineering***3 Credits Normal Grading Mode*

Studies in land vehicle dynamics and driveline systems. Specific topics include acceleration and braking performance, steering, suspensions, tires and current developments in powertrain and safety systems. Prerequisite(s): (ECCS 3131 Minimum Grade of D and ENGR 2141 Minimum Grade of D) or ME 3211 Minimum Grade of D.

**ME 3311 - Fluid Mechanics***3 Credits Normal Grading Mode*

Fundamentals of fluids phenomena, including hydrostatics, conservation of mass, momentum, and energy, dimensional analysis, internal and external flow, and turbo machinery. Offered fall semester. Prerequisite(s):MATH 2651 Minimum Grade of D and ME 2311 Minimum Grade of D.

**ME 3321 - Heat Transfer***3 Credits Normal Grading Mode*

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. Heat exchanger performance and design. Applications to engineering problems and systems. Offered spring semester. Prerequisite(s):PHYS 2311 Minimum Grade of D and MATH 2651 Minimum Grade of D and ME 3311 Minimum Grade of D.

**ME 3331 - Thermal Sciences Lab***1 Credit Normal Grading Mode*

Development execution, and presentation of experiments in thermodynamics, fluid mechanics, and heat transfer. Prerequisite(s):ME 3511 Minimum Grade of D. Corequisite(s): ME 3321.

**ME 3341 - Fluid Transfer***1 Credit Grading mode is S/U*

Fundamental concepts of fluid flow. Laminar and turbulent flow regimes. Conservation of energy and friction losses in pipe flow. Lift and drag forces resulting from external flow over solid objects. Dimensionless parameters, including Reynolds number, friction factor, and drag coefficient. Course Attributes: Requires Instructor Approval.

**ME 3411 - Manufacturing Laboratory***1 Credit Normal Grading Mode*

Introduction to the machines and processes involved in manufacturing. Students will learn the basic theory of and manufacture parts using the following methods: sand casting, welding, rapid prototyping, plasma cutting, and machining (mill, lathe, drill press). Must be enrolled in one of the following Major fields of study: Mechanical Engineering.

**ME 3421 - Manufacturing Processes***3 Credits Normal Grading Mode*

Manufacturing engineering and technology including casting, rolling, forging, extrusion, drawing, sheet metal forming, machining, and welding. Theoretical as well as practical considerations. Quality control and statistical methods. Prerequisite(s):ME 1411 Minimum Grade of D.

**ME 3511 - Experimental Methods***2 Credits Normal Grading Mode*

Use of experimental procedures and equipment typical in mechanical engineering practice. Uncertainty analysis and experimental design. Presentation of experimental data. Development of LabVIEW applications. Offered fall semester. Prerequisite(s):ME 2511 Minimum Grade of D.

**ME 3521 - Finite Element Analysis***3 Credits Normal Grading Mode*

The finite element method techniques are studied. These techniques are used to solve engineering continuum problems, both 'by hand' and using a commercial FEA package. Applications to engineering design of static and dynamic structures, as well as thermal systems. Offered spring semester. Prerequisite(s):ENGR 2231 Minimum Grade of D.

**ME 3611 - Aircraft Design***3 Credits Normal Grading Mode*

Fundamental aspects of aircraft design, incorporating concepts such as range, mission requirements, flight conditions, propulsion, appendage and fuselage design, as well as stability and control. Students will work in teams to develop a preliminary concept for an aircraft and present that design to the class. Prerequisite(s):ME 3311 Minimum Grade of D. Must be enrolled in one of the following Colleges: Engineering.

**ME 3901 - Special Topics***1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in mechanical engineering. Prerequisite(s):STAT 2501. Must be enrolled in one of the following Colleges: Engineering. Unlimited repeats permitted.

**ME 3951 - Independent Study***1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in mechanical engineering. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

**ME 4011 - Process of Design***3 Credits Normal Grading Mode*

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. There is an additional fee for this course. Offered fall semester. Corequisite(s): ENGR 4011. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Must be enrolled in one of the following Classifications: Senior.

**ME 4211 - Industrial Controllers***3 Credits Normal Grading Mode*

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 Minimum Grade of D or ECCS 3141 Minimum Grade of D or ECCS 2721 Minimum Grade of D.

**ME 4221 - Intelligent Systems***3 Credits Normal Grading Mode*

Students will learn to model complex systems. Students will apply algorithms such as neural networks, genetic algorithms, and fuzzy logic to such systems. Prerequisite(s):ME 2511 Minimum Grade of D or ECCS 1611 Minimum Grade of D. Must be enrolled in one of the following Classifications: Junior, Senior.

**ME 4231 - Robotics***3 Credits Normal Grading Mode*

An introduction to topics in robotics. Topics will include robot kinematics, motion planning, mobile robots, robot sensors, and artificial intelligence. Students will complete projects using robots.

**ME 4311 - Computational Fluid Dynamics***3 Credits Normal Grading Mode*

The theory and methods of computational fluid dynamics, including grid generation, flow solution, and post-processing analysis. Implicit and explicit methods are studied, as well as direct and iterative solution techniques, and stability criteria. 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 Minimum Grade of D.

**ME 4321 - Renewable Energy***3 Credits Normal Grading Mode*

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. Prerequisite(s):ME 2311 Minimum Grade of D.

**ME 4331 - Advanced Thermodynamics***3 Credits Normal Grading Mode*

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. Thermodynamics of reacting mixtures and compressible flow. Prerequisite(s):ME 2311 Minimum Grade of D.

**ME 4411 - Biomaterials and Medical Devices***3 Credits Normal Grading Mode*

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. Prerequisite(s):ME 1411 Minimum Grade of D.

**ME 4421 - Biomechanical Engineering***3 Credits Normal Grading Mode*

Application of engineering principles to clinical, occupational and sports biomechanics. Focus on kinematics and kinetics of human movement, including experimental methods, analysis and design. Prerequisite(s):ENGR 2141 Minimum Grade of D. Must be enrolled in one of the following Colleges: Engineering.

**ME 4511 - Engineering Analysis***3 Credits Normal Grading Mode*

Solution of a wide range of mechanical engineering problems using various analytical and numerical techniques. Prerequisite(s):ME 2511 Minimum Grade of D and ME 3111 Minimum Grade of D and ME 3211 Minimum Grade of D and ME 3321.

**ME 4901 - Special Topics***1 to 3 Credits Normal Grading Mode*

Selected topics of current interest in mechanical engineering. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.

**ME 4951 - Independent Study***1 to 3 Credits Normal Grading Mode*

Independent study of a topic of particular interest to the student in mechanical engineering. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Colleges: Engineering. Must be enrolled in one of the following Fields of Study: Mechanical Engineering. Unlimited repeats permitted.



THE RUDOLPH H. RAABE COLLEGE OF  
**Pharmacy**

# THE RUDOLPH H. RAABE COLLEGE OF Pharmacy

Steven J. Martin, *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)

## Offices

Office of Experiential Education (OEE)

Office of Student Services

## Vision Statement

To lead the nation in the preparation of practice-ready pharmacists who serve as primary care providers and team leaders.

## Mission Statement

We prepare pharmacists who improve health, serve others, lead change, and advance the profession.

## Student Learning Outcomes

- SLO1: **Foundational Knowledge** - The Professional program leading to the Doctor of Pharmacy degree (hereinafter "the program") develops in the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary to apply the foundational sciences to the provision of patient-centered care.
- SLO2: **Essentials for Practice and Care** - The program imparts to the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient-centered care, manage medication use systems, promote health and wellness, and describe the influence of population-based care on patient-centered care.
- SLO3: **Approach to Practice and Care** - The program imparts to the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary to solve problems; educate, advocate, and collaborate, working with a broad range of people; recognize social determinants of health; and effectively communicate verbally and nonverbally.
- SLO4: **Personal and Professional Development** - The program imparts to the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate self-awareness, leadership, innovation and entrepreneurship, and professionalism.

## 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 high school graduates should have completed college preparatory courses 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.

**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, experiential courses, professional pharmacy courses, and electives.

This program requires a minimum of 205 semester hours of study. All required courses must be completed with a grade of "C" or higher.

### Degree requirements include:

BIOL 1211	Introductory Biology
BIOL 2331	Anatomy and Physiology I
BIOL 2341	Anatomy and Physiology II
BIZ 2331	Principles of Management
CHEM 1711	General Chemistry 1
CHEM 1721	General Chemistry 2
CHEM 2511	Organic Chemistry 1
CHEM 2551	Organic Chemistry 1 lab
CHEM 2521	Organic Chemistry 2
CHEM 2561	Organic Chemistry 2 Lab
MATH 1461	Calculus for Life Sciences
PHBS 3011	Fundamental Sciences of Pharmacy 1
PHBS 3021	Fundamental Sciences of Pharmacy 2
PHBS 3411	Biochemistry 1
PHBS 3421	Biochemistry 2
PHBS 4121	Cardiology/Hematology/Pulmonology Module 1
PHBS 4221	CNS/Neurology/Psychology/Toxicology Module 1
PHBS 4241	Musculoskeletal/Connective Tissue/Immunology/Dermatology Module
PHBS 5121	Infectious Diseases/Medical Microbiology Module 1
PHBS 5141	Oncologic Pharmacotherapy Module
PHPR 1101	Foundations in Pharmacy Practice 1
PHPR 1121	Foundations in Pharmacy Practice 2
PHPR 1901	Professional Pharmacy Development 1
PHPR 1911	Professional Pharmacy Development 2
PHPR 2131	Foundations in Pharmacy Practice 3
PHPR 2141	Foundations in Pharmacy Practice 4
PHPR 2151	Self-Care and Patient-Pharmacist Interactions
PHPR 2901	Professional Pharmacy Development 3
PHPR 2911	Professional Pharmacy Development 4
PHPR 2921	Interprofessional Education in Healthcare Teams
PHPR 2991	Community IPPE
PHPR 3151	Foundations in Pharmacy Practice 5
PHPR 3161	Foundations in Pharmacy Practice 6
PHPR 3901	Professional Pharmacy Development 5
PHPR 3911	Professional Pharmacy Development 6
PHPR 4111	Pharmacist-Patient Care Process 1
PHPR 4131	Cardiology/Hematology/Pulmonology Module 2
PHPR 4141	Endocrine/Renal/Urology Module
PHPR 4211	Pharmacist-Patient Care Process 2
PHPR 4231	CNS/Neurology/Psychology/Toxicology Module 2
PHPR 4251	Gastrointestinal and Nutritional Issues Module
PHPR 4901	Professional Pharmacy Development 7
PHPR 4911	Professional Pharmacy Development 8

PHPR 5111	Pharmacist-Patient Care Process 3
PHPR 5131	Infectious Diseases/Medical Microbiology Module 2
PHPR 5151	Pediatrics, Pregnancy, and Geriatrics in Pharmacy
PHPR 5211	APPE Preparation Module
PHPR 5221	Advanced Topics in Social and Administrative Pharmacy
PHPR 5231	Capstone in Pharmacotherapy
PHPR 5901	Professional Pharmacy Development 9
PHPR 5911	Professional Pharmacy Development 10
PHPR 3991	Institutional IPPE
PHPR 6501	Advanced Practice Experience 1
PHPR 6502	Advanced Practice Experience 2
PHPR 6503	Advanced Practice Experience 3
PHPR 6504	Advanced Practice Experience 4
PHPR 6505	Advanced Practice Experience 5
PHPR 6506	Advanced Practice Experience 6
PHPR 6507	Advanced Practice Experience 7
PHPR 6508	Advanced Practice Experience 8
PHPR 6509	Advanced Practice Experience 9
PHYS 2111	General Physics
STAT 1761	Statistics for Pharmacy

Students must complete one from each of the following:

- PHPR 4621, PHPR 4631, PHPR 4641, PHPR 4651, PHPR 4661, PHPR 4671
- BIZ 2021, BIZ 2031, BIZ 2101, ABUS 2221
- PSYC 1001, SOC 1001
- PHIL 2401, HONR 2401

Students will complete 4 hours of professional electives. A list of approved professional electives will be maintained by the Dean's office and in Degree Works. Students will complete sufficient open elective credit to total 204 credit 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 should take no more than six semester hours in any summer term.
3. Licensure Requirement: A valid Ohio pharmacist intern license is required of all students entering the P3 year of the Pharm.D. program, and that license must be maintained continuously until graduation. Students must notify the college immediately if their intern license is revoked or not renewed. Students may not take pharmacy courses in the P3, P4, P5, or P6 year without a valid Ohio pharmacy intern license.
4. 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.
5. 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

*Rules 6-6.4 pertain to P1-P3 "Lower Division" students.*

6. A warning letter 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).
- 6.1 Students receiving a 2nd deficient grade (D or F), regardless of overall GPA, in any course work will receive a second warning letter.
- 6.2 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.
- 6.3 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.

- 6.4 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.

*Rules 7-7.2 pertain to P4-P6 "Upper Division" students.*

7. All students who receive a deficient grade during the first parts of a semester (e.g. the first PHPR module of two or three normally taken in succession in a single semester) are permitted to take the subsequent module(s) in which they are already enrolled that semester.
  - 7.1 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 completing 80% of class days in that module.
  - 7.2 For PHPR and/or PHBS required course work, students who earn a letter grade of "D" in one upper division course are eligible for course "Remediation" (see the College Handbook for additional information). Students earning a letter grade of "F" and/or a second letter grade of "D" must repeat all upper division courses for which letter grades of "D and/or F" were earned.

*Rules 8-8.3 pertain to all students P1-P6.*

8. All students who are repeating or remediating courses or modules because of earned deficient grades will have a maximum of three (3) opportunities to earn a grade of "C" or better. Failure to earn a "C" or better after the second repeat attempt, including remediation attempts, (i.e., third time total) will result in the student's dismissal from the College of Pharmacy.
  - 8.1 Except where noted, credit hours earned in repeated courses can be counted only one time among the total hours required for graduation.
  - 8.2 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.

## 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: Completion of the following courses or their articulated equivalent: PHPR 1101, 1121, 1931.
- P-3: Completion of the following courses or their articulated equivalent: PHPR 2131, 2141, 2921, 2151, 2911, 2991.
- P-4: Completion of the following courses or their articulated equivalent: PHBS 3011, 3021, 3411, 3421; PHPR 3151, 3161, 3171, 3911, 3991.
- P-5: A cumulative GPA of 2.00 or higher and have successfully completed PHBS 4121, 4221, 4241; PHPR 4111, 4131, 4141, 4211, 4231, 4251, 4911.
- P-6: A cumulative GPA of 2.00 or higher and have successfully completed PHBS 5121, 5141; PHPR 5111, 5131, 5151, 5211, 5221, 5231, 5911.

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 semester 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.

## Dual Degree Programs

Information concerning other undergraduate dual degree programs involving the College of Pharmacy appears on page 23 of this catalog. Students may receive further details in the College of Pharmacy Dean's office.

## Student Services

The College of Pharmacy provides specialized services to students through the staff of the Office of Pharmacy Student Services, including academic advising, personal 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.

## DEPARTMENT OF PHARMACEUTICAL & BIOMEDICAL SCIENCES

**Professors** Christoff, Kinder, Mahfouz, Olah (*Chair*), Rojeab, Stockert;  
**Associate Professors** D'Souza, Koh, **Assistant Professors** Chrissobolis, Rao

### ***Subject - Pharmaceutical and Biomedical Sciences (PHBS)***

#### **PHBS 2901 - Applied Sciences of Pharmacy**

*3 Credits Normal Grading Mode*

Course Description: 3 hours of lecture/discussion Selected principles of physics including mechanics, fluids, electromagnetism, thermodynamics and to a lesser extent, principles of biology and chemistry, are explored in relation to integrated clinical sciences and applications to pharmacy practice. Numerous examples of physiological pressures, bioelectricity, optics, acoustics, and medical imaging are presented to illustrate the critical need for understanding and integrating basic science principles when considering a multitude of pharmacy-related professional applications. Prerequisite(s):PHPR 2011 Minimum Grade of C or PHPR 2111 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmacy.

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#### **PHBS 3011 - Fundamental Sciences of Pharmacy 1**

*4 Credits Normal Grading Mode*

Introduction to biomedical and pharmaceutical sciences through discussions on medicinal chemistry including basic ADME principles, cell structure/function, cell injury/damage, cell homeostasis and basic pharmacodynamics with signaling and basic receptor functions. Offered fall semester. Prerequisite(s):BIOL 2341 Minimum Grade of C and (CHEM 2521 Minimum Grade of C or CHEM 2621 Minimum Grade of C) and (CHEM 2561 Minimum Grade of C or CHEM 2661 Minimum Grade of C) and PHPR 2911 Minimum Grade of S.

#### **PHBS 3021 - Fundamental Sciences of Pharmacy 2**

*4 Credits Normal Grading Mode*

Prerequisite(s):PHBS 3011 Minimum Grade of D and PHPR 3901 Minimum Grade of S.

#### **PHBS 3311 - Pharmaceutical Sciences 1**

*2 Credits Normal Grading Mode*

This course deals with the physical pharmacy, pharmaceutical and biopharmaceutical aspects of a variety of drug delivery systems, including solutions, solid dosage forms, disperse systems and aerosols. The chemical, physical, and biological properties of the ingredients used and their relationship to the final product will be discussed in order to facilitate preparation of elegant, stable, safe, and effective products. Offered spring semester. Prerequisite(s):PHBS 3411 Minimum Grade of D and PHPR 3011 Minimum Grade of D and PHPR 3311 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Pharmacy.

#### **PHBS 3411 - Biochemistry 1**

*3 Credits Normal Grading Mode*

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 2521 Minimum Grade of D or CHEM 2621 Minimum Grade of D) and (CHEM 2561 Minimum Grade of D or CHEM 2661 Minimum Grade of D).

#### **PHBS 3421 - Biochemistry 2**

*3 Credits Normal Grading Mode*

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 Minimum Grade of D.

#### **PHBS 3501 - Basic Nutrition**

*2 Credits Normal Grading Mode*

Basic principles of nutrition for Pharmacy and non-Pharmacy students. Topics include a description of essential nutrients, methods of evaluating individual dietary adequacy, and dietary methods for weight control. Offered spring semester.

#### **PHBS 4121 - Cardiology/Hematology/Pulmonology Module 1**

*4 Credits Normal Grading Mode*

An integrated approach to cardiovascular 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):PHBS 3021 Minimum Grade of C and PHPR 3161 Minimum Grade of C and PHPR 3911 Minimum Grade of S and PHPR 3991 Minimum Grade of S.

**PHBS 4221 - CNS/Neurology/Psychology/Toxicology Module 1***4 Credits Normal Grading Mode*

An integrated approach to central nervous 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 as well as introduction and development of toxicologic principles in pharmacy. Offered spring semester. Prerequisite(s):PHBS 4121 Minimum Grade of D and PPHR 4111 Minimum Grade of D and PPHR 4131 Minimum Grade of D and PPHR 4141 Minimum Grade of D and PPHR 4901 Minimum Grade of S.

**PHBS 4241 - Musculoskeletal/Connective Tissue/Immunology/Dermatology Module***2.5 Credits Normal Grading Mode*

An integrated approach to musculoskeletal, connective tissue, immunologic, and dermatologic 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 spring semester. Prerequisite(s):PHBS 4121 Minimum Grade of D and PPHR 4111 Minimum Grade of D and PPHR 4131 Minimum Grade of D and PPHR 4141 Minimum Grade of D and PPHR 4901 Minimum Grade of S.

**PHBS 4321 - Pharmaceutical Sciences 2***6 Credits Normal Grading Mode*

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(s):PHBS 3311 Minimum Grade of C and PHBS 3421 Minimum Grade of C and BIOL 3321 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHBS 4431 - Biomedical Sciences 1***5 Credits Normal Grading Mode*

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. Prerequisite(s):PHBS 3311 Minimum Grade of C and PHBS 3421 Minimum Grade of C and BIOL 3321 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHBS 4441 - Biomedical Sciences 2***6 Credits Normal Grading Mode*

Continuation of PHBS 4431. Offered spring semester. Prerequisite(s): PHBS 4431 Minimum Grade of D and PHBS 4321 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Pharmacy. Must have one of the following Student Attributes: P4.

**PHBS 4511 - Introduction to Nuclear Pharmacy***2 Credits Normal Grading Mode*

Survey of basic science and clinical science components of this specialty practice. Content includes radiation physics and exposure, exploration of the preparation, and use of diagnostics/therapeutic radiopharmaceuticals that target specific systems of the body. Prerequisite(s):PHBS 2901 Minimum Grade of D.

**PHBS 4521 - Remediation for Pharmaceutical Sciences 2 Module***1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHBS 4531 - Remediation for Biomedical Sciences 1 Module***1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHBS 4541 - Remediation for Biomedical Sciences 2 Module***1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHBS 5121 - Infectious Diseases/Medical Microbiology Module 1***4 Credits Normal Grading Mode*

An integrated approach to infectious disease and microbiologic 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 4211 Minimum Grade of D and PHBS 4221 Minimum Grade of D and PPHR 4231 Minimum Grade of D and PHBS 4241 Minimum Grade of D and PPHR 4251 Minimum Grade of D and PPHR 4911 Minimum Grade of D.

**PHBS 5141 - Oncologic Pharmacotherapy Module***3 Credits Normal Grading Mode*

An integrated approach to oncology 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 4211 Minimum Grade of D and PHBS 4221 Minimum Grade of D and PPHR 4231 Minimum Grade of D and PHBS 4241 Minimum Grade of D and PPHR 4251 Minimum Grade of D and PPHR 4911 Minimum Grade of D.

**PHBS 5651 - Research in the Pharmaceutical and Biomedical Sciences***1 to 2 Credits Normal Grading Mode*

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. Course Attributes: Critical and Creative Thinking, Scientific and Quant Literacy. This course may be repeated 12 times.

**PHBS 5971 - Independent Study - Pharmaceutical and Biomedical Sciences***1 to 3 Credits Normal Grading Mode*

Independent study in the pharmaceutical and/or biomedical sciences. Offered fall and spring semesters. This course may be repeated 8 times.

## DEPARTMENT OF PHARMACY PRACTICE

**Professors** DiPietro-Mager, Kier, Kroustos, Martin (*Dean*), Nau, Roecker (*Chair*), Shields, Sobota; **Associate Professors** Adane, Leonard, Musser, Partelano, Peters; **Assistant Professors** Aronson, Bates, Eddy, Hinson, Jarrell, Long, Parker; **Instructor** Bowers, Dierkes, Wells

## OFFICE OF EXPERIENTIAL EDUCATION

**Associate Professor** Partelano (*Director*); **Assistant Professor** Grundey (*Associate Director*); **Clinical Professors** Bellman, Bestic, Dotson, Garman, Grubaugh, Harger, Hulisz, Jacob, Kristufek, Landin, Leifheit, Macko, Meilton, C. Myers, R. Myers, Parson, Sabol, Smith, Walles, Ziegenbusch

### **Subject - Pharmacy Practice (PHPR)**

#### **PHPR 1101 - Foundations in Pharmacy Practice 1**

*3 Credits Normal Grading Mode*

An introductory course in the practice of pharmacy. This course will focus on becoming a pharmacist and what is entailed to have a strong professional identity along with being an effective team member. Topics will include the history of pharmacy, development in the profession, leadership, variety of pharmacy career paths, common library and drug information resources, and a general orientation to Ohio Northern and college life. Offered fall semester. Must be enrolled in one of the following Major fields of study: Pharmacy.

#### **PHPR 1121 - Foundations in Pharmacy Practice 2**

*3 Credits Normal Grading Mode*

An introductory course describing the pharmacist and how they are integrated into the healthcare system. Topics include the US healthcare system and its operation, insurance and payment structures, team interactions within healthcare, the distribution of medication and how medication errors occur, as well as communication to patients and healthcare professionals with special consideration to cultural sensitivity. Offered spring semester. Prerequisite(s):PHPR 1101 Minimum Grade of D.

#### **PHPR 1191 - Special Topics in Pharmacy**

*1 to 3 Credits Normal Grading Mode*

Topics in pharmacy. Enrollment is restricted to students with specific pharmacy/biomedical experiences, such as attendees of programs such as Summer Honors Institute or Project Lead The Way. May be repeated as topics or experiences vary. Offered fall and spring semesters. Course Attributes: Requires Department Approval. Must be enrolled in one of the following Colleges: Pharmacy. Unlimited repeats permitted.

#### **PHPR 1301 - Co-Curricular Remediation and Plan Development**

*1 Credit Grading mode is S/U*

Remediation course for students not completing co-curricular requirement during the academic year. This course will enable students to complete any outstanding co-curricular requirements and develop a personalized plan to ensure students are prepared to meet co-curriculum requirements in future terms.

#### **PHPR 1901 - Professional Pharmacy Development 1**

*0 Credits Grading mode is S/U*

This course requires completion of various tasks, certifications, and accreditation requirements according to College guidelines. Offered fall semester. Must be enrolled in one of the following Major fields of study: Pharmacy.

#### **PHPR 1931 - Professional Pharmacy Development 2**

*0 Credits Grading mode is S/U*

Continuation of PHPR 1901. Offered spring semester. Prerequisite(s):PHPR 1901 Minimum Grade of S.

#### **PHPR 2011 - The Profession of Pharmacy 3**

*2 Credits Normal Grading Mode*

Continuation of professional development and understanding of pharmacy services and patient care delivery. The majority of the material presented this semester will continue to prepare the student for their Community Introductory Pharmacy Practice and includes the topics of professionalism, drug information, community pharmacy practice, pharmaceutical calculations, professional writing, adverse drug reactions and CV/resumes. Class and textbook material will be reinforced through experiences with a health care professional and service learning. Addresses issues relevant to pharmacy internship and advanced pharmacy course work. Offered fall semester. Prerequisite(s):PHPR 1021 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

#### **PHPR 2021 - The Profession of Pharmacy 4**

*2 Credits Normal Grading Mode*

The core lecture material presented this semester will continue to prepare the student for their Community Introductory Pharmacy Practice Experiences and includes the topics of patient counseling, medication adherence, community pharmacy practice law, patient interviews, patient profiles, medical devices, and point of care testing, introduction to health systems, pharmacy advocacy, cultural implications on healthcare and leadership. Class and textbook material will be reinforced through experiences with a health care professional and service learning. Offered spring semester. Prerequisite(s):PHPR 2011 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

#### **PHPR 2111 - Transitions in Pharmacy 1**

*3 Credits Normal Grading Mode*

Course discusses the profession of pharmacy, professional development, and addresses the pharmacy services and patient care delivery with a focus for transferring pharmacy students. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

#### **PHPR 2121 - Transitions in Pharmacy 2**

*3 Credits Normal Grading Mode*

Continuation of Transitions in Pharmacy 1. Course discusses the profession of pharmacy, professional development, and addresses pharmacy services and patient care delivery processes with a focus for transferring pharmacy students. Prerequisite(s):PHPR 2111 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Pharmacy.

#### **PHPR 2131 - Foundations in Pharmacy Practice 3**

*3 Credits Normal Grading Mode*

Course describing the general methods where pharmacists become information master of relevant topics. This course will focus on pharmacy calculations and utilization of drug information resources. Assessment of verbal and written communications, including scientific writing will be done. Offered fall semester. Prerequisite(s):PHPR 1121 Minimum Grade of D and PHPR 1931 Minimum Grade of S. Corequisite(s): PHPR 2901.

#### **PHPR 2141 - Foundations in Pharmacy Practice 4**

*3 Credits Normal Grading Mode*

Course discussing the pharmacist and the legal practice of pharmacy. Focusing on Ohio and federal law, the learner will engage in the regulatory and safety aspects regarding the rules and regulations associated with the practice of pharmacy. This course will also focus on the application of previously described drug information skills. Offered spring semester Prerequisite(s):PHPR 2131 Minimum Grade of D and PHPR 2901 Minimum Grade of S. Corequisite(s): PHPR 2911.

#### **PHPR 2151 - Self-Care and Patient-Pharmacist Interactions**

*3 Credits Normal Grading Mode*

Students gain skills to counsel patients who desire to conduct self-medication or self-therapy with non-prescription drug products. Topics discussed include allergies, cough and cold, pain, diarrhea and constipation, insomnia, smoking cessation, medication use in children, methods of birth control, and the use of dietary supplements. Offered spring semester. Prerequisite(s):PHPR 2131 Minimum Grade of D and PHPR 2901 Minimum Grade of S.

**PHPR 2181 Rural and Underserved Health Scholars Seminar #1***1 Credit Normal Grading Mode*

Rural and Underserved Health Scholars seminar will provide the building blocks for the Rural Health Scholars to be successful as a scholar. Topics covered in the course will include the foundations of the delivery of health care challenges faced by the rural and underserved communities. Students will also start the process of performing needs assessments in their assigned communities. This course is repeatable for a total of 2 hours.

**PHPR 2211 - Peer Student Mentorship***1 Credit Normal Grading Mode*

A seminar for students serving as peer mentors for incoming pharmacy students. This seminar will include readings and projects to help students develop as a peer mentor. Students will be required to participate in reflection on and planning of mentor work. Offered fall term only. Prerequisite(s):PHPR 1021 Minimum Grade of D.or PHPR 2121 Minimum Grade of D or PHPR 1121 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy. Unlimited repeats permitted.

**PHPR 2411 - Contemporary Health Care Issues and Opportunities 1***2 Credits Normal Grading Mode*

Multiple practice settings including retail, institutional, manufacturing, distribution, association, government and how each is implementing a pharmaceutical care mission.

**PHPR 2421 - Contemporary Health Care Issues and Opportunities 2***2 Credits Normal Grading Mode*

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 patient care and pharmaceutical care mission. Offered spring semester. Must be enrolled in one of the following Colleges: Pharmacy, Business Administration.

**PHPR 2431 - Careers and Leadership in Pharmacy***1 Credit Normal Grading Mode*

Pharmacy Leaders from multiple practice settings will cover a broad scope of pharmacy careers and leadership roles, sharing their highlights of success and lessons learned. Offered spring semester. This course is repeatable for a total of 4 hours.

**PHPR 2521 - Issues in Preventative Medicine***3 Credits Normal Grading Mode*

An introduction to important health considerations in the United States and the implications that these disease states have on individual health, health care costs and productivity.

**PHPR 2611 - Professional Leadership Development***1 Credit Normal Grading Mode*

Professional Leadership Development is an elective course designed for pharmacy students. The goal of the course is to help students develop strong personal leadership. The course will focus on principle-centered leadership, and identify myths and challenges in personal leadership, as well as identify strategies for effective team leadership. Practice cases will be used to foster discussion. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 2711 - Medical Ethics and the Movies***1 Credit Normal Grading Mode*

This course applies the basic ethical principles of beneficence, nonmaleficence, autonomy, and justice to healthcare focused scenarios. The course is designed to build upon professional development and understanding of ethical principles and how they apply to medical practice, patient care, and other current topics in healthcare. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Nursing, Pharmacy. May not be enrolled in one of the following Classifications: Pharmacy - First Year, First-year. This course is repeatable for a total of 3 hours.

**PHPR 2811 - Global Healing Traditions***3 Credits Normal Grading Mode*

The course will allow students to explore how his/her culture has shaped an understanding of health and healing. It will expose students to various health and healing systems that may be known to them. Systems will vary from term to term but may include: Homeopathy, Western herbalism, shamanism, energy healing and others. It will include 7-10 day study abroad experience as part of course expectations. Prerequisite(s):ENGL 1221 Minimum Grade of D or HONR 1221 Minimum Grade of D or ENGL 1521 Minimum Grade of D. Course Attributes: GE\_Diverse Cultures.

**PHPR 2901 - Professional Pharmacy Development 3***0 Credits Grading mode is S/U*

Continuation of PHPR 1911. Offered fall semester. Prerequisite(s):PHPR 1121 Minimum Grade of D and PHPR 1931 Minimum Grade of S.

**PHPR 2911 - Professional Pharmacy Development 4***0 Credits Grading mode is S/U*

Continuation of PHPR 2901. Offered spring semester. Prerequisite(s):PHPR 2131 Minimum Grade of D and PHPR 2901 Minimum Grade of S.

**PHPR 2921 - Interprofessional Education in Healthcare Teams***1 Credit Normal Grading Mode*

This course will introduce the interprofessional education collaborative competencies including teamwork and team building, values/ethics for interprofessional practice, role/responsibility delineation, and interprofessional communication strategies. Offered fall semester. Prerequisite(s):PHPR 1121 Minimum Grade of D and PHPR 1931 Minimum Grade of S

**PHPR 2991 - Community Introductory Pharmacy Practice Experience***0 Credits Grading mode is S/U*

The Community Introductory Pharmacy Practice Experience (C-IPPE) consists of one hundred and twenty (120) hours of pharmacy experience. This experience will combine to enforce and enhance didactic coursework and provide real world perspective on practice of pharmacy and patient care. C-IPPE sites may include: community independent pharmacy, chain pharmacy, health departments with an outpatient pharmacy, and ambulatory care clinics. Prerequisite(s):PHPR 2021 Minimum Grade of D or PHPR 2121 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 3011 - The Profession of Pharmacy 5***2 Credits Normal Grading Mode*

Continues 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 patient care. Offered fall semester. Prerequisite(s): (PHPR 2021 Minimum Grade of C or PHPR 2121 Minimum Grade of C) and PHPR 2991 Minimum Grade of S. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 3021 - Professional Pharmacy Skills 1***3 Credits Normal Grading Mode*

This course provides a continuation of information provided in the Profession of Pharmacy (POP) sequence. The course is designed to build upon professional development and understanding of pharmacy services, pharmaceutical care, and patient care delivery. Areas of emphasis will be the functional practice of pharmacy, including roles in public health and health literacy, evidence based medicine and drug literature, toxicology, application of biostatistics, and pharmaceutical calculations. Offered spring semester. Prerequisite(s):PHPR 3011 Minimum Grade of D and PHPR 3311 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy. Must be enrolled in one of the following Fields of Study: Pharmacy. Must have one of the following Student Attributes: P3.

**PHPR 3151 - Foundations in Pharmacy Practice 5***3 Credits Normal Grading Mode*

An intermediate course in pharmacy focusing on advanced communication strategies for patient engagement and success. Topics include motivational interviewing and additional communication strategies with a focus on team dynamics within the pharmacy, healthcare system, and in the larger community and public health environments. Offered fall semester. Prerequisite(s):PHPR 2141 Minimum Grade of D and PHPR 2151 Minimum Grade of D and PHPR 2911 Minimum Grade of S and PHPR 2991 Minimum Grade of S.

**PHPR 3161 - Foundations in Pharmacy Practice 6***3 Credits Normal Grading Mode*

An intermediate course in pharmacy focusing on its place in the public health of our communities. Population and public health will be expounded upon with exercises and certifications appropriate to assist in the dissemination of appropriate care and information. Offered spring semester. Prerequisite(s):PHPR 3151 Minimum Grade of D and PHPR 3171 Minimum Grade of D and PHPR 3901 Minimum Grade of S.

**PHPR 3171 - Social and Administrative Pharmacy Development***3 Credits Normal Grading Mode*

An interdisciplinary approach to the practice of pharmacy as it relates to the contemporary health-care system, the business environment, and management/leadership principles. 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 fall semester. Prerequisite(s):PHPR 2141 Minimum Grade of D and PHPR 2151 Minimum Grade of D and PHPR 2911 Minimum Grade of S and PHPR 2991 Minimum Grade of S.

**PHPR 3311 - Self-care and the Pharmacist***3 Credits Normal Grading Mode*

Students gain skills to counsel patients who desire to conduct self-medication or self-therapy with non-prescription drug products. Topics discussed include allergies, cough and cold, pain, diarrhea and constipation, insomnia, smoking cessation, medication use in children, methods of birth control, and the use of dietary supplements. Offered fall semester. Prerequisite(s):PHPR 2021 Minimum Grade of C or PHPR 2121 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 3401 - Women's Health Issues***1 Credit Normal Grading Mode*

This course introduces students to timely and important topics in women's health through a discussion-based approach guided by the course instructor. This course broadly covers 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 also be exposed to social and economic issues that impact women's health. May not be enrolled in one of the following Classifications: First-year.

**PHPR 3411 - Introduction to Natural Product Therapeutics***1 Credit Normal Grading Mode*

The course will help students understand the use of therapeutics and natural products in modern medical practice and the importance of health care providers as patient educators. For each product discussed, basic mechanism of action, uses, and potential side effects will be discussed. Students will explore various drug information resources and learn how to find reliable sources of drug information about these products. May not be enrolled in one of the following Classifications: First-year. May not have one of the following Student Attributes: P1.

**PHPR 3431 - Chemical Dependency***2 Credits Normal Grading Mode*

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 semester.

**PHPR 3451 - Pharmacy Ownership***2 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 2021 Minimum Grade of D or PHPR 2121 Minimum Grade of D.

**PHPR 3461 - Pharmacy and Wellness (PAW) Review***2 Credits Normal Grading Mode*

This course provides students an opportunity to produce a professional, educational and relevant scientific journal for health care professionals while developing leadership, research skills and professional writing ability. Students write, edit and produce a student-directed publication with faculty oversight. Must be enrolled in one of the following Major fields of study: Athletic Training, Biology, Exercise Physiology, Nursing, Pharmacy, Sport Management. Must be enrolled in one of the following Classifications: Junior, Pharmacy - Fourth Year, Senior, Pharmacy - Fifth Year, .This course may be repeated 10 times.

**PHPR 3611 - Introduction to Service Learning***1 Credit Normal Grading Mode*

Introduction to Service Learning is a course offered to all health professional students to provide an in-depth service learning experience beyond that typically experienced through completion of outreach requirements. Students work in groups and are paired with a community agency interested in developing or expanding outreach programming. Students work with an agency representative to develop programming that meets the mission of the organization and fulfills an interest relevant to the students. Students develop skills in teamwork, project management, and community engagement, while providing a valuable service to the partner agency and to the community and enhancing relationships with the surrounding community. Active learning through direct patient care, project planning, and community engagement is the focus of the course with lecture and discussion time focused on providing the knowledge, support, and discussion needed to understand the basics of service learning, project planning, effective teamwork, community engagement, and sharing of ideas and experiences.

**PHPR 3901 - Professional Pharmacy Development 5***0 Credits Grading mode is S/U*

Continuation of PHPR 2911. Offered fall semester  
Prerequisite(s):PHPR 2141 Minimum Grade of D and PHPR 2151 Minimum Grade of D and PHPR 2911 Minimum Grade of S and PHPR 2991 Minimum Grade of S.

**PHPR 3911 - Professional Pharmacy Development 6***0 Credits Grading mode is S/U*

Continuation of PHPR 3901. Offered spring semester.  
Prerequisite(s):PHPR 3151 Minimum Grade of D and PHPR 3171 Minimum Grade of D and PHPR 3901 Minimum Grade of S.

**PHPR 3991 - Institutional Introductory Pharmacy Practice Experience**

*0 Credits Grading mode is S/U*

An institutional experience will combine to enforce and enhance didactic coursework and provide real world perspective on the practice of pharmacy and patient care. The student, under the direction of a preceptor, will integrate and expand his or her knowledge of professional pharmacy skills, pharmacy law, ethical decision making, medical terminology, drug use and distribution, medication safety drug information, patient advocacy, pharmacy administration, physical assessment, biology, chemistry, physiology, and pharmaceuticals. During this experiential curriculum, students will learn recommendations and participate in decisions regarding drug therapy. While some "shadowing" is necessary in certain settings and circumstances, the student is encouraged and expected to become a functioning component of the ongoing patient care services through preceptor instruction and self-learning. Prerequisite(s):PHPR 3021 Minimum Grade of D or PHPR 3161 Minimum Grade of D.

**PHPR 4011 - Professional Pharmacy Skills 2**

*4 Credits Normal Grading Mode*

The course is designed to build upon professional development and understanding of pharmacy services, pharmaceutical care, and patient care delivery. With a focus on physical assessment, interpretation of laboratory data and patient safety. Offered fall semester. Prerequisite(s):PHPR 3021 Minimum Grade of C and PHPR 3991 Minimum Grade of S. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 4111 - Pharmacist-Patient Care Process 1**

*2 Credits Normal Grading Mode*

A longitudinal case- and activity-based course continuing pharmacy practice discussions regarding patients with common disease states and real-life situations. Building of the exercises and experiences will revolve around the Pharmacist-Patient Care Process. Offered in fall semester. Prerequisite(s):PHBS 3021 Minimum Grade of C and PHPR 3161 Minimum Grade of C and PHPR 3911 Minimum Grade of S and PHPR 3991 Minimum Grade of S.

**PHPR 4131 - Cardiology/Hematology/Pulmonology Module 2**

*4 Credits Normal Grading Mode*

Continuation of PHBS 4121. Offered fall semester. Prerequisite(s):PHBS 3021 Minimum Grade of C and PHPR 3161 Minimum Grade of C and PHPR 3911 Minimum Grade of S and PHPR 3991 Minimum Grade of S.

**PHPR 4141 - Endocrine/Renal/Urology Module**

*5 Credits Normal Grading Mode*

An integrated approach to endocrine, renal, and urologic 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 spring semester. Prerequisite(s):PHBS 3021 Minimum Grade of C and PHPR 3161 Minimum Grade of C and PHPR 3911 Minimum Grade of S and PHPR 3991 Minimum Grade of S.

**PHPR 4211 - Pharmacist-Patient Care Process 2**

*2 Credits Normal Grading Mode*

Continuation of PHPR 4111. Offered spring semester. Prerequisite(s):PHBS 4121 Minimum Grade of D and PHPR 4111 Minimum Grade of D and PHPR 4131 Minimum Grade of D and PHPR 4141 Minimum Grade of D and PHPR 4901 Minimum Grade of S.

**PHPR 4231 - CNS/Neurology/Psychology/Toxicology Module 2**

*4 Credits Normal Grading Mode*

Continuation of PHBS 4221. Offered spring semester. Prerequisite(s):PHBS 4121 Minimum Grade of D and PHPR 4111 Minimum Grade of D and PHPR 4131 Minimum Grade of D and PHPR 4141 Minimum Grade of D and PHPR 4901 Minimum Grade of S.

**PHPR 4251 - Gastrointestinal and Nutritional Issues Module**

*2.5 Credits Normal Grading Mode*

An integrated approach to gastrointestinal and nutritional 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 spring semester. Prerequisite(s):PHBS 4121 Minimum Grade of D and PHPR 4111 Minimum Grade of D and PHPR 4131 Minimum Grade of D and PHPR 4141 Minimum Grade of D and PHPR 4901 Minimum Grade of S.

**PHPR 4411 - Cardiovascular Module**

*6 Credits Normal Grading Mode*

An integrated approach to cardiovascular 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 spring semester. Prerequisite(s):PHBS 4321 Minimum Grade of D and PHBS 4431 Minimum Grade of D and PHPR 4011 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 4421 - Chronic and Ambulatory Medicine Module**

*6 Credits Normal Grading Mode*

Continuation of PHPR 4411. An integrated approach the management of various acute and chronic diseases 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 spring semester. Prerequisite(s):PHBS 4321 Minimum Grade of D and PHBS 4431 Minimum Grade of D and PHPR 4011 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 4441 - Healthcare Quality and Performance Measurement**

*2 Credits Normal Grading Mode*

This course is designed to provide an informative view of healthcare (HC) quality, performance measurement in HC and will review the National Quality Strategy. Additionally, the course will include a thorough discussion of quality improvement strategies that are being used in our HC system and how those strategies and interventions align with the Triple Aim of HC. The courses will also highlight new models of team-based care and the use of technology to support a high-value HC system. Must be enrolled in one of the following Major fields of study: Pharmaceutical/Healthcare Bus, Pharmacy, Public Health. Must be enrolled in one of the following Classifications: Senior, Pharmacy - Fourth Year.

**PHPR 4501 - Remediation for Professional Pharmacy Skills 2 Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4511 - Remediation for Cardiovascular Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4521 - Remediation for Chronic/Ambulatory Medicine Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4531 - Remediation for Infectious Disease Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4541 - Remediation for Advanced Endocrine Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4551 - Remediation for Central Nervous System Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4571 - Remediation for Oncology Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4581 - Remediation for Pharmacy Administration Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4591 - Remediation for Special Populations Module**

*1 Credit Grading mode is S/U*

This self-directed learning course will allow student to identify and rectify deficiencies from previous coursework in this topic area. Course Attributes: Requires Instructor Approval.

**PHPR 4611 - Service Learning for Health Professionals**

*0 Credits Grading mode is S/U*

Course offered to all health professional students to provide an in-depth service learning experience beyond that typically experienced through completion of outreach requirement. Students are grouped with a community agency to develop or expand outreach programming. Must be enrolled in one of the following Major fields of study: Exercise Physiology, Medical Laboratory Science, Nursing, Pharmacy, Public Health.

**PHPR 4621 - Patient Care Experience with ONU Healthwise**

*0 Credits Grading mode is S/U*

The course will provide students opportunities to provide direct patient care in an ambulatory care setting. Students will be trained in point of care testing, patient interview skills, and physical assessments skills. Students will gain experience in managing chronic disease states. Patient care will be provided through the ONU HealthWise program. Prerequisite(s):PHPR 3021 Minimum Grade of C and PHPR 3991 Minimum Grade of S. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4631 - Pharmacy Services Center - Managed Care - Medication Adherence**

*0 Credits Grading mode is S/U*

The course will provide students opportunities to provide direct patient care via provision of medication therapy management. Student will be trained in patient interview skills, and provision of MTM. Students will gain experience in evaluating medication profiles and providing patient education. Patient care will be provided through ONU HealthWise Program. Prerequisite(s):PHPR 3021 Minimum Grade of C and PHPR 3991 Minimum Grade of S. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4641 - Ambulatory Care in HealthWise Community Pharmacy**

*0 Credits Grading mode is S/U*

The course will provide students opportunities to provide direct care in a pharmacy care setting. Students will be trained in patient interview skills, and physical assessment skills. Students will gain experience in managing patient medications. Patient care will be provided through the ONU HealthWise program. Prerequisite(s):PHPR 3021 Minimum Grade of C and PHPR 3991 Minimum Grade of S. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4651 - Medication Reconciliation Experience LMH**

*0 Credits Grading mode is S/U*

This course will provide student opportunities to provide medication reconciliation services in an institutional pharmacy setting. Students will be trained in patient interview skills and use of hospital medical records programs. Patient care will be provided through the pharmacy department at Lima Memorial Health System. Prerequisite(s):PHPR 3021 Minimum Grade of D. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4661 - Geriatric Patient Care Experience**

*0 Credits Grading mode is S/U*

This course will provide student opportunities to provide direct patient care to a geriatric population in a long term care facility. Students will gain skills in patient interviews and patient education. Prerequisite(s):PHPR 3021 Minimum Grade of D.

**PHPR 4671 - Medication Reconciliation - Mary Rutan**

*0 Credits Grading mode is S/U*

This course will allow student opportunities to provide medication reconciliation services in an institutional pharmacy setting. Students will be trained in patient interview skills and use of hospital medical records programs. Patient care will be provided through the pharmacy department at Mary Rutan Hospital. Prerequisite(s):PHPR 3021 Minimum Grade of C and PHPR 3991 Minimum Grade of S. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 4901 - Professional Pharmacy Development 7**

*0 Credits Grading mode is S/U*

Continuation of PHPR 3911. Offered fall semester. Prerequisite(s):PHPR 3911 Minimum Grade of S and PHPR 3991 Minimum Grade of S.

**PHPR 4911 - Professional Pharmacy Development 8**

*0 Credits Grading mode is S/U*

Continuation of PHPR 4901. Offered spring semester. Prerequisite(s):PHPR 4901 Minimum Grade of S.

**PHPR 5111 - Pharmacist-Patient Care Process 3**

*2 Credits Normal Grading Mode*

Continuation of PHPR 4211. Offered fall semester. Prerequisite(s):PHPR 4211 Minimum Grade of D and PHBS 4221 Minimum Grade of D and PHPR 4231 Minimum Grade of D and PHBS 4241 Minimum Grade of D and PHPR 4251 Minimum Grade of D and PHPR 4911 Minimum Grade of S.

**PHPR 5131 - Infectious Diseases/Medical Microbiology Module 2****4 Credits Normal Grading Mode**

Continuation of PHBS 5121. Offered fall semester. Prerequisite(s):PHPR 4211 Minimum Grade of D and PHBS 4221 Minimum Grade of D and PHPR 4231 Minimum Grade of D and PHBS 4241 Minimum Grade of D and PHPR 4251 Minimum Grade of D and PHPR 4911 Minimum Grade of S.

**PHPR 5151 - Pediatrics, Pregnancy, and Geriatrics in Pharmacy****2 Credits Normal Grading Mode**

The course will educate students in the clinical guidelines and therapeutics of special patient populations including pediatrics, geriatrics, pregnancy and lactation, and others. Offered fall semester. Prerequisite(s):PHPR 4211 Minimum Grade of D and PHBS 4221 Minimum Grade of D and PHPR 4231 Minimum Grade of D and PHBS 4241 Minimum Grade of D and PHPR 4251 Minimum Grade of D and PHPR 4911 Minimum Grade of S.

**PHPR 5211 - APPE Preparation Module****3 Credits Normal Grading Mode**

This course will prepare the pharmacy student for the upcoming advanced pharmacy practice experiences (APPE). Involved with the course will be both logistic and resource oriented content on appropriate preparation. Prerequisite(s):PHPR 5111 Minimum Grade of D and PHBS 5121 Minimum Grade of D and PHPR 5131 Minimum Grade of D and PHBS 5141 Minimum Grade of D and PHPR 5151 Minimum Grade of D and PHPR 5901 Minimum Grade of S.

**PHPR 5221 - Advanced Topics in Social and Administrative Pharmacy****2 Credits Normal Grading Mode**

An integrated approach to further discuss advanced subjects in social and administrative pharmacy, including the topics of ethics, financial management, human resource management, law, leadership, and pharmacoeconomics. Offered spring semester. Prerequisite(s):PHPR 5111 Minimum Grade of D and PHBS 5121 Minimum Grade of D and PHPR 5131 Minimum Grade of D and PHBS 5141 Minimum Grade of D and PHPR 5151 Minimum Grade of D and PHPR 5901 Minimum Grade of S.

**PHPR 5231 - Capstone in Pharmacotherapy****6 Credits Normal Grading Mode**

An integrated approach 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 experiences. Offered spring semester. Prerequisite(s):PHPR 5111 Minimum Grade of D and PHBS 5121 Minimum Grade of D and PHPR 5131 Minimum Grade of D and PHBS 5141 Minimum Grade of D and PHPR 5151 Minimum Grade of D and PHPR 5901 Minimum Grade of S.

**PHPR 5431 - Infectious Disease Module****5.5 Credits Normal Grading Mode**

Continuation of PHPR 4421. An integrated approach to infectious disease 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 Minimum Grade of D and PHPR 4421 Minimum Grade of D and (PHPR 4621 Minimum Grade of S or PHPR 4631 Minimum Grade of S or PHPR 4641 Minimum Grade of S or PHPR 4651 Minimum Grade of S or PHPR 4661 Minimum Grade of S or PHPR 4671 Minimum Grade of S. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5441 - Advanced Endocrine Module****3.5 Credits Normal Grading Mode**

Continuation of PHPR 5431. An integrated approach to endocrine 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 Minimum Grade of D and PHPR 4421 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5451 - Central Nervous System Module****5.5 Credits Normal Grading Mode**

Continuation of PHPR 5441. An integrated approach to central nervous 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 Minimum Grade of D and PHPR 4421 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5461 - Capstone in Pharmacy Practice****6 Credits Normal Grading Mode**

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 experiences. Offered spring semester. Prerequisite(s):PHPR 5431 Minimum Grade of C and PHPR 5441 Minimum Grade of C and PHPR 5451 Minimum Grade of C and PHPR 5471 Minimum Grade of C and PHPR 4411 Minimum Grade of C and PHPR 4421 Minimum Grade of C and PHBS 4431 Minimum Grade of C and PHBS 4441 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5471 - Oncology Module****3.5 Credits Normal Grading Mode**

Continuation of PHPR 5451. An integrated approach to oncology 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 Minimum Grade of D and PHPR 4421 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5501 - Leadership, Entrepreneurship, and Administration in Pharmacy Module****6 Credits Normal Grading Mode**

An interdisciplinary approach to the practice of pharmacy as it relates to the contemporary health-care system and the business environment, and leadership principles. 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. Prerequisite(s):PHPR 5431 Minimum Grade of D and PHPR 5441 Minimum Grade of D and PHPR 5451 Minimum Grade of D and PHPR 5471 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.



**PHPR 5531 - Special Populations***3 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5431 Minimum Grade of D and PHPR 5441 Minimum Grade of D and PHPR 5451 Minimum Grade of D and PHPR 5471 Minimum Grade of D. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 5551 - Emergency Medicine***2 Credits Normal Grading Mode*

An overview of unscheduled medical appointments and emergencies. Offered spring semester. Must be enrolled in one of the following Major fields of study: Pharmacy. Must have one of the following Student Attributes: P5.

**PHPR 5561 - Palliative Care***1 Credit Normal Grading Mode*

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 Major fields of study: Pharmacy. Must have one of the following Student Attributes: P5.

**PHPR 5581 - Advanced Compounding***1 Credit Normal Grading Mode*

A laboratory based course designed to expand on the basic compounding technique and develop problem solving skills pertaining to pharmaceutical compounding dilemmas. Must be enrolled in one of the following Major fields of study: Pharmacy. Must be enrolled in one of the following Classifications: Pharmacy - Fifth Year.

**PHPR 5591 - Career Planning***1 Credit Normal Grading Mode*

This course offers an overview of information to prepare a student pharmacist to take necessary steps to achieve the desired pharmacy career. The course will be a combination of class discussions, guest speakers, in-class workshops, readings and assignments. Prerequisite(s):PHPR 5431 Minimum Grade of D and PHPR 5441 Minimum Grade of D and PHPR 5451 Minimum Grade of D and PHPR 5471 Minimum Grade of D.

**PHPR 5611 - Interprofessional Patient Care for HP Students***1 Credit Normal Grading Mode*

Professional Students are expected to achieve certain outcomes upon graduation. These outcomes guide curriculum development to provide opportunities for students to learn necessary skills, abilities, values, and knowledge. This course addresses these educational outcomes as noted where course objectives are matched to educational standards.

**PHPR 5651 - Pharmacy Practice Research***1 to 6 Credits Normal Grading Mode*

A research experience for students. Participation in all aspects of the design, implementation, evaluation and presentation of research results. Unlimited repeats permitted.

**PHPR 5901 - Professional Pharmacy Development 9***0 Credits Grading mode is S/U*

Continuation of PHPR 4911. Offered fall semester. Prerequisite(s):PHPR 4211 Minimum Grade of C and PHPR 4911 Minimum Grade of S and PHPR 4991 Minimum Grade of S.

**PHPR 5971 - Independent Study-Pharmacy Practice***1 to 16 Credits Normal Grading Mode*

Can be repeated as the topic varies. Offered fall and spring semesters. Must be enrolled in one of the following Colleges: Pharmacy. This course is repeatable for a total of 16 hours.

**PHPR 5991 - Intermediate Pharmacy Practice Experience***0 Credits Grading mode is S/U*

The Intermediate Introductory Pharmacy Practice Experience (I-IPPE) consists of eighty (80) hours of patient care experience. The experience may occur in a variety of patient care settings some examples include: community pharmacy , 340b pharmacies, Health systems, emergency departments, health departments with an outpatient pharmacy, and ambulatory care clinics. Prerequisite(s):PHPR 5461 Minimum Grade of C. Must be enrolled in one of the following Major fields of study: Pharmacy.

**PHPR 6501 - Advanced Pharmacy Practice Experience - 1***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6502 - Advanced Pharmacy Practice Experience - 2***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6503 - Advanced Pharmacy Practice Experience - 3***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6504 - Advanced Pharmacy Practice Experience - 4***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6505 - Advanced Pharmacy Practice Experience - 5***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6506 - Advanced Pharmacy Practice Experience - 6***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6507 - Advanced Pharmacy Practice Experience - 7***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6508 - Advanced Pharmacy Practice Experience - 8***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.

**PHPR 6509 - Advanced Pharmacy Practice Experience - 9***4 Credits Normal Grading Mode*

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. Prerequisite(s):PHPR 5461 Minimum Grade of C and PHPR 5501 Minimum Grade of C and PHPR 5531 Minimum Grade of C. Must be enrolled in one of the following Colleges: Pharmacy.



THE CLAUDE W. PETTIT COLLEGE OF  
**Law**

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# Law

**Charles H. Rose III, Dean**

**Professors** Bales, Brant, Crago, Frohnen, Gerber, Kamatali, Newell (*Associate Dean*), O'Melinn, Raack, Rose (*Dean*), Veltri, Ward;  
**Associate Professors** Flake, Rosenberg; **Assistant Professor** Kidder;  
**Instructor of Legal Writing** Mittendorf; **Instructor** Hunt; **Taggart Library: Professor** Armstrong; **Associate Professor** Johnston-Green; **Assistant Professor** Ellis

Founded in 1885, the Ohio Northern University Claude W. Pettit College of Law is accredited by the American Bar Association (1948) and is a member of the Association of American Law Schools (1965).

The College of Law 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 graduates who can compete in today's challenging legal world.

## **The Fred L. Carhart Memorial Program in Legal Ethics**

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 of Law 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.

## **Ella A. and Ernest H. Fisher Chair in Law.**

Established in 1984 from the estate of Ella A. and Ernest H. Fisher.

## **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. '86. 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 Memorial Lecture in Federal 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. Ohio Northern 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 are available online.

## **Mission Statement**

The mission of the College of Law is to educate and transform students into competent, ethical, and professional legal practitioners able to apply their skills and talents in traditional and emerging environments.

## **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 College of Law contains faculty and student activity offices, two courtrooms, classrooms, two student lounges, and the library. Wireless connectivity is available throughout the entire College of Law building. The Taggart Law Library houses more than 450,000 volume equivalents in both hard copy and microform and offers computerized legal research services including LEXIS, WESTLAW, and other electronic subscription services. The library is a federal depository and contains a significant collection of government-related materials. A free, statewide, resource-sharing network (OhioLINK) provides faculty and students with direct online borrowing privileges at more than 85 college and

university libraries. The library offers ample study carrels and tables and a computer lab. Additional network and power connections are available throughout the library and at several other locations in the law building. The College of Law 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 2015 to contain the latest in courtroom technology. The David C. Crago Rare Book and Special Collections Room was added to the Taggart Law Library in 2012. Classroom 125 was renovated in 2017 and classroom 124 was renovated in 2020.

## **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 and a January term. There are no part-time or evening programs.

The core curriculum of the College of Law provides 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, dispute resolution, environmental law, government regulatory law, employer-employee relationship law, civil liability law, and property law.

Well-established clinical and legal extern programs and judicial externships also play an important role in the curriculum. The College of Law offers a program of clinical legal studies and extern placements for academic credit that incorporates both classroom instruction and actual law office and courtroom experience.

The College of Law offers multiple simulated experiential learning opportunities both internally and externally, with intra-school and national-level moot court trial and appellate teams. These students compete nationwide, learning best practices based upon real-world simulated experiences while learning from leaders in the field.

Each semester those full-time students receiving a minimum grade point average of 3.50 for the term are named to the Dean's List of the College of Law. They are recognized with a certificate at the annual awards ceremony.

## **Student Learning Outcomes**

- SLO1: Graduates will demonstrate knowledge of substantive and procedural law.
- SLO2: Graduates will demonstrate competence in legal research.
- SLO3: Graduates will demonstrate competence in legal analysis and problem-solving.
- SLO4: Graduates will demonstrate the ability to communicate effectively, orally and in writing.
- SLO5: Graduates will demonstrate knowledge and understanding of proper professional and ethical responsibilities to clients and the legal system.
- SLO6: Graduates will demonstrate competence in legal practice skills.

## **Graduation Requirements**

The J.D. degree is conferred upon application to all students who, in no less than 28 months and no more than 72 months after matriculation, have successfully completed a total of 90 hours, including the courses graded with an "S" or "U", and with a cumulative average of 2.00 for all courses in which a letter grade is given. At least 75 of these credit hours must be completed in residence at the College of Law. The Dean, at his discretion, may waive the number of hours to be completed in residence under special circumstances.

Degrees are conferred at the end of the semester during which requirements were completed. Commencement exercises are held at the close of the spring semester. Students who complete their work prior to the spring semester are invited to participate.

Students who graduate and complete at least 60 hours in the College of Law and whose cumulative grade averages meet the standards for academic recognition will have this recognition announced at commencement, recorded on their diplomas and recorded on their transcripts. The levels of academic recognition are *cum laude*: a cumulative grade point average of 3.30-3.59; *magna cum laude*: a cumulative grade point average of 3.60-3.89; and *summa cum laude*: a cumulative grade point average of 3.90 and above.

## Concurrent J.D./M.S.A. Degree Program

Students with an interest in taxation can earn both their J.D. degree and a Master of Science in Accounting (M.S.A.) through a concurrent degree program offered by the College of Law and the Dicke College of Business Administration. Students admitted to the program can earn both degrees within three academic years.

Concurrent degree students begin their studies with the standard first year curriculum of the College of Law. In the summer following their first-year, students will take two courses in the J.D./M.S.A. track. Following a second academic year of specialized courses and electives, students will be placed in a summer externship for credit that will offer a field experience in tax accounting. The students will then complete a third year of study and earn both the J.D. and M.S.A. degrees in the spring.

## Student Activities

Many student organizations complement the academic life of the College of Law and provide an opportunity for further professional and personal development.

Among those organizations are Agriculture Law, Association for Immigration and Refugee Reform, Black Law Students Association (BLSA), Bruce Comly French American Inn of Court, Christian Legal Society, Environmental Law Society, Federalist Society, Icelandic Legal Exchange Program, International Law Society, J. Reuben Clark Law Society, Law School Veterans Association, Legal Association of Women, Moot Court, Ohio Northern University Law Review, Phi Alpha Delta International Fraternity, Public Interest Law Association, Student Animal Legal Defense Fund, Sports and Entertainment Law Association, Student Bar Association (SBA), and Willis Society Law Honorary.

The Bruce Comly French Inn of the American Inns of Court was established at Ohio Northern in the spring of 1992. Members include judges, senior attorneys, young lawyers, professors, and a group of ten rising second- and third-year law students. The Inn seeks to encourage better trial practice, foster civility amongst practitioners of our craft, and aid in the professionalism of the advocacy program.

The College of Law's strong Moot Court program sends teams to national and international competitions. In addition, four 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 law journal, is edited and published by law students. Published three times per year, the Law Review consists of leading articles on current legal issues authored by prominent scholars, law professors, judges, and practitioners; student comments on recent legislation and cases; and selected symposia presentations on varied legal topics.

## Student Body

The College of Law's student body represents a wide range of ages, cultures, interests, abilities, and accomplishments. Over 100 undergraduate institutions are represented.

## Admissions Process

The College of Law endeavors to select a first-year class that reflects the geographical, socioeconomic, 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 prior to the start of the fall semester or be admitted pursuant to a 3 + 3 admission agreement with their undergraduate institution. 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 of study in compliance with the regulations of the American Bar Association may be approved by the Associate Dean for Academic Affairs.

All applicants, including applicants from foreign countries, must take the Law School Admission Test (LSAT). Registration with the Credential Assembly Service (CAS) is required to provide the College of Law's Admissions Committee with an official copy of the applicant's LSAT score report, an analysis of the applicant's undergraduate transcript(s), and a copy of the applicant's LSAT writing sample.

The deadline to apply for admission is August 1 and students are

encouraged to apply as early as possible to avail themselves of the most consideration for admission and financial aid awards. Admissions decisions are rendered on a rolling basis, and applicants are admitted until the entering class is filled. Two seat deposits are required for accepted students by April 15 and June 15. Upon being accepted to the Summer Starter program, one seat deposit will be required on April 1. All seat deposit payments are applied to first semester tuition.

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 depth and rigor of courses completed; grade trends; graduate work; relevant work experience; community service; leadership in extracurricular activities; 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. Merit-based scholarships recognize students who have outstanding academic credentials, diverse backgrounds, and leadership abilities that indicate the applicants' potential to excel in all aspects of the law school experience. Awards range from \$5,000 to \$29,000. 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 remains in good academic standing. Additional scholarship awards, which are also renewable, are made to students who distinguish themselves academically during their first year.

Scholarships and grants are awarded assuming full-time enrollment for both fall and spring semesters and are divided evenly between the semesters. If a student attends only one of these semesters the scholarship and/or grant will be reduced accordingly. (Example: a \$10,000 scholarship will provide \$5,000 per semester, but the student must be in attendance for two semesters to receive the full amount.)

While full-time enrollment is normally required for a student to receive Ohio Northern scholarships and grants, an exception will be made for one fall or spring semester during a student's enrollment at the College of Law provided the student is enrolled for at least 3 credit hours. For many students this is the final semester of enrollment where less than 12 credit hours are needed to complete the degree program. During this semester Ohio Northern scholarships and grants will be prorated by dividing the number of hours registered by 12 and multiplying the resulting percentage by the full-time semester award amount of the scholarship or grant. To initiate this proration of funds, students must communicate intent to enroll for less than 12 credit hours to the Financial Aid Office by the end of the last day to add a class of the applicable semester.

Financial aid is also made available in the form of federal student loans and student loans from private sources. The two federal student loans that are available to law students are the Direct Unsubsidized Loan and the Direct Graduate PLUS Loan. A Free Application for Federal Student Aid (FAFSA) application is required for student loans. Applications and additional information about individual loan programs may be obtained from the Financial Aid Office.

## LAW COLLEGE CALENDAR 2020-22

### Summer Semester 2020

#### May

26 Law classes begin  
29 Last day to add a class or section

#### June

5 Beginning of "W" period for withdrawals

#### July

2 Last day to withdraw  
3 Independence Day observed- Classes recess  
20 Law classes end  
21-22 Reading days  
23-24 Law finals

## Fall Semester 2020

### August

20-21	New law student orientation
24	Law classes begin
28	Last day to add a class or section

### September

4	Beginning of "W" period for withdrawals
7	Labor Day - Classes are in session

### October (no fall break)

26	Last day to withdraw
26-30	Registration for January term/spring

### November

13	Last day to remove "incomplete"
20	Law classes end
23-24	Reading days
25-27	Thanksgiving recess
28-30	Reading days

### December

1-11	Law finals
13	Fall Law graduation
12-Jan. 4	Christmas break

## January Term 2021

### January (online education only)

5	Classes begin
6	Last day to add a class or section
7	Beginning of "W" period for withdrawals
13	Last day to withdraw
18	Martin Luther King Day - Classes recess
20	Last day of classes
21-22	Reading days
25-26	Law finals

## Spring Semester 2021

### January

27	Classes begin
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### February

2	Last day to add a class or section
9	Beginning of "W" period for withdrawals

### March

8-12	Spring Break
15	Classes resume
22-26	Summer/Fall registration

### April

2	Good Friday - Classes recess
6	Last day to withdraw
23	Last day to remove "incomplete"
30	Classes end

### May

1-3	Reading Days
4-14	Law finals
15	Commencement (Sat.)

## Summer Semester 2021

### May

24	Law classes begin
27	Last day to add a class or section
31	Memorial Day - Classes recess

### June

1	Classes resume
4	Beginning of "W" period for withdrawals

### July

1	Last day to withdraw
2	Independence Day observed - Classes recess
19	Law classes end
20-21	Reading days
22-23	Law finals

## Fall Semester 2021

### August

18-20	New law student orientation
23	Law classes begin
27	Last day to add a class or section

### September

3	Beginning of "W" period for withdrawals
6	Labor Day - Classes recess
7	Classes resume

### October

11-12	Fall Break - Classes recess
13	Classes resume
25	Last day to withdraw
25- Nov. 5	Registration for January term/ Spring

### November

12	Last day to remove "incomplete"
23	Law classes end
24-26	Thanksgiving recess
27-29	Reading days
30- Dec 10	Law finals

### December

12	Fall Law graduation
11-Jan. 3	Christmas break

## January Term 2022

### January

3	Law students arrive; check in
4	Classes begin
5	Last day to add a class or section
6	Beginning of "W" period for withdrawals
12	Last day to withdraw
17	Martin Luther King Day -Classes recess
21	Last day of classes
22-23	Reading days
24-25	Law finals

## Spring Semester 2022

### January

26	Classes begin
----	---------------

### February

1	Last day to add a class or section
8	Beginning of "W" period for withdrawals

### March

7-11	Spring Recess
14	Classes resume
28- Apr 8	Summer/Fall registration

### April

1	Last day to withdraw
15	Good Friday- Classes recess
18	Last day to remove "incomplete"
29	Classes end

### May

2	Reading days
3-13	Law finals
14	Commencement (Sat.)

# TUITION, FEES, AND OTHER CHARGES 2020-22

## College of Law

Students enrolled and attending classes for the 2020-21 academic year

### Tuition & General Fee Per Semester

•Full-time student.....	\$15,065.00
•Part-time student (less than 12 hrs.) (per hour) .....	\$1,260.00
•Academic overload fee (per hour).....	\$945.00
•January term (per hour) .....	\$1,160.00

### University Student Fee

•Per semester \$485

### Room

•Campus apartments \$4,750

Additional funds are needed for books, supplies, and incidentals. A minimum of \$1,000 per term should be budgeted for these purposes. Books and supplies are sold at the university 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, admission to athletic events and most other events on campus, the student newspaper, and literary magazine if full-time during the two semesters of the academic year.

## PAYMENT PLANS

Ohio Northern makes available to parents and students both monthly and bi-weekly payment plan options. These plans can be used to make tuition and fee payments throughout the term, rather than paying the full amount due in a lump sum. Please contact the Controller's Office for more information on these plans.

### Regular Billing Schedule

For students selecting courses during the advance registration period, initial billing statements will be sent through the TouchNet Ebill System approximately one month before the start of each term. Students will receive an e-mail at their Ohio Northern account when a new billing statement is available to view. Students can also view their account balances and make payments online 24 hours a day, 7 days a week, using the TouchNet Ebill System.

Full payment of all charges is due the first day of each semester. Failure to pay balances by the posted due dates may result in the cancellation of the student's 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 upon registration. Balances can be viewed through the TouchNet Ebill System upon registration, even if updated billing statements have not been issued. It is the student's responsibility to view and pay his/her balance in a timely manner.

### Student Financial Responsibility Agreement

All students will be required to sign a Student Financial Responsibility Agreement upon registration for courses at Ohio Northern. This agreement informs students of the financial responsibilities associated with enrolling for classes at Ohio Northern. It also covers financial aid obligations, communication policies, privacy rights and responsibilities, 1098-T receipt, and more. This agreement helps Ohio Northern explain the potential consequences if a student fails to meet his/her obligations to the university.

### Credit Card Payments

Visa, MasterCard, Discover, and American Express payments for tuition and fees may be made online through the TouchNet Ebill System. A convenience fee of 2.85% will apply to all credit card payments. Credit Card payments for tuition and fees cannot be taken in the Controller's Office.

**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 TUITION AND FEE PAYMENTS FOR 2020-21

Fall Semester	August 24, 2020
Spring Semester	January 27, 2021

### Other Charges

#### 1. Advance Deposit

##### Fall Matriculants:

Upon receiving an offer of admission to the College of Law, an advance deposit of \$400.00 will be required by April 15.

A second deposit of \$200.00 is required by June 15. No portion of the first or second deposit is refundable. Both deposits are credited to fall tuition.

##### Summer Matriculants:

Students offered admission to the Summer Starter Program will be required to submit a deposit of \$500.00 by April 15.

Summer or fall matriculants admitted after a due date will be required to make a partial or full payment within 7-14 days of the admission date.

#### 2. Applied Music Lessons

For music minors and non-music majors-for each instrument .....\$450.00

3. **Auditing Fee**, per semester hour (when permitted) at College of Law tuition rate.

4. **Exam 4 Software Fee** (fall only) .....\$30.00

#### 5. Late Payment Fee

If tuition and fees are not paid in full when due, a \$50.00 late fee is assessed along with interest at a rate of 1.5% per month on the unpaid balance due. Interest will continue to accrue at a rate of 1.5% per month (18% annual) on any unpaid balance until the balance is paid in full.

#### 6. 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 ....\$110.00

7. **Law Review Fee** (all law students) (fall only).....\$20.00

8. **Lost/stolen/damaged ID Card Fee** .....\$25.00

#### 9. Motor Vehicles

##### On-Campus Parking Permit

Full year .....	\$65.00
Per semester .....	\$40.00

##### Schedule of Fines

Driving or parking on grass .....	\$30.00
Driving on sidewalks .....	\$30.00
Falsification of information.....	\$30.00
Improper parking .....	\$15.00
Parking in fire lanes .....	\$35.00
Parking in handicapped space .....	\$50.00
Parking in restricted area .....	\$30.00
Parking longer than posted time .....	\$15.00
Parking without parking permit.....	\$65.00
Reckless operation of a motor vehicle.....	\$35.00
Stop sign violation.....	\$15.00
30-day parking ticket non-payment late fee (per ticket)	\$5.00

Motor vehicle regulations are designed to protect the safety and welfare of the campus community and promote good order. Violations are issued by public safety officers. Cited violators may appeal to an appeals committee within three working days of the violation.

<b>10. Payment Plan Fee</b> .....	\$30.00
<b>11 Residence Halls Fees</b>	
Early arrival fee .....	\$50.00 set up + \$30.00 per day
Housing over break (residence halls only).....	\$15.00 per day
Improper check-out .....	\$100.00
Lock out Fee (per incident).....	\$10.00
Re-pin/new keys .....	\$100.00
Room Lock Replacement.....	\$300.00
Staying on campus late fee .....	\$30.00 per day
<b>12. Returned Check Fee</b> .....	\$25.00
<b>13. Student Bar Dues</b> (full-time law students only)	
Per semester.....	\$20.00
<b>14. Transcript Fee</b>	
•Transcripts may be ordered via Self-Service Banner from National Student Clearing house (NSC), a non-profit organization serving the higher education community.	
•Transcript fee is \$4.00 plus NSC service fee(s).	
•Transcripts ordered from NSC are processed same or next day if electronic delivery is chosen, and within two to five business days if paper delivery is chosen.	
•Special handling will be granted upon request, at the Registrar's Office, with prepayment of the appropriate fee.	
<b>15. 3L Bar Success Fee</b> (all 3rd-year law students -fall only).....	\$50.00

**Printing Fees:**

Students are given a \$30.00 print allowance each year they are enrolled at Ohio Northern. Students who go over their printing allowance are charged for their additional printing at the end of each semester. The cost to print is \$0.10 per color page or \$0.04 per black-and-white page (standard 8.5-by-11 size). Students can check print balances online at <http://onuprinters.onu.edu:9191/user>.

**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. Students will be charged for replacement cards if their card is lost, stolen, or damaged. 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 on-campus housing.

**Withdrawal Refund Policy:**

**Return of Title IV Funds**

If a student withdraws from Ohio Northern, or is suspended for disciplinary reasons, a refund of tuition and Title IV funds will be made on the basis shown below. The withdrawal date is the date the student officially submits the withdrawal form, or the date the university determines the student ceased attendance or failed to meet published academic policies, whichever comes first. Students who drop from fulltime to less than fulltime during the first 60% of the semester may have adjustments made to their tuition and financial aid as well.

The adjustments in charges and/or financial aid may result in an outstanding balance on the student's account, which will be due at the time of withdrawal.

**Refund of University Charges**

Note: The following refund information applies to summer, fall, and spring terms only. During January term, no refund of any type will be issued after the first day of the term.

**Tuition** – Students withdrawing on or before the first day of classes each semester are granted a 100% refund of tuition. Tuition charges are prorated from that point forward. During the first week of classes, tuition will be prorated 5%. After the first week of the semester has passed, tuition refunds are calculated through the Controller's Office using 10% increments through the 60% point of each semester. There is no proration of charges after the 60% point of each semester. For more information and to connect with a financial aid counselor please refer to the Financial Aid page of our website at [www.onu.edu/financial-aid](http://www.onu.edu/financial-aid).

**Fees** – Students will be responsible for the full amount of any Ohio Northern University General Student Fee and College of Law Fee charges. Course fee charges are refunded at 100% through the last day to add a class or section for each term, with no proration given after that point. Please review the College of Law calendar to view the last day to add a class or section for each term.

**Room and Meal Plan** – Students choosing to move out of campus housing on or before the first day of classes each semester are granted a 100% refund of housing and meal plan charges. Housing and meal plan charges are prorated from that point forward based on the date the student moves out of campus housing. During the first week of classes, housing and meal plan charges will be prorated 5%. After the first week of the semester, housing and meal plan refunds are calculated through the Residence Life Office using 10% increments through the 60% point of each semester. There is no proration of charges after the 60% point of each semester. Early arrival charges, late check-out fees, damage billing, and other housing fees are not subject to this proration policy and are non-refundable fees.

**Financial Aid Adjustments**

**Ohio Northern Aid** – All Ohio Northern scholarships, grants, and awards will be adjusted using the same proration as used for our tuition adjustments. Students withdrawing on or before the first day of classes each semester will have 100% of all Ohio Northern aid removed from their account. Ohio Northern aid is prorated from that point forward. During the first week of classes, Ohio Northern aid will be prorated 5%. After the first week of the semester has passed, Ohio Northern aid is calculated through the Financial Aid Office using 10% increments through the 60% point of each semester. There is no proration of aid after the 60% point of each semester. For more information and to connect with a financial aid counselor please refer to the Financial Aid page of our website at [www.onu.edu/financial-aid](http://www.onu.edu/financial-aid).

**Title IV Aid** – Title IV Aid includes Federal Pell Grant, Federal Supplemental Education Opportunity Grant (FSEOG), TEACH Grant, Direct Subsidized and Unsubsidized Stafford Loan, and Direct PLUS Loan funds. Title IV Aid will be prorated on a daily basis from the first day of classes as per federal regulation (34 CRF 668.22). Direct Subsidized/Unsubsidized Stafford Loan, Perkins Loan, and Health Profession Loan borrowers will be expected to provide the exit interview information as requested through their loan servicer. Direct Subsidized/Unsubsidized Stafford Loan servicers are assigned to each borrower by the Department of Education. All Perkins Loans and Health Profession Loans borrowed while enrolled at Ohio Northern are serviced through ECSI. More information can be found on their site at <https://borrower/ecsi.net>.

**Outside Aid** – The adjustment of outside financial aid received, such as outside scholarships, will depend 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's aid refund schedule.



Work Study Earnings – 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.

### **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 Office of Public Safety to the Traffic Violation Appeals Committee. Appeals for other charges must be filed with the Vice President of Student Affairs.

### **Housing**

The university makes available well-maintained living facilities at a moderate cost for all 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 College of Law's Office of Career and Professional Development 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 (OLPC) and the National Association of Law Placement (NALP), 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 the student's name on the list of possible recipients for such awards.)

•The David and Katherine Kegerreis Albright Scholarship was established by David and Katherine Kegerreis Albright. It is a general scholarship for a student in good academic standing and with financial need.

•The Andrews Student Aid Fund was established by Mrs. Mabel Andrews Beachler, AA 1930, 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 University included Charles, Ralph, James, Mabel, Louise and Alice Andrews.

•The Gertrude Andrews Scholarship Fund was established by a bequest from Mrs. Gertrude Andrews, a United Methodist friend from Cloverdale, Ohio. The income from this endowed fund is awarded each year to worthy students with financial need.

•The Clyde and Frances Augsburgers Scholarship Fund was established by Robert R. Augsburgers and his wife, Jean Ann, as a memorial to his mother, Frances Russell Augsburgers, AA 1888, and his father, Clyde Augsburgers, 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 Byron Evans Baker Scholarship Fund was established with a substantial gift by Mrs. Homer Hudson in 1949 to honor her father. Dr. Baker was a loyal and grateful alumnus who practiced medicine in Milford Center for 53 years. The award 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 student(s) from Belmont County in Ohio with preference being given to Martins Ferry High School graduates.

•The Richard Wellington Barnes, Class of 1892, Scholarship was established by a trust from his daughter, Florence Barnes Hartman, to assist general university students.

•The Barnes & Noble Textbook Scholarship was established through a gift from Barnes & Noble Bookstore to help students purchase textbooks. The fund is to honor the leadership and service of Dr. Kendall Baker, president of Ohio Northern University 1999-2011, and is to be awarded at the discretion of the University.

•The Olga "Mom" Bentley Leadership Scholarship was established by members of the Sigma Phi Epsilon fraternity in memory of their house mother, Olga Bentley. The annual award will be for junior and senior men at Ohio Northern University who have proven themselves to be strong campus leaders and who are committed to the service of others.

•The Clark O. and Dorothy B. Biddle Memorial Scholarship was established by the estate of Dorothy B. Biddle for deserving Ohio Northern University students.

•The Edgar J. Brookhart Scholarship, was established by Mrs. Dora M. Brookhart, AA 1900, in memory of her husband, Edgar, a graduate in 1903 and a trustee of Ohio Northern University, 1918-1949. The award 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 Clair E. and Rosemary Butturff Scholarship was established by Clair E., Hon. DBA 1995, and his wife, Rosemary Butturff from Lima, Ohio. The scholarship recipients will be limited to full time sophomore and above students attending Ohio Northern University and who a.) live in Allen and contiguous counties in Ohio, b.) who are employed, c.) have an average 2.50 GPA on a 4 point grading scale, d.) are deemed worthy of financial assistance as judged by appropriate college officials, and e.) practice a religion of their choice aspiring to high moral and spiritual standards. The maximum amount available to any one student shall not exceed 12.5% of his or her annual cost of tuition.

•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 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 Paul Chenoweth Scholarship Fund was established through the will of Paul L. Chenoweth, BSEd 1956, for students selected in accordance with university financial aid policy.

•The Raymond and Leola V. Clark Scholarship was established by a gift from Mr. Clark, BSCE 1927, of Willoughby, Ohio. Award to go to a qualified student(s) in any of the four undergraduate colleges.

•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 recipient shall be a student in the final year of study and have maintained a 3.0 GPA. The scholarship will rotate each year to a different college within the University.

•The Class of 1939 Scholarship was established by members of the Class of 1939 during their 50th reunion year.

•The Class of 1949 Reunion Scholarship was established by the members of this class during their 40th and 50th reunion years for a student with financial need.

•The Class of 1961 Scholarship was established in honor of the Class of 1961 35th reunion to help support a deserving, qualified student.

•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 Karen Condeni/Phyllis Howser Scholp Study Abroad Scholarship will support students participating in Ohio Northern University study abroad programs and experiences in a European or Asian Country with preference given to applicants pursuing a major or a minor in the College of Arts and Sciences and a minimum 2.5 cumulative GPA.
- The Frank Cooper Financial Aid Fund, established by Mrs. Frances Brown Cooper as a memorial to her husband, Dr. Frank B. Cooper, PhD 1893, is awarded to students from Hardin or adjacent counties.
- The Richard Cooper Memorial Award was established in 1970 in memory of Rick Cooper, a senior in 1970, who lost his life one month prior to graduation. The income from the fund is given to the outstanding senior male fraternity member.
- 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. Cremean Scholarship was established by Dr. and Mrs. Ken Cooper to memorialize Thomas L. Cremean, BSED 1939, who was Mrs. Cooper's father and to honor Warren J. Cremean, BSCE 1942, who is Mrs. Cooper's uncle. To be awarded to any qualified undergraduate student, in accordance with established student aid policy.
- 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. The award is available to students from Wyandot County who have financial need.
- 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 Dickason and Oren Dickason, Sr. Scholarship was established by the Oren E. Dickason family to provide for the continuing assistance of ONU from three generations of its supporters.
- 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 David F. Domizi Scholarship Fund was established through the will of David F. Domizi II, PhD 1932, to support a student with a demonstrated work ethic and strong academic background or high academic potential having financial need. The holder of the scholarship must maintain a 3.0 G.P.A. Mr. Domizi was a pharmacist, owning a drug store in Fairview Park, Ohio, for many years, retiring in 1981.
- 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 University. The award is to be made to any qualified student in the University
- The Education Incentive Scholarship for Minority Students was established by faculty, alumni and friends of the University and is awarded to a qualified minority student pursuing teacher education and certification.
- 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 Elmer L. Faber Perpetual Scholarship was established through the generosity of Dr. Elmer L. Faber, BSED 1937, Hall of Fame 1976, Alumni Citation 1993, Doctor of Engineering 1994, 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 Fred F. Fox Scholarship was established through a bequest from Fred F. Fox, JD 1950 of Caldwell, Ohio. The award of the scholarship shall be limited to applicants who are residents of Noble County, Ohio. Each scholarship shall be renewed annually for four years for undergraduate students and for the average total annual period for a graduate program. Renewal shall be subject to the maintenance of scholarship criteria as established by Ohio Northern University.
- 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 Catherine Freed Senior Female Leadership and Service Award will be awarded to a current senior female student enrolled at Ohio Northern University who has leadership positions in campus organizations, campus involvement, and positive campus contributions.
- 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. Miss Frost, of Cincinnati, Ohio, was a retired school teacher who was not directly connected to Ohio Northern University, but was an active United Methodist. The award is to assist students with financial need.
- 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 second G.A.R. Foundation Scholarship was established with a grant of \$50,000 in 1993 from the G.A.R. Foundation in Akron, Ohio. Award is to be made for qualified students from Summit County, Ohio. The G.A.R. Foundation was established in 1967 by Mr. and Mrs. Galen Roush. Mr. Roush was co-founder of Roadway Express.
- 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 Gangemi-Krofft Financial Aid Award was established in 2003 in memory of Joseph J. Gangemi, the son of Francis and Charleen Gangemi of Findlay, Ohio. Joseph died in 2003 and would have been a freshman at Ohio Northern University in 2004. Francis Gangemi served the University from 1967-1995 as professor of physics and his wife, Charleen, received her BA degree in 1973. The award is for a science, liberal arts, or engineering student.
- 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 Griffith Family Scholarship was established by Ted, Tara, Tess, TJ and Tea Griffith of Ada, Ohio in pursuit of education at ONU. Eligible students must demonstrate a background in agriculture with preference given to students with immediate family involvement in farming. Consideration will also be given to students with demonstrated participation in activities that support agriculture, such as 4-H, FFA or Farm Bureau, or who have held agricultural employment. Eligible students must be graduates of a Hardin County school or Allen East, Cory Rawson or Benjamin Logan, with high academic achievement and extracurricular involvement. Recipients will be selected by the Office of Financial Aid with recommendations by the college deans.
- 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 in Marion and Forest, Ohio.
- The Floyd Student Aid Fund, in memory of Roy C. Floyd and his wife, Hettie Studebaker Floyd, Verona, Ohio was presented by their son and daughter-in-law, Loren R. and Leona Floyd. It is awarded to students who are graduates of Twin Valley High School or reside in Darke or Preble County, 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 University 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, ACit. 1996, LLD 1998, for students from Lancaster and/or Fairfield County, Ohio.
- The Jennette Cochrun Hapner Scholarship is granted to students from Spencerville 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 a 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 University, 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, to honor their minister, Reverend George W. Herd. Preference is given to students from the Lancaster 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 annual 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 Pleadis A. Hillier, founders--to honor the memory of their father, Robert E. Hillier. It is awarded to high school students with outstanding academic records and preference given to graduates of Everett, Michigan High School and/or graduates of high schools in Summit, Medina, or Stark Counties of Ohio.
- 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 scholarship will be awarded with first preference given to students from Fairview High School, located in Sherwood, Ohio, Defiance County; with second preference given to students from Defiance County, Ohio. This scholarship shall be awarded to worthy and deserving students and shall take into consideration a combination of financial need and merit with a heavier emphasis being given to need.
- Phyllis Howser Scholp decided to establish the international student course resource award to help recruit international students to attend ONU. Phyllis recognized the need to provide financial assistance to international students for the purchase of textbooks and other course resource material. This award exemplifies the dedication that Phyllis Howser Scholarship has to ONU and the growing number of international students who attend the University.
- The Merrill and Frances Insley Scholarship was established in 1984 by Dr. Susan Insley, JD 1977, and her brother, Thomas Insley, to honor their father, Dr. Merrill Insley, BSPH 1936, DS 1970, and the memory of their mother, Frances Insley, AA 1933, BSED 1935. Dr. Susan Insley was a member of the ONU Board of Trustees. Dr. Merrill Insley was a trustee of the University, 1953-58 and 1964-69
- The Johnstone Family Scholarship was established through a gift from Mr. William Johnstone to celebrate the 50th Anniversary of his graduation from Ohio Northern as a member of the Class of 1968. Mr. Johnstone came to Ohio Northern from central New Jersey, as the first in his family to attend college. William recognized many of his peers may not have been granted the opportunity for higher education that his parents' sacrifice afforded him. In honor of his mother, Marjorie Martin Johnstone, William wants to provide an opportunity for students to find their very own True North at Ohio Northern. The scholarship is awarded to a student who will be the first person in their family to graduate from college. Preference will be given to students with financial need from New Jersey.
- The Kappa Alpha Theta Scholarship fund was established with gifts from alumnae, family, and friends of Kappa Alpha Theta. Annual scholarship award(s) from the fund shall be made to rising junior(s)/senior(s) on a need blind basis. Preference will be given to recipients who have a minimum GPA of 2.5, a minimum of 5 community service hours completed on an annual basis, and be involved with at least one other campus organization in addition to Kappa Alpha Theta.
- The Mary G. Kennedy Memorial Fund was established through a bequest of Mary G. Kennedy, Hon. DH 1981. Mary was the granddaughter of Henry Solomon Lehr, founder of Ohio Northern University. The scholarship is for the benefit of deserving students attending Ohio Northern University.
- The Donald C. Kinsey Memorial Scholarship was established through the will of Mr. Kinsey, XBSME 1933, to provide scholarship assistance for deserving students at the University. Mr. Kinsey was a community leader in West Milton, Ohio.
- The Dr. John G. and Alice E. 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 Winifred Leicy Scholarship was established in memory 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 Steubenville area

- The Nathan L. Lindabury and Family Scholarship was established by Nathan 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 and Dorothy Ludwig Scholarship was established by Dr. and Mrs. Cleo Ludwig to be awarded to students with high academic achievement and demonstrated financial need. Dr. Ludwig, co-founder of the L&K Motel and Restaurant chain, is a trustee of the University.
- The Sadie and Ina Lybarger Aid Fund was established by Sadie Lybarger, LA 1905, in memory of her family, who were longtime residents of Nevada, Ohio. The Lybarger Fund will be restricted to students with financial need and preference will be given to students who reside in or attend schools in Wyandot or Crawford counties in Ohio.
- The Everett L. and Mary E. Maffett Scholarship was established by Mr. and Mrs. Everett Maffett to provide financial assistance for Native Americans to attend Ohio Northern University with preference given to applicants from the Wyandotte Tribe. If no student from this tribe is available, scholarship is to be presented to any Native American student. If there is no Native American student available, scholarship may be awarded to a general university student.
- The Joseph and Bruno Mallone Scholarship was established by Judge Joseph P. Mallone, BSED 1939, JD 1950, and friends, to honor the memory of his brother, Bruno A. Mallone, BSED 1942, HF 1980 and assist 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 Student Aid Fund was established by a bequest of J. Elwood Bulen, friend of the University. The income from the fund will be used each year to assist qualified students with 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 University 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 Methodists 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 and Martha Meyer Scholarship Fund was established by Dr. Walter and Mrs. Marian English in recognition of Dr. Meyer's twelve years of service as President of Ohio Northern University and Mrs. Meyer's service as First Lady, 1965-77. The award is presented to a worthy student who has demonstrated financial need and a preferential interest in oratory and debate.
- The Oscar J., BA 1972, and Judith D. (Jacobs), BS 1970, Mfsud 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 award is to assist a deserving male upper-class student, with preference to a residence hall staff member and football player.
- The Charles W. Mitchell, BSEE '49, Scholarship was established by his wife, Virginia A. Mitchell, through a will commitment. Scholarship recipients will be any student, including incoming freshmen, who are deemed worthy of financial assistance and will be made for a full academic year and may be renewed annually on the basis of satisfactory progress towards graduation.
- 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 undergraduate students in good standing who are graduates of a West Virginia high school. The James L. and Dolores W. Moore Family Memorial Scholarship was established in honor of James L. Moore, Registrar of Ohio Northern University, 1966-1991, and Dolores W. Moore, Faculty Emeritus, College of Business Administration. Its purpose is to provide support to students from the Moore's native state of West Virginia.
- 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 by the National Lime and Stone Company of Findlay, Ohio to assist worthy students with financial need.
- The Lou Ann Neubert Memorial Scholarship was presented by James and Louella Neubert in memory of their daughter, Lou Ann Neubert, BA 1963, to assist physically handicapped students from northwest Ohio.
- 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 voluntary 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 Allen, Auglaize, Hancock and Hardin County ONU Women Scholarship was established to provide annual scholarship assistance for a female resident of Allen, Auglaize, Hancock and Hardin counties who has attained at least her third year of progress at the University and has declared her major.
- The ONU Women's Endowed Scholarship Fund, established by the women of the Ohio Northern University community, awards five equal need-based scholarships each year to one female student in each of the five colleges.
- 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 by Mrs. Palmer of Edgerton, Ohio, 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, Ohio. The award is to be given to a qualified undergraduate student.
- 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 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 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.

•Paul Ridenour from Lima, Ohio had a 30 year career as an Air Force pilot and scientist. He began his college studies at ONU in the 1940's, later earning a BS in Physics from OSU and MS from the Air Force Institute of Technology. With his wife Juanita, also from Lima, they instilled strong Christian beliefs in their 3 children: Alan, Nancy (BS '74) and Barbara (BS Edu '67). Barbara and Phil Brooks (BSCE '65) continued the belief in ONU by sending their daughter, Dawn (BSC '93) and Heather (BS '99).

•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 to assist students with financial need.

•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. Preference is given to graduates of Carroll County, Ohio, high schools.

•The Robuck Memorial Scholarship Fund was established by Mr. and Mrs. Robert J. Morris of Columbus, Ohio to honor the memory of her parents, Dr. and Mrs. O. S. Robuck. Dr. Robuck received a BS degree in 1900 and his wife, Margaret, a BA degree in 1904. The award is to assist qualified students with financial need.

•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 established through gifts and a bequest from Helen W. Routh of Cuyahoga Falls, Ohio, in memory of her deceased son, Richard William, XBSME 1964.

•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 Phillip W. Russell Scholarship Fund was established in 1990 by Gregg E. Russell, BA 1975, Phillip's brother, and other family members and friends. Phillip Russell died in an automobile accident in 1989. The award is to go to a student athlete graduate of Triad High School, Champaign County, Ohio.

•The Charlotte R. Schmidlapp Scholarship was established in October, 2007 by the Charlotte R. Schmidlapp Fund of Cincinnati, Fifth Third Bank, Trustee, with a grant of \$150,000. An additional grant of \$100,000 was received in 2018. The award is to support female students majoring in mathematics and the sciences, including Pharmacy and Engineering who are deemed worthy of financial assistance as judged by appropriate college officials. 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. This scholarship is financially assisted by the Charlotte R. Schmidlapp Fund, Fifth Third Bank, trustee.

•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, Ralph XBSCE 1931. The scholarship is awarded to a worthy student with recognized financial need.\*

•The Seiler Student Aid Fund was presented by Dr. Marion S. Seiler, XLLB 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, BSEE 1925, by his family. It is awarded to academically qualified students in the College of Engineering and the College of Pharmacy 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 Fiess 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 was established by Mrs. George (Avanel) Stambaugh, to be awarded to a worthy student from Ada High School.

•The John F. and Rhea Welsh Stambaugh Scholarship was established by a bequest of Mrs. Rhea Welsh Stambaugh, BA 1913, of Plymouth, Ohio. The scholarship is to be awarded to deserving students.

•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 University.

•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 Stansloski - Romans Scholarship Fund was established by Donald W. Stansloski, retired pharmacy professor at Ohio Northern University and Patricia A. Romans Stansloski, BSBA '89, to support a native American student. If more than one native American applies, the most academically qualified one should be awarded the scholarship. Only in the event that no native American applied can a person not of Indian ancestry be awarded the scholarship.

•The Herb Strayer Memorial Fund was established in 2002 by friends and family to honor the memory of Herb Strayer, associate professor of health and physical education and head baseball coach at Ohio Northern University 1969-2000. Herb compiled a record of 630-424-6 in his 31 seasons at Ohio Northern University.

•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 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 Wilmot 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, DeGraff, Ohio.

•The David V. Wisner Scholarship was established by the estate of David and Helen Wisner to provide financial assistance for two students from the Spencerville, Ohio school district enrolled in the fields of education, law, engineering or pharmaceutical studies at Ohio Northern University. Mrs. Wisner obtained the AA degree in 1937 and a BSEd degree in 1942.

•The Helen E. Wisner Scholarship was established by the estate of David and Helen Wisner to provide financial assistance for two students from the Spencerville, Ohio school district enrolled in the fields of education, law, engineering or pharmaceutical studies at Ohio Northern University. Mrs. Wisner obtained the AA degree in 1937 and a BSEd degree in 1942.

•The Geraldine Wright Wilkinson Scholarship was established by bequest of Miss Charlotte Wilkinson of New York City to honor the memory of her sister, who briefly attended the University. 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 Wolfe-Smith Music Fund was funded through the maturation of a trust established by Mrs. C. V. (Vera Smith) Wolfe in honor of her sister, Mrs. Ralph Shields, AA'14, and in memory of her husband, Lima businessman, Cletus V. Wolfe. Award shall be given to a student with financial need, majoring in music.

•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. Woofter Scholarship was established by Mr. and Mrs. Stanley Woofter 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 a bequest from his daughter, Dorothy L. Yoder. Dr. Yoder received two degrees from ONU, an ED in 1895 and the AB in 1898.

•The George F. and Dollie L. Zimpfer Scholarship was established from the estate of George, LLB 1941, and his wife Dollie Zimpfer of Lancaster, Ohio. Scholarship recipients will be limited to students, including entering freshmen

## Arts & Sciences Scholarships

•The Oliver E. Accountius Endowed Scholarship in Chemistry will be awarded to academically eligible Ohio Northern University Chemistry students with demonstrated financial need. Mr. Accountius was a 1938 alumnus from Ohio Northern University majoring in Chemical Engineering.

•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 Toby Ratliff Baker Scholarship is established in recognition for her outstanding service to Ohio Northern University. This scholarship is in support of ONU students with first preference being given to students who are pursuing a degree in art and second preference to students who are pursuing a degree in English or who are participating in Band.

•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. Banyas, 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 Mabel Beachler Scholarship Fund was established by Mrs. Mabel Andrews Beachler, AA 1930, for a deserving, qualified student in the College of Arts & Sciences.

•The John W. and Marvel Bielstein Scholarship was established by a bequest from John W. Bielstein in memory of his wife, Marvel, BSEd 1959. Mrs. Bielstein, 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 in 1988 with a gift by Robert J. Huffman, BA '59, JD '60, Raymond L. Landis, BA '64, JD '67, and Gary L. Weaks, BA '67, JD '70, alumni and partners in the law firm of Huffman, Landis, Weaks and Lopez of West Milton, Ohio. The scholarship is in memory of Professor Binkley, a long-time revered professor of political science at Ohio Northern University. Preference for the scholarship will be given to a student majoring in political science from southwestern Ohio. This student shall have been recommended by the Department of History and Political Science and financial need is not a necessary factor.

•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 Bowden Scholarship Fund was established by his widow, Mary Stambaugh Bowden, and family and friends of the late Dr. Robert Bowden who, for many years, was Professor of Biology and Department Chair from 1952-1979. Scholarship to be presented to a sophomore biology major with high scholastic achievement and financial need. The award is renewable, but the recipient must maintain a 3.0 GPA or better to be considered for renewal. Renewal is not automatic, recipients must be reconsidered each year by the Biology Department.

•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 Andra Elaine Brubaker Memorial Scholarship was established by Dr. Inara Mencis Brubaker. BS 1959, of Bluffton, Ohio, in memory of her daughters, Erika Jane and Andra Elaine Brubaker. The award will go to worthy students in the College of Arts & 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. Income from the fund is to be awarded each year to one or more outstanding chemistry majors chosen by the faculty of the Chemistry Department.

•The Reva Clarke Memorial Nursing Scholarship was established in 2005 upon the death of Reva Clarke, wife of former trustee, Wesley Clarke, BA 1950, DD 1976, by friends and family as a memorial to Mrs. Clarke. The award is for deserving students entering the nursing profession.

- The Clausing/Cotsamire Scholarship was established in 1984 by Mrs. Persis Clausing, AA 1927, her daughter Mrs. Doris Cotsamire, and son-in-law Mr. Harold Cotsamire. Mr. Cotsamire was controller of the University for 33 years, 1957-1990. The scholarship is to support a student who wants to pursue a career in teaching with first preference for students in elementary education. In 2019 the fund was enhanced through the estate of Mrs. Doris Cotsamire and a gift of her brother, Dr. Robert Clausing.
- 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 Normal School in 1901 and went on to teach for 40+ years.
- The Helen Crafts Memorial Scholarship was established by Dr. Earl Crafts in memory of his sister, Helen, to be awarded to needy and worthy students with financial need.
- The Leslie and Marie Cribley Scholarship was established through the generosity of Mrs. Marie Cribley, B.A. 1938 and B.S. 1939, to assist academically worthy music students with financial need, 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 Fund was established through the estate of Thelma Hull Dickson, BA 1927. The award is to go to worthy students with financial need.
- The Dobbins Family Memorial Scholarship is given to worthy students with financial need from the College of Arts & Sciences and the College of Engineering. There is a long history between the Dobbins family and Ohio Northern University.
- The Clyde Dornbusch/Charles "Tod" 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 Mrs. J. H. Edwards Scholarship was organized for students preparing for ministry or church work. If there is no need under this criteria, the scholarship may be given to any worthy student.
- 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 in memory of her husband. Preference is given to a student preparing for full-time Christian service.
- 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 a student in the College of Arts & Sciences and a student in the College of Pharmacy.
- 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 Mr. and Mrs. C. H. Ginn and Mr. and Mrs. Robert M. Peters Scholarship was established by Miss Vera DeLean 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 Pamela and Peter Haff, Jr. Scholarship was established through a bequest by Peter J., BA 1972, and Pamela J., BSED 1972, Haff of Upper Sandusky, Ohio. Scholarship recipients will be limited to Ohio Northern University students who are sophomores, juniors or seniors, deemed worthy of financial assistance, have a GPA of 2.5 to 3.5 on a 4.0 basis, and are concentrating their study in the field of elementary education (K-5) with the intent to teach.
- The Frederick R. and Geneva Heifner Scholarship was established in 1994 with a gift by Mr. and Mrs. Heifner, good friends of the University and long-time residents of Ada, Ohio. The scholarship will go to a student who is majoring in biology or environmental science, maintain a 3.0 GPA following his freshman year, and a 3.3 GPA following his sophomore year. Financial need will not be a principal criteria, but in the event of two applicants who qualify, the student with greater financial need will be given preference.
- The Mildred Lowman Henning Memorial Music Scholarship was provided by Mrs. Mildred Lowman Henning, XBA 1923 of Ada, Ohio, in recognition of Mrs. Henning's interest and accomplishments in the field of music. Annual income from this endowed fund is to be awarded to worthy and talented students pursuing degrees in music with preference given to those majoring in voice.
- The Heterick - Felker Memorial Scholarship was established by Robert Heterick, D. Humanities 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 & 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 in 2003 with gifts from friends and family of Dr. Hoffman in honor of his 75th birthday. Dr. Hoffman served as University chaplain and VP for Student Affairs in the late 1970's. The student recipient may be in any year of their study at Ohio Northern University who is interested in, exploring, or committed to pursuing a role in ministry and may or may not be majoring in philosophy and religion. If there is no student meeting the preferences, the scholarship may be awarded to a student majoring in nursing.
- 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 & Sciences who has financial need, high ideals, and is of at least average academic standing.
- The Dr. Charles (Chuck) L. Johnson Memorial Fund is a scholarship endowment will honor the memory of Dr. Charles (Chuck) L. Johnson, Professor of Communications Arts Emeritus. It will benefit students within the College of Arts & Sciences departments of Communication and Media Studies and Theatre Arts.
- The Mr. and Mrs. Torrey A. Kaatz Scholarship was established by Mrs. Esther Kaatz, widow of Mr. Torrey A. Kaatz, to be awarded to any deserving student in the College of Arts and Sciences who maintains a 2.5 GPA. Mr. Kaatz was a member of the Board of Trustees, 1971-76.
- The Richard Kain Scholarship was established by alumni and friends on the retirement of Richard D. Kain, BSED 1953, DTech 1993, who served 31 years as professor of industrial arts and department chair at Ohio Northern University. The award is presented to an industrial technology student who exhibits both substantial scholarship and financial need.
- The M. Antoinette Purpus Kehoe Scholarship was established by Dr. Ray E. Kehoe in memory of his wife, Antoinette, BSED 1943. Preference for the scholarship shall be given to needy students pursuing careers in music or music education.
- Terry and Christine Keiser established the Metzger Nature Center Endowed Fund in 2020. Dr. Keiser joined the ONU faculty in 1967 and retired in 2017 after 50 years of service to the University. Keiser was instrumental in establishing the Metzger Nature Center in Tuscarawas County, Ohio.



- The Charles and Carla Kim Endowed Scholarship was established on February 23, 2010 by Charles and Carla Kim. Charles and Carla are graduates of Ohio Northern University; Charles is a 1998 Business graduate with a major in economics and finance and Carla (Bender) is a 1997 Arts and Sciences graduate with a major in biology. Charles and Carla believe that “a decision for higher education should not be based on the price of the university. This should be secondary and the increasing cost of a quality education has driven [their] desire to help in this area.” Charles and Carla want to emphasize the importance of math and science and they would like to see more women pursue a career in science, technology, engineering or math. They believe that an education in basic science provides the core fundamentals for advancement of women in these fields. By having a scholarship emphasize these areas of education, they hope to further encourage young women’s success.
- The Wendy King endowed scholarship fund was established by Wendy King Koops (Arts & Sciences 1945) to assist students majoring in Communication Arts with concentration in, but not limited to, Broadcasting and Electronic Media and/or Professional and Organizational Communication. (Catalog Description)
- The Clona E. Kinzey Scholarship was established through a bequest from Clona E. Kinzey, BA 1931. The award is to go to a qualified student in the College of Arts & Sciences.
- 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 & 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 John W. Lacey Family Scholars Fund was established by a bequest in 1987 from the estate Zelma C. Lacey to honor the memory of her parents, Mr. and Mrs. John W. Lacey, brother, Warren D. and herself of Liberty Township, Ada, Ohio.
- The Clyde A. Lamb Memorial Scholarship was established by family and friends in 1970 to honor the memory of Mr. Lamb, Professor of Health and Physical Education, Department Chairman, and Football Coach, 1930-1969. It 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 was established by ONU alumni, Robert, BA 1970, JD 1973, and Christina, BSED 1970, Laybourne and 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. (Rilla) 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 & 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 Logsdon Endowed Scholarship Fund was established by Paul Malcolm Logsdon, 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 was established by family and friends to honor Dr. Ludwig, Associate Professor of Physical Education, Director of Women’s Physical Education, and Coach of Women’s Athletic Teams from 1963-1984. Dr. Ludwig was the first woman to be inducted into the University’s Athletic Hall of Fame. It is awarded to a worthy student majoring in health and physical education 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 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 Ray and Margaret McCleary Scholarship was established by Dr. Ray L. McCleary, BA 1929, and Mrs. Margaret McCleary, of Monclair, NJ, to aid a qualified student in the Getty College of Arts & Sciences
- The Charlene S. McComas Memorial Scholarship for English was established through the generous contributions of her parents, siblings and family members, as a tribute to the memory of Charlene Sue McComas, BA 1970. With a degree in English and having been highly involved in campus activities, Ms. McComas went on to pursue a distinguished career in public relations and corporate communications, both as a writer and an editor. The scholarship is limited to a female in the College of Arts & Sciences who has declared English as her major, carries a cumulative GPA of 3.0, be in at least year two (sophomore) of her academic career and provide proof of financial need.
- The Charlene S McComas Memorial Scholarship for Public Relations was established through the generous contributions of her parents, siblings and family members, as a tribute to the memory of Charlene Sue McComas, BA 1970. With a degree in English and having been highly involved in campus activities, Ms. McComas went on to pursue a distinguished career in public relations and corporate communications, both as a writer and an editor. The scholarship is limited to a student in the College of Arts & Sciences who has declared Public Relations as his or her major, carries a cumulative GPA of 3.0, is in at least the second (sophomore) year of his or her academic career and provide proof of financial need.
- The McElroy - Landon Scholarship Fund was established by Mrs. H. LeIrma McElroy, B.A. 1932, 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. The scholarship is to be awarded annually to qualified pre-ministerial students. Dr. McGilliard was a trustee of the University from 1972-1982.
- The Dr. and Mrs. John V. Melick Scholarship was established by John V., Honorary DBA 1951 and his wife Mable F. Melick of Sylvania, Ohio. The scholarship is to be awarded to a student in pre-ministry or church work.
- The Andrea (Funderburg) Murphy Endowed Scholarship Fund will be awarded to undergraduate degree seeking students of the Getty College of Arts and Sciences that are Ohio residents with a 2.5 GPA or above. The scholarship was established by Beth and Dennis Funderburg to honor their daughter Andrea (Funderburg) Murphy, a 2000 Chemistry graduate of The Getty College of Arts and Sciences. She continued her education at the College of Medicine at the University of Cincinnati and is now a practicing physician.
- 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 are history majors in the University’s College of Arts & Sciences.

- The Henry L. and Geraldine Metzger Scholarship was established by Dr. Henry L. Metzger, BSED 1941, DBA 1994, 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 Judith D. (Jacobs) Mifsud Endowed Scholarship Fund was established in 2013 by Judith Mifsud because of her belief in education and the teaching profession. Scholarship recipients must be deemed worthy of financial assistance and pursuing a degree in education in the College of Arts & Sciences at Ohio Northern University with preference to sophomores, juniors and seniors.
- Established by Louise T. Miller, BA '61 in loving memory of her husband, Dr. George B. Miller, Jr. Dr. Miller attended Duke and Georgia Tech to study aeronautical engineering. After service in the Navy during WWII, he embarked upon a lengthy career in education, with advanced degrees from Emory and the University of Georgia. Dr. Miller taught for over 50 years, proudly impacting many students' lives during those years. He joined the faculty and staff of Ohio Northern University in 1960, serving most of his 41 years at ONU in the Education Department training future generations of teachers.
- 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 Myra Orthwein Arts & Sciences Scholarship was established with a bequest from Myra C. Orthwein, BA 1930, from Malinta, Ohio. The income from this endowed fund will help students at Ohio Northern University who are enrolled in the Getty College of Arts & Sciences and have financial need.
- 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, D. Engr. in 1972 and 1975. The award is given to music majors in compliance with university financial aid policy.
- The Florence Overmire Scholarship was established by Florence F. Overmire, B.S.Ed. 1934, of Arcadia, Ohio, to assist a qualified student in the Getty College of Arts & 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, AA 1932. Awards are made to deserving students in the field of education and have a desire to be a teacher.
- The Buster Rozier Jr. Nursing Incentive Scholarship for Minority Students was established to assist academically qualified minority students with financial need to pursue a degree in nursing. In order to qualify for a scholarship, Ohio Northern University sophomores or students who have completed at least the first semester of their freshman year and are from a culturally diverse backgrounds entering nursing must have a GPA of 2.8 or higher.
- The Walter Pingrey 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. Bryon 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 Osmon 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 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 C. Austin and Mary Bess 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 & 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 & 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 to be given to students in the College of Arts & 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 & Sciences.
- The Armstrong and Beatrice 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 & 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, BA 1937, 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 University 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 Ruth E. Weir Memorial Scholarship was established by Ruth E. Weir, BA 1940, through a bequest. The fund will assist deserving students in the College of Arts & Science who are graduates of high schools in either Hardin or Hancock County, Ohio.

•The Victor and LaDona (Church) Wellman Scholarship Fund was established by Victor, BSCH 1938 and LaDona, AA 1936, BSED 1962, to assist one student in the College of Arts and Sciences and one student in the College of Engineering.

•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 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 Willis H. and Mignon Winkler Memorial Scholarship was established through the estate of Willis H. Winkler, BA 1927. The award is to go to a deserving student who is intending to enter the teaching profession.

•The Dr. Laurence N. Woodworth Scholarship was established by Dr. Woodworth's widow, Margaret Bretz Woodworth, BSED 1940, and family and friends. Scholarships are awarded to students majoring in history and/or political science with demonstrated financial need. Dr. Woodworth received his BA in 1940, DPA 1966, Univ. Cit. 1963, and was a trustee of the University from 1969-1977.

•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, D.D. 1949, D. Lit. 1965, who served as former chair of the board of the trustees of ONU from 1947 until his death in 1973.

•The Mary J. Young Memorial Scholarship was established by a bequest from Mary T. Hugentugler, a friend of Miss Young, B.A. 1929. 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 was established in May, 1988, by The United Telephone Company of Ohio in memory and appreciation of Richard W. Allen's exemplary character and service to United Telephone as vice president of administration. The award will give preference to students in the College of Business Administration who live in the United Telephone of Ohio's 52 county service area. At least one-fourth of the recipients will be minority students and the scholarship will be renewable upon successful completion of each academic year.

•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 William D. Atteberry Scholarship, established by Dr. William Atteberry, DBA 1993, of Cincinnati, is for a student in the College of Business Administration with financial need.

•The Ethyl and Ernest S. Bartram Scholarship Fund was established by a gift from the estate of Mrs. Ethyl Bartram, AA 1925. The scholarship shall be awarded to a freshman who is attending the College of Business Administration at Ohio Northern University and who is majoring in accounting. The scholarship is awarded on a yearly basis and will be renewed upon successful completion of each academic year (the student will be able to keep the scholarship for his/her entire four years at the University).

•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 who are enrolled in the College of Business, deemed worthy of financial assistance and majoring in accounting.

•The John Bishop/Encova Mutual Insurance Group Scholarship Endowed fund was established by university trustee John J. Bishop, BA 1972, BSBA 2006, and his wife Shirley to provide and supplement support for deserving students majoring in Finance, Data Analytics, or Actuarial Science of the Dicke College of Business Administration.

•The Larry, Becky Wyatt and David Boord Endowed Award Fund was established with a donor restricted gift. The award is in support of students who display scholarly achievement, service to the university, and have financial need.

•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 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, community service including 14 years of service to Ohio Northern University as a trustee. Mrs. Elshoff is also being honored for her extraordinary commitment to community service. Both have been very active in many community charitable organizations.

•The Dr. Roger H. Goldberg Endowed Business Scholarship honors the James F. Dicke College of Business at Ohio Northern University by providing support to future generations of deserving students pursuing their business education. Specifically, the scholarship will be awarded to academically eligible Ohio Northern University Business student(s) with demonstrated financial need. Additionally, it will be awarded to a person with sophomore status or above with a GPA of 3.0 or higher and has involvement with organizations and activities in the University community.

•The Michele and Paul Govekar Award in Management Endowed Fund is for a student (an incoming freshman in business is preferred) majoring in management and can be renewed pending a yearly average GPA of 3.0 or greater. This award will be determined by the dean's discretion and should go to a student who maintains their major in management.

•The Leona and Andrew C. Griffing Scholarship Fund was established by A. C. Griffing, BA 1912, in memory of his wife, for students with above average ability who demonstrate financial need in the College of Business.

•The Gronlund-Keiser Endowed Scholarship was established by Robert (Bob) L. Gronlund, BA 1964, DBA 2009, and his classmate, Terry Keiser, BA 1964 and professor of biological sciences at Ohio Northern University since 1967. Scholarship recipients will be limited to Ohio Northern University students including entering freshmen who are enrolled in the James F. Dicke College of Business Administration, deemed worthy of financial assistance and preference given to students from the State of Pennsylvania, but shall not be limited by this provision.

•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 preferably from Fairfield County, Ohio.

•The Pamela S. Hershberger-Ernst & Young Endowed Scholarship Fund was established by Pamela S. Hershberger, BSBA 1987. Recipients must maintain a 3.0 GPA and be majoring in accounting.

•The Hillier Trust/C.B.A Invested Fund was established by the Hillier Family Charitable Trust. As with the Hillier General University Scholarship, the awards are to go to graduates of Everett, Michigan high schools and/or graduates of high schools in Summit, Medina, or Stark Counties of Ohio. This scholarship fund, however, at the direction of Hillier Charitable Trust trustees, is managed (invested) exclusively by a committee of students from the College of Business Administration.

•The George C. Hindall and Wilhelmina Scholarship was established through the generosity of Mrs. George "Billie" Hindall and sons, Geo, BA 1963, Steven, BSCE 1964, and William Bradley, BA 1968, 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 Harold C. Hodson Scholarship will assist any college of business students who are eligible to receive the award.

•The Taffy Howard/Brenda Johnson Memorial Fund was established in 1988 by friends and family of Taffy, BSBA 1988, and Brenda, BSBA 1989 on the occasion of their deaths in an automobile accident in May, 1988, only days before the end of the school year. The award is to go to a deserving student in the College of Business Administration in recognition of their outstanding leadership and service.

•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 Janice Graeser Mitchell Memorial Scholarship was established in Mrs. Mitchell's memory, BSEd 1950, by her husband, James R. Mitchell, BSEE 1949, to benefit advanced students in the College of Business Administration.

•The Dean Clyde A. Painter Endowed Fund was established through the generosity of Dean Clyde A. Painter to assist academically worthy students of the College of Business Administration with financial need.

•The Elfreda M. Rusher Accounting Scholarship was established by Dr. Elfreda M. Rusher, BSED 1938, of Bowling Green, Ohio. The recipient of the award must be a junior or senior with a minimum GPA of 3.0 who demonstrates financial need, is a resident of Ohio and is a full-time student in the College of Business majoring in Accounting.

•The Weatherwax Family Award is awarded annually to a current or incoming student who is classified as a first generation college student. The criteria for selection includes students who have financial need and did not qualify for the highest scholarship award.

•The Ronald G. Weber Scholarship was established by Mr. and Mrs. Henry L. Metzger to honor Dr. Weber, consultant in the ONU Development Office from 1984 to his death in May, 2003. The scholarship is granted to a deserving student in the College of Business Administration.

•The Stanley L. and Grace Crow Woofter Scholarship was established with a bequest from Ronald L. Woofter, BA 1961, to honor his parents. The scholarship is available to full-time students in the James F. Dicke College of Business Administration.

## Engineering Scholarships

•The Norman D. Ackley Electrical Engineering Scholarship Endowment 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 Memorial 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 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, 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 Russell J. and Maybelle L. Anspach Scholarship was established by a trust distribution from Maybelle L. Anspach to benefit junior or senior engineering students in memory of her husband, Russell, BSEE 1926 and BSME 1927.

•The Beene Student Aid Fund was established by Herbert K. Beene, BSCE 1925, in memory of his wife, Adella Margaret Beene, 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 University 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, Max J. Bielenberg, BSCE '23 and Viola C. Bielenberg. The award is given to a civil engineering student designated by the financial aid office.

•The Braun Financial Aid Fund was established by Karl Braun, BSCE 1919, for an engineering student with financial need.

•The Ralph W. Briggs Scholarship Fund was established by Mr. Briggs, BSME 1917, 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 Stearns, his sister. It is awarded to a qualified and deserving student.

•The Roger R. and Sarah Lee Brown Engineering Scholarship was established with a bequest from the estate of Roger, BSEE 1963 and his wife Sarah Lee Brown of Sunbury, Ohio. Scholarship recipients will be limited to Ohio Northern University students, including incoming freshmen, who are deemed worthy of financial assistance, are engineering students, have at least a 3.0 GPA and are Christians aspiring to high moral and spiritual standards.

•The Bruce and Jane Burton Scholarship was established through the generosity of Dr. and Mrs. Burton in 1994. Dr. Burton, professor of mechanical engineering retired in 1999. He had been a member of the faculty since 1958 and was dean of the engineering college, 1985-1994. The scholarship is to be awarded to deserving students with a preference for students majoring in mechanical engineering.

•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 Ivor and Ethel Campbell Merit Scholarship was established in memory of Dr. Campbell, BSCE 1916, and Mrs. Campbell, AA 1917 by their daughter, Miss Mary L. Campbell. The scholarship is to be given annually to four undergraduate students, one in each class with preference given to students in the College of Engineering on the basis of merit. Dr. Campbell was a Professor in the College of Engineering from 1921-1937.
- The C. Robert Case Scholarship in Engineering was established by C. Robert Case, BSCE 1932, and his wife, Barbara of Stow, Ohio, to be awarded to a qualified and needy student who has completed more than one year toward his or her 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 Student Aid Fund was established by Dr. Harlow Crooks, BSEE 1923, D. Engr. 1976, and his wife, Melvene. Dr. Crooks was a prominent industrialist in Grand Rapids, Michigan.
- 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 Dobbins Family Memorial Scholarship is given to worthy students with financial need from the College of Arts & Sciences and the College of Engineering. There is a long history between the Dobbins family and Ohio Northern University.
- 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 Ralph and Joyce Ellerbrock Endowed Scholarship for Putnam County Students is awarded annually to a student pursuing a degree in engineering with preference given to a student attending Ohio Northern from Putnam County, Ohio.
- The Engineering Deans' Scholarship was established to honor deans of the Engineering College. The award will go to a student in good academic standing and with financial need.
- 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 Ernest H. Fisher Scholarship was established by Ernest H. Fisher, BSME 1915, and his wife, Ella A. Fisher, JD 1921, for a worthy engineering student with financial need.
- The Joseph and Lucille Foster Scholarship was established in the name of Mr. and Mrs. Joseph Foster, BSCE 1932, 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. Griffing Scholarship was established for engineering students with financial need and above average ability by A.C. Griffing, BS 1912, in memory of his wife.
  - 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, Thurza D. Hazeltine, for engineering students. Mr. Hazeltine, BSCE 1913, served as a trustee of the University from 1941-1946.
  - 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 H. and Mary Louise Herendeen Engineering Scholarship was established by James H. Herendeen, BSCE 1929, and his wife, Mary Louise. 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. Marjorie Hollinger, BSEd 1948, and son, Bruce, BSCE 1975, for a deserving student(s) in the engineering college from the Lima, Ohio area.
  - The Professor Henry and Mary Horltd Scholarship was established by former students, friends and alumni in honor of Professor Horltd and in memory of his wife, Mary, for qualified engineering students. Dr. Horltd 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 Harold E. Keneipp Endowed Scholarship Fund was established by Linda and Don Hawk in memory of Harold E. Keneipp, Linda's father. Mr. Keneipp was a long time employee and business leader for Westinghouse in Lima, Ohio and personally participated in frequent partnership efforts between Westinghouse and Ohio Northern University, including the Westinghouse Scholars Program. Mr. Keneipp also taught engineering classes at ONU. Income from the fund will be awarded to students who are deemed worthy of financial assistance with preference for a deserving 3rd, 4th, or 5th year female engineering student showing continued academic progress during her first two years at ONU.
  - The James L. Klingenberger Scholarship Fund was established by former students, friends and colleagues to honor Professor Klingenberger, BSEE 1949, A. Cit. 1982, D. Engr. 1995, Professor at ONU from 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. Scholarships will be awarded to Ohio Northern University engineering students including one incoming freshman, who are deemed worthy of financial assistance with preference to residents of Ohio.
  - The Robert H. Lee Scholarship in Engineering was given by Mr. Lee, BS 1893, in memory of his mother and is awarded to a freshman engineering student from Seneca County.
  - The Doug and Renee Leuthold Endowed Scholarship in Engineering will be awarded to academically eligible Ohio Northern University engineering students with demonstrated financial need.
  - 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 Student Aid Fund was established through a bequest from Mr. Lytle for worthy engineering students. Mr. Lytle, founder of the Star Bronze Company in Alliance, Ohio was a former student at ONU, Class of 1923.

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 Lynn A. and Virginia Melick & Family Endowed Scholarship Fund was established by Lynn A. Melick. A recipient for the scholarship will be limited to Ohio Northern University junior or senior students, who are: a) deemed worthy of financial assistance as judged by appropriate college officials, and b) majoring in 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 University 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 J. Messick Scholarship was established by Mrs. Linda Messick in honor and memory of her husband, Mikel, BSEE, 1961. It is awarded to engineering students with financial need from Allen, Auglaize and Hardin counties of Ohio who have a 3.0 G.P.A. or higher.

•The Donald E. Milks Civil Engineering Scholarship was established by the family of Dr. Don Milks, civil engineering professor at Ohio Northern University for nearly 40 years. Dr. Milks took great pride in the success of his students and encouraged them to reach their full potential. This scholarship is awarded to preferably a second-year, civil engineering student who demonstrates the tenacity to succeed in the classroom.

•The Dr. Linda Brunswick Moore Endowed Scholarship was established by Linda J. Moore, BSEE 1985, to benefit women majoring in engineering who have need beyond what Financial Aid calls "demonstrated" need. Linda wanted to help female students who like herself, needed financial support but because her family owned a farm, she did not qualify for state and federal assistance.

•Metokote Corporation Scholarship was established in 1994 with a gift by the Metokote Corporation 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 Thomas D. Morrison Student Aid Fund was established through the will of his wife, Mrs. Agatha A. Morrison. Award is to go to an engineering student with financial need. Mr. Morrison graduated from ONU in 1910 with a CE degree.

•The Ross J. Myers Endowed Engineering Scholarship fund will be awarded to academically eligible Ohio Northern University electrical engineering students with demonstrated financial need. Ross J. Myers was the first in his family to graduate from college. Mr. and Mrs. Myers established the scholarship to encourage and support engineering students at their sons' alma maters. The scholarship can be renewed each year contingent on the recipient being in good academic standing and making satisfactory progress toward completion of their degree

•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 alumnus 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 from 1939-1946. The scholarship is awarded to a qualified, deserving student in the T.J. Smull College of Engineering.

•The Paul H. and Mildred G. Reid Engineering Scholarship is given to a worthy and qualified student with financial need by Paul H. Reid, BSME 1912, and his wife, Mildred G. Reid.

•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, BSEE 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.

•The Earl I. and Helen V. Salo Scholarship was established by Earl I. Salo, BSME 1939. Scholarship recipients will be limited to Ohio Northern University students, including incoming freshmen, who are deemed worthy of financial assistance enrolled in the College of Engineering with preference to, but not limited to, students of Finnish ancestry.

•The Samrad Engineering Scholarship Fund was established for students by Dr. Cyrus Samrad, BSCE 1957, in compliance with university financial aid policy.

•The John S. Sawvel, Sr. Scholarship Fund was established by Mr. Sawvel through the maturation of a trust, for qualified students in the College of Engineering. Mr. Sawvel, friend of the University, was a registered engineer whose company represented numerous municipalities in their rate negotiations with public utilities serving the municipalities.

•The William H. and Elizabeth Schaum Financial Aid Fund was established by William, BSCE 1923, D ENGR 1976 and his wife, Elizabeth to give future students of Ohio Northern University the opportunity for a unique educational experience. The award is given to worthy students in the College of Engineering

•The John Edward Seman Scholarship was established in his loving memory by his parents, David A. and Lisabeth M. Seman and brothers, Steven and Daniel of Findlay, Ohio. The scholarship recipient will be limited to an Ohio Northern University student in his/her senior year majoring in Civil Engineering and who is the highest ranking student in the class eligible for scholarship awards. In the event there are two or more students with the same GPA then the scholarship shall be awarded to the student deemed most worthy of financial assistance as judged by appropriate University officials.

•The William E. and June W. Sholl Scholarship was established by a bequest from June W. Sholl in honor of her husband, William BSCE 1933. The award provides financial assistance for students in the College of Engineering, with preference for students formerly or currently in the U. S. military or children of a parent currently or formerly in the U. S. military.

•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 was established in memory of Floyd D. Spar, BSChE 1936, from his estate and family. The scholarship shall be awarded annually with preference given to a student enrolled in the College of Engineering and a graduate of Ada High School

•The Stimmel Financial Aid Fund, established by Clayton H. Stimmel, BSCE 1960, and his wife, Harriett, 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 Alton D. Taylor Student Aid Fund was established by his wife, Mrs. Alton D. Taylor in memory of her husband, who served on the civil engineering faculty, 1954-1959. Preference is to be given to a student in civil engineering.

•The Willard T. Taylor Student Aid Fund was established in memory of Willard Thompson Taylor, BSME 1930, by his sister and brother-in-law, Frances and Park D. Rogers of St. Clairsville, Ohio. The award goes to a worthy engineering student with financial need. Mr. and Mrs. Rogers have also established a Taylor Memorial in English Chapel.

•The Edward and Grace Thevenet Scholarship Fund was established by Edward T. Thevenet, BSCE 1916, and his wife, Grace, of Bethlehem, Pennsylvania. The award is to go to a student with financial need in the College of Engineering.

•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 in 2002 with a gift from Nelva E. Van Dusen in memory of her husband, Charles, and in honor of her grandson, Elliott M. Metzger, BSCPE 2003. Income from the fund will be awarded only to an electrical engineering student(s), who has at least a 3.0 G.P.A. or above with a sincere commitment to the field of 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, BSEE 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 Wander Scholarship Fund was established by Ronald W. (Soc) Wander, BSCE 1924 and his wife Shirley. The annual income from the endowed fund will be used to assist worthy students with financial need in the College of Engineering. Preference will be given to students majoring in civil engineering.

•The Miller H. Ward Memorial Scholarship was established from the estate of his wife, Sally MacGregor Ward. The scholarship is awarded annually to a worthy student or students majoring in engineering.

•The Victor and LaDona (Church) Wellman Scholarship Fund was established by Victor, BSCE 1938 and LaDona, AA 1936, BSCE 1962, to assist one student in the College of Arts and Sciences and one student in the College of Engineering.

•The Thomas W. Westerbeck Electrical Engineering Scholarship was established by his parents, Wilson A. and Ethel B. Westerbeck, in honor of their son, Thomas, BSEE 1969. The scholarship is to be awarded to junior or senior electrical engineering students who are involved in the Co-op program.

•The B. David and Mabel Williams and Ernest L. and Evelyn Dustman Scholarship was established by Mr. and Mrs. David J. Williams in honor of the memory of their parents. The scholarship is for worthy students in the College of Engineering.

•The Mete Yalcin Engineering Scholarship was established through the generosity of Mr. Mete Yalcin, Honorary D ENGR 1997, to assist academically worthy engineering students with financial need.

## 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 Butler Family Endowed Pharmacy Scholarship will be awarded to academically eligible Ohio Northern University Pharmacy student(s) who have demonstrated financial need in northwest Ohio with preference to high school students from the Lima, Ohio, area. Every tenth year (in years ending with 0) the scholarship will be given to a student pursuing a degree in education.

•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 CVS Health Scholarship was established by CVS Health to provide funds for a student in the College of Pharmacy.

•The Leasure Kline Darbaker Prize Fund was established by the Leasure Kline Darbaker Trust, to be awarded to an outstanding student in the area of pharmacognosy.

•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 experiential learning opportunities to pharmacy students in the long-term care pharmacy practice settings and increase opportunities for experiential learning and overall assistance to pharmacy students residing in Northeastern Ohio and Western Pennsylvania.

•The Cloyce M. and Aretha R. Durliat Scholarship Fund was established in 1983 by Mr. Cloyce (PH G 1929) and Mrs. Aretha Durliat of Lakeland, Florida. Preference will be given to pharmacy students with demonstrated financial need.

•The John W. Dargavel Foundation Scholarships are sponsored by the National Association of Retail Druggists.

•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 Robert Fischelis Scholarship Fund is given to qualified students in the College of Pharmacy. The scholarship was made possible by the estate of Mr. Fischelis and memorial gifts from appreciative alumni and friends. Dr. Fischelis, HON. LLD 1979, was dean of the College of Pharmacy from 1963-1966

•The Roland R. Foley Scholarship Fund was established in 1985 by the will of Roland R. Foley, BS 1912 and BSPH 1912, for a student in the College of Arts & Sciences and a student in the College of Pharmacy.

•The Gahm Family Endowed Scholarship Fund was established by Mr. Troy Gahm, BSPH 1992, President of Gahm's Family of Businesses, including Gahm'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 Anne E. Hartford and James H. 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 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 Thomas A. and Phyllis J. Gossel Scholarship was established by Dr. Thomas, BSPH 1963, A. Cit. 1989, and Mrs. Phyllis, BSED 1963, Gossel for a student in the College of Pharmacy and to recognize the relationship between the University and the Gossel family graduates; Tom, Phyllis, daughters Jan, BSPH 1987, and Cindy, BA 1993, and daughter-in-law Jeanne, BSPH 1987. Dr. Gossel was appointed assistant professor in 1972, promoted to associate professor in 1975 and to professor in 1983. He served as associate dean of the College of Pharmacy 1992-1993, then as dean of the college from 1993-1999.
  - 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 Richard Lynn Green Memorial Award is provided through an endowment established by Mr. and Mrs. Richard Clark Green, family and friends.
  - The J. Richard Grunder Pharmacy Scholarship was established through a trust by J. Richard Grunder, BSPH 1959, of Norman, Oklahoma. The scholarship will provide student aid to academically eligible pharmacy students with demonstrated financial need.
  - The Meredith and Geraldine Guider Scholarship is awarded to a third, fourth or fifth-year pharmacy student. The Guiders established the scholarship in appreciation for the scholarship assistance given to their three children, Connie, BSED 1961, Carol, BSED 1965, and Douglas, BSPH 1969.
  - The Hakes Memorial Scholarship was established by Vern H. Hakes, PhC 1933, D.S. 1976 and his wife, Evelyn, in memory of their son, Robert H. Hakes, BSPH 1955. Dr. Hakes, a trustee of the University, is a former president of the Alumni Association.
  - 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 Barbara Jo Hart Memorial Endowed Scholarship will be awarded to academically eligible Ohio Northern University Pharmacy students with demonstrated financial need.
  - The Edwin C. and Kathryn C. Hart Endowed Scholarship Fund was established by Mr. Edwin, BSpH 1942, and Mrs. Kathryn 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 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 Huet-Musser Endowed Scholarship Fund was established as a memorial by family and friends of Gayle Huet-Musser, 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 Herman E. and Joanne E. (Judy) Hunt Endowed Scholarship was established by Herman E., BSPH '59 and JD '69 and Joanne E. Hunt of Columbus, Ohio. Scholarship recipients will be limited to Ohio Northern University pharmacy or law students including entering freshmen who are deemed worthy of financial assistance by appropriate college officials, maintain a 3.5 GPA and shall be from one of the following counties in the State of Ohio: Franklin, Delaware, Madison, Pickaway, Fairfield, Hocking, Morgan, Ross, Miami, Shelby, Champion, Darke, Logan and Hardin.
  - The Hursh Endowed Scholarship was established by Raymond, BA 1948 and Marilyn, BSED 1949, Hursh of Ashland Ohio. The scholarship will benefit students enrolled in the College of Pharmacy.
  - 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 Dr. Kanika Kapoor Memorial Endowed Scholarship provides financial assistance to pharmacy students with demonstrated financial need with a GPA of 3.0 or above with preference to students having membership and demonstrated involvement in pharmacy and/or university student organizations.
  - The Kmart Scholarship for Excellence in Community Pharmacy is an endowed scholarship 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 C. O. Lee Memorial Scholarship was established by Dr. Lee, Professor of Pharmacy from 1954-72 and Dean of the college during 1962-63.
  - The Marida S. Lin Endowed Scholarship Fund was established on March 25, 2015. Scholarship awards from the investment earnings of the Fund will be made for a full academic year and may be renewed annually on the basis of satisfactory progress toward graduation. Scholarship recipients will be limited to Ohio Northern University students, including entering freshmen, who are: a) deemed worthy of financial assistance as judged by appropriate college officials, b) attending the College of Pharmacy, and c) a copy of her personal message dated August 25, 2015 should be provided to every student who benefits from her scholarships.
  - The Joseph E. Marmon Memorial Scholarship was established by Dr. Marmon's widow, Margaret, family, friends, and alumni in memory of Joseph E. Marmon, BSpH 1938, D.Sc. 1970. Awarded to deserving pharmacy students. Dr. Marmon was a trustee of the University from 1961-81.
- The Charles and Ethel McCleery Scholarship was established by a bequest from the estate of Ethel McElroy McCleery, BA 1916, BSED 1920, with preference given to graduates of Fairfield County high schools. Mr. Charles McCleery, PHG 1917, BSPH 1920, and his wife were long-time owners of a drug store in Lancaster, Ohio.



- The McCurdy Fund was established with gifts from alumni and friends to honor the retirement of Dr. Robert McCurdy, BSPH 1965, Hon. D Pharm 1996, and his service to the Raabe College of Pharmacy, Ohio Northern University and the profession of pharmacy. The award will be presented to a P-5 student in the College of Pharmacy for use during their P-6 school year.
- The Brent and Tara McKenna Endowed Scholarship fund will be awarded to academically eligible Ohio Northern University Pharmacy students with demonstrated financial need that are of P4, P5, or P6 status. Brent and Tara are both graduates of ONU. They are excited to give back and help students during their later years in Pharmacy. Tara remembers getting some assistance later in her education which enabled her to finish her degree in Pharmacy.
- 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 Scholarship Fund was established by Meijer, Inc. The scholarship is to be 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. and Alice K. Odenkirk Pharmacy Scholarship was established from the estate of Alice K. Odenkirk in memory of her husband, Roy, PhG 1925, a well-known pharmacist, drugstore owner and businessman in Sugarcreek, Ohio, for a student in the College of Pharmacy.
- 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. Pierstorf Scholarship was established by Dr. Clarence H. Pierstorf, D.Ph. 1990, of Cleveland, for a student in the College of Pharmacy.
- Dr. and Mrs. Ervin W. Pierstorf Scholarship Fund was established by Dr. Ervin W. Pierstorf, BSPH 1940, D.Ph. 1978, and his wife, Florence, of Cleveland for a worthy student in the College of Pharmacy. Dr. Pierstorf served on the Board of Trustees of the University from 1981 until his death in 2016.
- 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 was established in 1990 by the Rite Aid Corporation. The recipients of the scholarship should be a student in the College of Pharmacy wishing to pursue a career in retail pharmacy, have excellent communication and leadership skills and have financial need.
- The Josephine Vlad Romosan Endowed Scholarship Fund will be awarded to academically eligible Ohio Northern University Pharmacy students with demonstrated financial need. Josephine served in the pharmacy profession for many years retiring from St. John's Hospital. The scholarship will be awarded to academically eligible Ohio Northern University Pharmacy students with financial need and 2.75 cumulative GPA or above with permanent residency in one of the following Northwest Ohio counties: Allen, Auglaize, Hancock, Hardin, Logan, Mercer, Paulding, Putnam, Van Wert, Wyandot.
- 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 Charles G. Schwartz, Sr., PhG 1897, Scholarship was established from personal and family gifts for pharmacy students from the Pittsburgh area.
- The Janet and Albert Sebok Scholarship award is given annually to a pharmacy student in their last three years of study and is also a member of Kappa Psi Fraternity.
- The Richard L. Senff Memorial Pharmacy Scholarship Fund is awarded to upper class Pharmacy students (P4 and above) with a GPA of 3.0 or above and primary residence from Wayne County.
- The Shrivvers Pharmacies and Coler LTC Endowed Fund will be awarded to academically eligible Ohio Northern University Pharmacy and Related allied health science and business students with demonstrated financial need and residing the communities served by Shrivvers Pharmacies
- The L.C. Slesman Scholarship was established through the general pharmacy memorial endowment fund by faculty of the College of Pharmacy, alumni, and friends of Mr. Slesman, 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. 'Doc' Smith Memorial Award was established by the family and friends of Dr. Smith to recognize his many years of dedicated service to the Raabe College of Pharmacy. The award is presented to a fourth year pharmacy student with an excellent academic record. Dr. Smith was a Professor of Pharmacy and one-time Dean of the College of Pharmacy from 1944-72.
- The Robert M. Storch Pharmacy Scholarship was established by friends and family of Robert M. Storch, BSPH 1968, at his untimely death in 2009. The award will go to a student attending the College of Pharmacy with financial need.
- The Tannert Family Endowed Scholarship Fund will be awarded to academically eligible Ohio Northern University Pharmacy students with interest in long term care pharmacy.
- The Turner Family Endowed Fund in support of Pharmacy Student Organizations and Community Service was established by friends and family of Mary Ann (Gardner) Turner, BSPH 1963, 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 Company Scholarship Fund was established by the Walgreen Company to be 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 scholarship recipients of the Walmart and Sam's Club Endowed Leadership Scholarship Fund will be awarded to academically eligible Ohio Northern University Pharmacy students entering their 4th, 5th, or 6th year of pharmacy studies who have demonstrated leadership in pharmacy specific and/or ONU student organizations and have shown interest in community pharmacy.
- The Dr. Joel M. Weaver II and Barbara L. Weaver Endowed Scholarship Fund will be awarded to academically eligible Ohio Northern University Pharmacy students with demonstrated financial need.
- The Paul White Endowed Scholarship Fund will be awarded to academically eligible Ohio Northern University Pharmacy students with demonstrated financial need and residing in Northeast Ohio. When possible, preference will be provided to students residing in Stark County and surrounding areas.
- 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 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 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.

•The Lorrie Burns Zacharias Scholarship Fund will be awarded to academically eligible Ohio Northern Pharmacy student(s) with demonstrated financial need.

## Law Scholarships

•The Frank J. Aimutis Memorial 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 South 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 Henry C. Ashcraft Scholarship was established through a bequest from Henry C. Ashcraft, BS 1909, LLB 1910, to be used for a worthy law student with financial need.

•The Albert A. Baillis Scholarship was established by alumni, faculty and friends to honor Professor Albert A. Baillis, 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. Bauknecht Scholarship was established by John E. Bauknecht, JD 1922, LLD 1979, of East Palestine, Ohio, for students with both high academic ability and financial need. Dr. Bauknecht, who died in September 1990, was, at the time of his death, the oldest ONU law graduate in active practice.

•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 55 in 2003.

•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 III, 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 Blase A. Bonpane Student Aid Fund, made in recognition of his appreciation for the legal education obtained at Ohio Northern University and provided by a bequest from the estate of Judge Blase A. Bonpane, JD 1917. The annual income from this endowed fund shall be awarded to a worthy student, demonstrating financial need and pursuing a graduate degree in law.

•The Dr. George D. and Evelyn B. Brabson Scholarship was established by Dr. and Mrs. Brabson for a law student with outstanding academic scholarship. Dr. Brabson, LL. D. 1977, was a member of the College of Law Faculty from 1962-72.

•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, LLD 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 University 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 Burns Trust for the College of Law was established to provide funds for a student in the College of Law.

•The W. Kent Carper Scholarship fund will be awarded to academically eligible Ohio Northern University law students from West Virginia, or who work as or who have a family member who works as a first responder or in public health.

•The Erwin L. and Effie Clemens Scholarship Fund was established in 2001 through a bequest from the estate of Erwin L. Clemens, JD '34, Hon. D. '81, of Defiance, Ohio. The endowment supports scholarships to second- and third-year law students whose academic performance is superior but whose financial need is so great that their continued study of law might be at risk without substantial scholarship assistance. A distinguished attorney and 1934 graduate of the College of Law, Clemens' interest in the fund was stimulated by his own struggle over several years during the Great Depression to pay for the legal education that defined his ambitions and his life's work. Beginning in 1967 and continuing until his death in 1999, Clemens served as a University trustee. During his tenure, he played a leadership role in two fundraising campaigns for the College of Law.

•The George Ray Craig 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 Sickafoose for 58 years. The award will go to a worthy student demonstrating financial need, pursuing a degree in law.

•The George C. Ellis Law Scholarship fund will be awarded to Ohio Northern University Law students with demonstrated financial need.

•The Ella A. Fisher Student Aid Fund was established for a worthy student in the College of Law with financial need by Ernest H. Fisher, BSME 1915, and wife, Ella A. Fisher, JD 1921.

•The Murray Gabriel Flom Scholarship 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 John Marsh, Jr. Scholarship Fund was established by John Marsh, Jr., JD 1934, and his wife, Mary C. Marsh of Delphos, Ohio. The award is for students with demonstrated ability and financial need in the Pettit College of Law.
- The Daniel S. 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 Robert and Lola Koch Student Aid Fund for the College of Law was established by C. Robert Koch, JD 1941, A. Cit. 1986.
- The Eugene N. Hanson Fellows & Scholarship Fund was established 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 Scholarship was established in memory of John Alexander Lutz Hughes, LLB 1962 by Judge Sam Street Hughes, for a worthy law student with financial need.
- The Herman E. and Joanne E. (Judy) Hunt Endowed Scholarship was established by Herman E., BSPH '59 and JD '69 and Joanne E. Hunt of Columbus, Ohio. Scholarship recipients will be limited to Ohio Northern University pharmacy or law students including entering freshmen who are deemed worthy of financial assistance by appropriate college officials, maintain a 3.5 GPA and shall be from one of the following counties in the State of Ohio: Franklin, Delaware, Madison, Pickaway, Fairfield, Hocking, Morgan, Ross, Miami, Shelby, Champion, Darke, Logan and Hardin.
- The Carl Frederick Klein, Clara E. Berry Klein and Robert W. Summers, M.D. Scholarship was established by Mrs. Mariann Klein Summers of Canton, Ohio, 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 Delbert L. Latta Law Scholarship Fund was established by the Honorable Delbert L. Latta, LLB '40, BA '50, DPA '83, of Bowling Green, Ohio for students of his former congressional district with high abilities and financial need. (The congressional district included the Ohio counties of Defiance, Erie, Fulton, Hancock, Henry, Ottawa, Paulding, Putnam, Sandusky, Seneca, Van Wert, Williams, and Wood.) The Honorable Delbert L. Latta served as a member of Congress for 30 years, voluntarily retiring in 1989. He had a long and distinguished career.
- 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 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 Bellefontaine, 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.
- Julius and Eve Matz Scholarship Fund was established by Dr. and Mrs. Julius Matz, to be awarded to a law student without regard to financial need. Dr. Matz received his law degree in 1927 from Ohio Northern University.
- 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, JD 1964, LLD 2202, to assist academically worthy students with financial need.
- The Hon. Frederick D. Pepple Endowed Scholarship Fund was established by The Hon. Frederick D. Pepple, JD 1978, with a donor restricted gift to provide financial support to deserving law students attending the Pettit College of Law. The selection policy is determined by completing an application and is determined by the Dean or his designees.
- The Claude W. Pettit Memorial Scholarship was established in memory of Claude W. Pettit by friends and family. Judge Pettit, LLD 1957, was a member of the faculty at the ONU College of Law for 30 years and 25 years as dean of the college, retiring in 1954. Annual income from this fund shall be awarded upon recommendation of the Dean of the College of Law to worthy students with financial need.
- The Judge William D. Radcliff Endowed Scholarship for the Pettit College of Law is established with a donor. Selection criteria for the awarding of the scholarship shall favor students who were raised and attended elementary and secondary school in rural counties of Ohio or neighboring states and who, in the opinion of the Dean and/or awards committee, have a demonstrated record of academic achievement as well as a financial need.
- The Rutter-Taggart Scholarship is awarded to a student with both high scholastic ability and financial need. The Rutter-Taggart Scholarship was established by a bequest of Miss Ilo Rutter, BA 1913, sister of Winifred Rutter Taggart, AA 1904, who served on the Board of Trustees of the University from 1950-1966. Miss Rutter retired in 1969 after 30 years of working in the Alumni office at Ohio Northern University. Preference for the award is given to a student with high academic 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 Monsignor Francis X. Schweitzer Service Award: Donald Beran (JD '64) and Mary Helen Beran have made possible an endowed scholarship in memory of the late Monsignor Francis X. Schweitzer. A student will be selected annually at the discretion of the dean and by nominations of the law faculty. This award will benefit a student who embodies characteristics of community service to the law school and Ada area.
- The John S. Stuckey Scholarship Fund was established by the family and friends of John S. Stuckey, JD 1953, to honor his memory. The scholarship is awarded to a worthy third-year law student.

•The Mary S. Wetherill Scholarship Fund was established by her estate for students in the College of Law, in memory of her husband, E. B. Wetherill, XLLB 1920, a long-time practicing attorney in Kenton, Ohio.

•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 Law Scholarship was established in 1977 through the estate of Miss Helen Willis, BA 1918, daughter of Frank B. Willis. Frank Willis was a member of the ONU faculty in the College of Law, U.S. Congressman, Ohio Governor and U. S. Senator. Income from this endowed fund shall be awarded each year to a student in the College of Law who are in good academic standing and who have demonstrated financial need. Preference will be given to Ohio students.

•The Zeigler Scholarship is an annual award for students enrolled in ONU Law and specifically in the Summer Starter Program.

•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 undergraduate women 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 & SCIENCES

•College of Arts & Sciences Loan Fund.

### BUSINESS ADMINISTRATION

•College of Business Administration Loan Fund.

•OSCPA Loan Fund.

### ENGINEERING

•The Harry B. Raison Engineering Loan Fund, established by Harry B. Raison, BSME 1931, is to provide an additional source of financial assistance (in the form of loan money) to eligible engineering students during their junior or senior year, and also applies to co-op students who would be in their fifth year. The loan fund is administered by the University Financial Aid Office with information furnished by the Dean of the College of Engineering. There must be a demonstrated need to qualify for a loan. This need may be determined by using information from a variety of sources and not limited to the FAF or the needs analysis formula. Students must be currently enrolled and in good academic standing to apply.

### 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 Pierstorf Scholarship Loan Fund, established by Ervin, BSPH 1940, D.Ph 1978 and Clarence Pierstorf, D.Ph 1990 as a memorial to the Pierstorf family.

### LAW

•The Law College Emergency Loan Fund.

# University Faculty 2020-2021

Faculty are listed with position and rank for the 2020-21 academic year as of 7/24/2020. The year refers to the time of initial service to the university.

**Eyob D. Adane**, B.Pharm., M.S. (Addis Ababa University), Ph.D. (University of Kentucky), 2014. *Associate Professor of Pharmacy Practice*

**Alisa L. Agozzino**, B.A. (Ohio Northern University), M.A., Ph.D. (Bowling Green State University), 2007. *Associate Professor of Public Relations*

**Robert M. Alexander**, B.A. (Ohio Northern University), M.A., Ph.D. (University of Tennessee), 2002. *Professor of Political Science; Director, Institute for Civics and Public Policy*

**Saeed M. Al-Haj**, B.S., M.S. (Yarmouk University), Ph.D. (University of North Carolina at Charlotte), 2017. *Assistant Professor of Computer Science*

**Khalid Al-Olimat**, B.S. (Far Eastern University), M.S. (Bradley University), Ph.D. (University of Toledo), 1999. *Professor of Electrical and Computer Engineering;*

**Ahmed Ammar**, B.S. (Sirte University), M.S., Ph.D. (West Virginia University), 2019. *Visiting Assistant Professor of Electrical and Computer Engineering*

**Rodney P. Anderson**, B.S. (Sioux Falls College), Ph.D. (University of Iowa), 1987. *Professor of Biological Sciences*

**Amelia M. Anderson-Wile**, B.A. (Hamline University), M.S., Ph.D. (Cornell University), 2010. *Associate Professor of Chemistry*

**Nancy A. Armstrong**, A.B. (Vassar College), J.D. (Boston College), M.S. (Drexel University), 2001. *Director of the Taggart Law Library; Professor of Law*

**Benjamin D. Aronson**, A.A. (St. Cloud State University), Pharm.D., Ph.D. (University of Minnesota), 2016. *Assistant Professor of Social and Administrative Pharmacy*

**Amy L. Aulthouse**, B.S. (Shippensburg University of Pennsylvania), Ph.D. (South Dakota State University), 1997. *Professor of Biological Sciences*

- Richard Bales**, B.A. (Trinity University), J.D. (Cornell University), 2013. *Professor of Law*
- Kathleen T. Baril**, B.A. (Grinnell College), M.A. (Teachers College, Columbia University), M.A. (University of Iowa), 2010. *Librarian with the rank of Assistant Professor, Heterick Library; Director of Heterick Memorial Library*
- Sarah B. Bassitt**, A.A.S. (James A. Rhodes State College), B.S.N. (Defiance College), M.S. (Western Governors University), 2020. *Assistant Professor of Nursing*
- Brittany N. Bates**, Pharm.D. (Ohio Northern University), 2019. *Assistant Professor of Pharmacy Practice*
- Charles Bates**, B.S. (Virginia State University), M.Ed., M.A. (University of Minnesota, Twin Cities), Ph.D. (The Ohio State University), 1993. *Professor of Music; Director of University Bands*
- Susan E. Bates**, B.A. (Rockford College), A.M., Ph.D. (Washington University in St. Louis), 1996. *Associate Professor of Chemistry*
- Emily E. Baumgartner**, B.S. (Ohio Northern University), MISST (Muskingum University), Ph.D. (Kent State University), 2020. *Assistant Professor of Manufacturing Technology*
- Holly L. Baumgartner**, B.A. (University of Toledo), M.A., Ph.D. (Bowling Green State University), 2017. *Professor of English; Dean, Getty College of Arts and Sciences*
- Christy L. Beaschler**, B.S.B.A. (Ohio Northern University), M.B.A. (Ashland University), 2016. *Assistant Professor of Accounting; Assistant Dean, Dicke College of Business Administration*
- Jill N. Bennett-Toomey**, B.S. (University of Oregon), Ph.D. (University of Illinois at Chicago), 2017. *Assistant Professor of Physiology*
- Khagendra P. Bhandari**, M.S. (University of Minnesota Duluth), Ph.D. (University of Toledo), 2018. *Visiting Assistant Professor of Physics*
- Samantha Bittner**, B.S.C.E. (University of North Carolina at Charlotte), M.B.A. (Wingate University), Ph.D. (Florida State University), 2019. *Assistant Professor of Marketing*
- Bryan O. Boulanger**, B.A., B.S., M.S. (University of Connecticut); Ph.D. (University of Iowa), 2012. *Professor of Civil Engineering; Chair, Department of Civil and Environmental Engineering*
- Christopher P. Bowers**, B.A. (Kenyon), Ph.D. (The Ohio State University), 2003. *Professor of Chemistry*
- Khristo N. Boyadzhiev**, M.S., Ph.D. (University of Sofia, Bulgaria), 1990. *Professor of Mathematics*
- John E. Brady**, B.A., M.A. (University of Michigan), MA (University of Detroit Mercy), Ph.D. (The Ohio State University), 2019. *Assistant Professor of Education*
- Joanne C. Brant**, A.B. (Cornell University), J.D. (Case Western Reserve University), 1991. *Professor of Law*
- Kimberly Broekemeier**, B.A. (St. Olaf College), Ph.D. (University of Minnesota), 1998. *Associate Professor of Biochemistry*
- Jill R. Cadotte**, BS. (Frostburg State University), MAcc (Wright State University), 2018. *Assistant Professor of Accounting*
- Mellita Caragiu**, M.S. (Babes-Bolyai University, Romania), Ph.D. (Pennsylvania State University), 2000. *Professor of Physics*
- Mihai Caragiu**, B.S., M.S. (University of Bucharest), Ph.D. (Pennsylvania State University), 2000. *Professor of Mathematics*
- Samuel Carolus**, B.S. (Purdue University), M.A., Ph.D. (Bowling Green State University), 2019. *Visiting Assistant Professor of Mathematics*
- Robert M. Carrothers**, B.A., M.A., Ph.D. (Kent State), 2005. *Associate Professor of Sociology*
- Rebecca L. Casey**, B.M. (Ohio Northern University), M.M. D.M.A., (University of Cincinnati College Conservatory of Music), 1994. *Associate Professor of Music*
- Tevey C. Celius**, B.S. (University of Puget Sound), M.S., Ph.D. (Cornell University), 2005. *Professor of Chemistry; Assistant Dean, Getty College of Arts and Sciences*
- Jaki Chowdhury**, B.S. (Minnesota State University), Ph.D. (University of Illinois at Urbana-Champaign), 2009. *Associate Professor of Mathematics*
- Sophocles Chrissobolis**, B.S.(Hons), Ph.D. (University of Melbourne), 2015. *Assistant Professor of Pharmacology*
- Jeffrey J. Christoff**, B.S. Pharm. (Duquesne University), Ph. D. (The Ohio State University), 1998. *Professor of Medicinal Chemistry*
- Jill R. Christopher**, B.S.B.A. (Ohio Northern University), M.Acc. (Case Western Reserve University), D.B.A. (Cleveland State University), 1988. *Professor of Accounting*
- Megan Clegg-Kraynok**, B.A. (West Virginia Wesleyan College), M.S. (University of Pittsburgh), Ph.D. (West Virginia University), 2010. *Associate Professor of Psychology*
- Forrest J. Clingerman**, A.B. (Augustana College), M.Div. (Boston University), Ph.D. (Iowa State University), 2005. *Professor of Religion and Philosophy; Director of CAFE and Honors Program*
- Stephany Coffman-Wolph**, B.S. (University of Michigan), M.S.(Bowling Green State University), Ph.D. (Western Michigan University), 2019. *Visiting Assistant Professor of Computer Science*
- Jacqueline Connour**, B.S., B.A. (Iowa State University), Ph.D. (Johns Hopkins School of Medicine). *Assistant Professor of Anatomy and Physiology*
- Sheila Coressel**, B.S., (University of Akron), M.S. (Oklahoma State University), Ph.D. (Michigan State University). 2016. *Director of Student Affairs with faculty rank*
- Elizabeth A. Cozad-Howard**, B.F.A. (Wright State), M.F.A. (St. Mary's College of California) 2012. *Assistant Professor of Dance/ Director of Dance*
- David C. Crago**, A.B. (Duke University), J.D. (University of Michigan), 1991. *Professor of Law*
- Russ Crawford**, B.A., B.S. (Chadron State University), M.A., Ph.D. (University of Nebraska), 2005. *Professor of History*
- Jacob T. Crowley**, B.S., M.S.A., (Ohio Northern University), 2020. *Assistant Professor of Accounting*
- Heather A. Crozier**, B.S. (Northern Michigan University), M.L.S. (Indiana University-Purdue University Indianapolis), 2015. *Electronic Resources Librarian with rank of Assistant Professor, Heterick Memorial Library*
- Mark D. Cruea**, B.S. (The Ohio State University), M.Ed., M.A., Ph.D. (Bowling Green State University), 2009. *Associate Professor of Communication Arts; Director, The School of Social Sciences and Human Interaction*
- Margaret E. Cullen**, B.A. (University at Buffalo The State University of New York), M.A. (San Francisco State University), Ph.D. (University of Tennessee), 1992. *Associate Professor of English*

- Chris Deems**, B.A. (The Ohio State University), MSIS (University of Texas at Austin), 2018. *Systems and Technology Librarian with the rank of Instructor, Heterick Memorial Library.*
- Dennis J. De Luca**, B.A. (Upsala College), Ph.D. (Cleveland State University), 2003. *Associate Professor of Biological Sciences; Program Director for Forensic Biology*
- Douglass S. Degen**, B.S.C.E. (Ohio Northern University), M.S. (The University of Findlay), 1999. *Instructor of Construction Management*
- Joseph G. DeLeeuw**, B.A., M.S. (Michigan State University), Ph.D. (Indiana University), 2016. *Assistant Professor of Criminal Justice*
- Kathleen E. DeVault**, B.A. (The Ohio State University), M.F.A. (University of Massachusetts), 2001. *Resident Lighting Designer; Production Manager with faculty rank*
- Louis A. DiBerardino III**, B.S.M.E., M.S., Ph.D. (University of Illinois at Urbana-Champaign), 2014. *Associate Professor of Mechanical Engineering*
- Natalie A. DiPietro Mager**, M.P.H., Ph.D. (Indiana University), Pharm.D. (Ohio Northern University), 2007. *Professor of Pharmacy Practice*
- Mark H. Dixon**, B.A. (Indiana University), M.A. (University of Tennessee), Ph.D. (Purdue University), 2003. *Associate Professor of Philosophy*
- Jennifer A. Donley**, B.A. (College of Wooster), M.L.I.S., M.S.-I.A.K.M. (Kent State University), 2009. *Cataloging and Knowledge Architect Librarian with the rank of Assistant Professor, Heterick Memorial Library*
- Douglas G. Dowland**, B.A. (Michigan State University), M.A., Ph.D. (University of Iowa), 2010. *Associate Professor of English*
- Manoranjan S. D'Souza**, M.B.B.S., M.D. (Mumbai University), Ph.D. (University of Texas at Austin), 2013. *Associate Professor of Pharmacology*
- Joseph Dule**, A.D. (Community College of the Air Force), B.A. (American Military University), M.A. (Webster University), M.S. (University of New Haven), 2020. *Instructor of Criminal Justice*
- Keith F. Durkin**, B.A. (Marywood College), M.S., Ph.D. (Virginia Polytechnic Institute), 1999. *Professor of Sociology*
- Melissa Eddings-Mancuso**, B.F.A. (Ohio University), M.F.A. (Edinboro University of Pennsylvania), 1997. *Associate Professor of Art*
- Emily T. Eddy**, B.S. (Bucknell University), Pharm.D. (University of North Carolina Chapel Hill), 2017. *Assistant Professor of Pharmacy Practice*
- Kaylan M. Ellis**, B.A. (Florida State University), M.S.L.I.S. (University of Illinois at Urbana-Champaign), 2016. *Technical Services Librarian with the rank of Assistant Professor, Taggart Law Library*
- Kevin M. Ernst**, B.B.A., M.B.A. (Mount Vernon Nazarene University), 2016. *Assistant Professor of Management*
- John K. Estell**, B.S.C.S.E. (University of Toledo), M.S., Ph.D. (University of Illinois at Urbana-Champaign), 2001. *Professor of Computer Engineering & Computer Science*
- Thomas P. Finn**, B.A. (Marquette University), M.A. (University of Notre Dame), Ph.D. (University of Wisconsin), 1999. *Professor of French and Spanish*
- Dallan F. Flake**, B.S., M.S. (Brigham Young University), J.D. (University of Michigan), 2016. *Associate Professor of Law*
- Danielle Foster**, B.A., M.B.A. (Bluffton University), Ed.D. (Bowling Green State University), 2020. *Assistant Professor of Marketing*
- Kami L. Fox**, B.S.N., M.S. (Wright State University), D.N.P. (University of Toledo), 2010. *Associate Professor of Nursing; Director, The School of Health and Behavioral Sciences*
- Todd M. France**, B.S. (University of Toledo), M.S. (University of Nevada, Las Vegas), Ph.D. (University of Colorado Boulder), 2015. *Assistant Professor of Engineering Education*
- Matthew Francis**, B.A. (Bluffton University), M.A. (Wright State University), 2018. *Archivist with the rank of Assistant Professor, Heterick Memorial Library.*
- Jaume Franquesa**, B.A., M.S. (Universitat Autònoma de Barcelona), Ph.D. (Purdue University), 2015. *Assistant Professor of Management*
- Bruce P. Frohnen**, B.A. (California State University), M.A. (University of California), J.D. (Emory University), Ph.D. (Cornell University), 2008. *Professor of Law*
- Lawrence W. Funke**, B.S.M.E. (University of Dayton), M.S., Ph.D. (University of Notre Dame), 2017. *Assistant Professor of Mechanical Engineering*
- Scott D. Gerber**, B.A. (College of William and Mary), J.D., Ph.D. (University of Virginia), 2001. *Professor of Law*
- Jeffrey A. Gray**, B.S. (Pennsylvania State University), Ph.D. (Massachusetts Institute of Technology), 1993. *Professor of Chemistry and Biochemistry*
- Jennie Grundey**, PharmD (Ohio Northern University), 2004. *Associate Director of Experiential Programs with faculty rank*
- Firas Hassan**, B.E. (Beirut Arab University), M.E. (American University of Beirut), Ph.D. (University of Akron), 2009. *Professor of Electrical and Computer Engineering*
- Jessica Hinson**, B.S. (Xavier University), Pharm.D. (University of Cincinnati), 2015. *Assistant Professor of Pharmacy Practice*
- Brian Hofman**, B.B.A. (Iowa State University), M.Ed. (Bowling Green State University), Ph.D. (University of Toledo), 1998. *Associate Professor of Sport Management*
- Jamie M. Hunsicker**, B.A., M.S. (Butler University), B.S.N., M.S.N. (South University), D.N.P. (Case Western Reserve University) 2016. *Assistant Professor of Nursing*
- Michelle Hunt**, B.A., M.Ed. (The Ohio State University), J.D. (North Carolina Central University), 2020. *Assistant Director of Academic Success and Instructor of Law.*
- Juliet K. Hurtig**, B.S.E.E. (Ohio Northern University), M.S.E.E., Ph.D. (The Ohio State University), 2000. *Professor of Electrical and Computer Engineering; Interim Provost and Vice President for Academic Affairs*
- J. Blake Hylton**, BSME (University of Tulsa), MSME, Ph.D. (Purdue University), 2015. *Assistant Professor of Mechanical Engineering*
- Feng Jao**, B.S. (Sheng-te Christian College), M.S. (Fort Hays State University), Ph.D. (University of Toledo), 2000. *Professor of Technology*
- Katherine Jarell**, B.A., B.S., (Washington and Lee University), PharmD (West Virginia University), 2020, *Assistant Professor of Pharmacy Practice*
- Ann C. Johnson**, B.A., M.A., Ph.D. (University of Notre Dame), 2013. *Associate Professor of Psychology*
- Darlene Johnston**, B.A. (Hanover College), M.A. (Indiana University), M.A. TESOL (The University of Findlay), Ph.D., (Bowling Green State University), 2019. *Assistant Professor of English*

- David W. Johnstone**, B.E., M.S. (Youngstown State University), Ph.D. (University of Akron), 2015. *Associate Professor of Civil Engineering*
- Dustin Johnston-Green**, B.A. (Ohio Wesleyan University), M.S., J.D. (University at Buffalo The State University of New York), 2016. *Reference Librarian with the rank of Associate Professor, Taggart Law Library*
- Jin Ho Jung**, B.B.A. (Chung-Ang University), M.S. (The Ohio State University), Ph.D. (Oklahoma State University), 2016. *Assistant Professor of Marketing*
- Jean-Marie Kamatali**, B.S., J.D. (National University of Rwanda), M.A. (Notre Dame), Ph.D. (Karl-Franzens-Universität-Graz), 2008. *Professor of Law*
- Errol G. Katayama**, B.A., M.A., Ph.D. (University of Toronto, Canada), 2000. *Professor of Philosophy; Assistant Director, School for the Humanities and Global Cultures*
- Courtney Kattengell**, B.A. (Marymount Manhattan College), M.F.A. (San Diego State University), 2016. *Assistant Professor of Theatre*
- Ross M.B. Kauffman**, B.S. (Eastern Mennonite College), M.P.H., Ph.D. (The Ohio State University), 2017. *Assistant Professor of Public Health*
- M. Ajmal Khan**, B.S. (NED University), M.S. (KFUPM), Ph.D. (Western University, Canada), 2016. *Assistant Professor of Electrical and Computer Engineering*
- Melissa Kidder**, B.F.A., J.D. (Ohio Northern University), 2015. *Director of Legal Clinics and Assistant Professor of Law*
- Karen L. Kier**, B.S. Pharm. (Ohio Northern University) M.S., Ph.D. (The Ohio State University), 1986. *Professor of Pharmacy Practice; Director of Assessment, Director of Drug and Health Information*
- Tristin M. Kilgallon**, B.A. (Kutztown University), M.S. (Troy State University), M.S. (St. Joseph's University), J.D., LL.M. (Ohio Northern University), 2012. *Associate Professor of Criminal Justice*
- Dong Hyun Kim**, B.A. (Seoul National University, Korea), M.A. (Oklahoma State), Ph.D. (University of Oklahoma), 2011. *Associate Professor of Finance*
- David Kinder**, B.S. (Purdue University), M.S. (Indiana University-Bloomington), Ph.D. (University of Illinois at Urbana-Champaign), 1993. *Professor of Medicinal Chemistry*
- David W. Koh**, B.S. (Centre College), B.S., Ph.D. (University of Kentucky), 2013. *Associate Professor of Pharmacology*
- Timothy O. Koneval**, B.A. (Illinois Wesleyan University), M.S., Ph.D. (University of Massachusetts), 2016. *Assistant Professor of Biology*
- David J. Kosmyna**, B.E. (University of Toledo), M.M. (Ohio University), D.M.A. (University of Cincinnati College Conservatory of Music), 2006. *Professor of Music*
- Kelly M. Kroustos**, B.S. (Ohio Dominican University), Pharm.D. (The Ohio State University), 2008. *Professor of Pharmacy Practice*
- Katherine L. Krynak**, B.S. (University of Cincinnati), Ph.D. (Case Western Reserve University), 2016. *Assistant Professor of Biology*
- Matthew D. Kutch**, B.S. (Central Michigan University), M.E., Ph.D. (North Carolina State University), 2011. *Associate Professor of Economics*
- Laurie K. Laird**, B.S.M.E. (Ohio Northern University), M.S. (University of Cincinnati), 1993. *Assistant Professor of Mechanical Engineering; Director of Corporate and Alumni Relations*
- Anup R. Lamichhane**, B.A., M.A. (Tribhuvan University, Nepal), Ph.D. (University of Southern Mississippi), 2016. *Assistant Professor of Mathematics*
- Kasie Landin**, Pharm.D. (Ohio Northern University), 2019. *Clinical Assistant Professor of Pharmacy Practice*
- Christopher S. Larsen**, B.M.E. (Wartburg College), M.M. (University of Arizona), D.M.A. (University of Texas), 2016. *Assistant Professor of Music*
- Heath J. LeBlanc**, B.S. (Louisiana State University), M.S., Ph.D. (Vanderbilt University), 2012. *Associate Professor of Electrical and Computer Engineering*
- Derek-Dion Lee**, B.S. (Florida Atlantic University), M.S., Ph.D. (Florida International University), 2018. *Assistant Professor of Finance*
- Terri Brown Lenzo**, B.M. (University of Cincinnati College Conservatory of Music), M.F.A. (The University of Iowa), Ph.D. (Kent State University), 2015. *Assistant Professor of Music Education*
- Steven N. Leonard**, B.S., Pharm.D. (Purdue University), 2015. *Associate Professor of Pharmacy Practice*
- Megan C. Lieb**, B.S. (Ohio Northern University), M.S.N. (Lourdes University), D.N.P. (Northern Kentucky University), 2015. *Assistant Professor of Nursing*
- Christina M. Liebrecht**, B.S., D.N.P. (University of Toledo), M.S.N. (Walden University), 2011. *Associate Professor of Nursing*
- Lauren H. Logan**, B.S.E.E. (Ohio University), M.S. (Purdue University), Ph.D. (University of Illinois Urbana-Champaign), 2018. *Assistant Professor of Civil and Environmental Engineering*
- Brittany L. Long**, Pharm.D. (Ohio Northern University), 2017. *Assistant Professor of Pharmacy Practice*
- Michael B. Loughlin**, B.A., M.A., Ph.D. (Indiana University), 1988. *Professor of History*
- Bryan A. Lutz**, B.A. (The Ohio State University), M.A. (Ohio University), Ph.D. (Iowa State University), 2018. *Assistant Professor of Rhetoric and Composition*
- John N. Mager, III**, B.A. (Hiram College), M.S. (Miami University), Ph.D. (Cornell University), 2005. *Professor of Biological Sciences*
- Tarek M. Mahfouz**, B.S. (Cairo University, Egypt), M.S. (West Texas A&M University), Ph.D. (University of Houston), 2006. *Professor of Pharmaceutical Chemistry*
- William J. Mancuso**, B.S. (Brockport State University of New York), M.F.A. (University at Buffalo The State University of New York), 1998. *Assistant Professor of Art*
- Jed E. Marquart**, B.S.M.E. (Ohio Northern University), M.S.A.E., Ph.D. (University of Dayton), 1991. *Professor of Mechanical Engineering*
- Steven J. Martin**, B.S., Pharm.D. (Ferris State University), 2014. *Professor of Pharmacy; Dean, Raabe College of Pharmacy*
- David McClough**, B.A. (Vanderbilt University), M.B.A. (American University), M.A. (Bowling Green State University), Ph.D. (University of Southern California), 2008. *Associate Professor of Economics*
- Sarah McClusky**, B.S. Ed.D. (The Ohio State University), M.S. Ed. (Mount Vernon Nazarene University), 2020. *Visiting Assistant Professor of Education*
- Kristie A. McHugh**, B.S., M.B.A., Ph.D. (Binghamton University), 2014. *Associate Professor of Management*
- Eva B. McManus**, B.A., M.A. (James Madison University), Ph.D. (University of Tennessee), 1988. *Professor of English*

- Vishal R. Mehta**, B.S. (Maharaja Sayajirao University, India), M.S., Ph.D. (New Jersey Institute of Technology), 2016. *Assistant Professor of Mechanical Engineering*
- David Mikesell**, B.A. (Duke University), B.S.M.E. (Ohio Northern University), M.S.M.E., Ph.D. (The Ohio State University), 2007. *Professor of Mechanical Engineering; Chair, Department of Mechanical Engineering.*
- Richard F. Miller**, B.S. (Ohio Northern University), M.S., (Walden University), Ph.D. (Indiana University-Bloomington), 2007. *Associate Professor of Technology; Assistant Director, The School of Science, Technology and Mathematics*
- Allison A. Mittendorf**, B.A., J.D. (University of Toledo), 2004. *Instructor of Legal Writing; Director of Legal Research and Writing*
- Kelly Fritz Mofield**, B.S. (Bowling Green State University), M.S. (Indiana Wesleyan University), 2020. *Visiting Assistant Professor of Public Relations*
- Jennifer Moore**, B.A. (Mercyhurst University), M.A. (University of Colorado at Boulder), Ph.D. (University of Illinois at Chicago), 2012. *Associate Professor of Creative Writing; Director, The School for the Humanities and Global Cultures*
- Vicki A. Motz**, B.A., M.S. (Rutgers University), Ph.D. (Boston University), 2008. *Associate Professor of Biological Sciences*
- Michelle R. Musser**, B.S. (Ashland University), Pharm.D. (The Ohio State University), 2010. *Associate Professor of Pharmacy Practice, Director of Outreach Programming*
- Brian J. Myers**, B.A. (Hiram College), Ph.D. (Indiana University Bloomington), 2002. *Professor of Chemistry*
- David P. Nau**, BSPH. (Ohio Northern University), M.S. (University of Toledo), Ph.D. (University of Florida), 2020. *Professor of Social and Administrative Pharmacy*
- John C. Navin**, B.S.B.A. (Bowling Green State University), M.A., Ph.D. (Michigan State University), 2016. *Professor of Economics; Dean, Dickie College of Business Administration*
- Lauren A. Newell**, B.A. (Georgetown University), J.D. (Harvard University), 2012. *Professor of Law; Associate Dean for Academic Affairs, Pettit College of Law*
- Christine L. North**, B.A., M.A. (University of Nebraska at Omaha), Ph.D. (University of Oklahoma), 2006. *Professor of Communication Arts*
- Lynda Nyce**, B.A. (Goshen College), M.A., Ph.D. (University of Notre Dame), 2015. *Interim Associate Vice President for Academic Affairs with faculty rank; Director of Student Success*
- Kofi Nsia-Peptra**, B.A. (University of Cape Coast-Ghana), LL.M. (Essex University), Ph.D. (Wayne State University), 2008. *Professor of Political Science*
- Mark E. Olah**, B.S. (Philadelphia College of Pharmacy and Science), Ph.D. (The Ohio State University), 2008. *Professor of Pharmacology; Chair, Department of Pharmaceutical and Biomedical Sciences*
- Liam O'Melinn**, B.A. (University of California-Santa Cruz), J.D. (Columbia University), Ph.D. (Yale University), 2001. *Professor of Law*
- Kirsten Osbun-Manley**, B.M. (Bowling Green State University), 1995. *Resident Artist in Music and Instructor in Music; Assistant Director, The School of Visual and Performing Arts*
- Kenneth J. Oswald**, B.S. (Xavier University), M.S., Ph.D. (University of South Carolina), 2016. *Assistant Professor of Biology*
- Mahesh Kumar Pallikonda**, B.Tech. (National Institute of Foundry & Forge Technology) M.S.M.E. (Cleveland State University), 2020. *Visiting Instructor of Manufacturing Technology*
- Kyle W. Parker**, BSPH (Ohio Northern University), M.B.A. (Thomas More College), 2016. *Assistant Professor of Pharmacy Practice*
- Patricia A. Parteleno**, B.S.Pharm., Pharm.D. (Ohio Northern University), 1996. *Associate Professor of Pharmacy Practice; Director of Experiential Programs*
- Kristie E. Payment**, B.A. (Potsdam State University of New York), M.A. (St. Bonaventure University), Ph.D. (Kent State University), 2005. *Associate Professor of Psychology; Assistant Director, The School of Health and Behavioral Sciences*
- Trilisa M. Perrine**, B.S. (Western Michigan University), Ph.D. (University of Chicago), 2008. *Professor of Chemistry*
- Raymond F. Person, Jr.**, B.A., M.Div. (Phillips University), Ph.D. (Duke University), 1993. *Professor of Religion*
- Lindsey M. Peters**, Pharm.D. (University of Cincinnati), 2014. *Associate Professor of Pharmacy Practice*
- Ronald C. Peterson**, B.S. (Northern Illinois University), Ph.D. (University of Chicago), 1987. *Professor of Biochemistry*
- Brian Phillips**, B.A. (Ohio Northern University), M.F.A. (University of North Carolina School of the Arts), 2011. *Technical Director with faculty rank*
- Gregory E. Phipps**, A.A. (James A. Rhodes State College), B.S. (University of Toledo), M.A. (Bluffton University), 2017. *Instructor of Multimedia Journalism*
- Jason C. Pinkney**, B.A. (Macalester College), Ph.D. (New Mexico State University), 2002. *Professor of Physics*
- Jonathan D. Pitts**, B.A., M.A. (University of Idaho), Ph.D. (University at Buffalo The State University of New York), 2000. *Associate Professor of English*
- Justine A. Post**, B.A. (Millersville University), M.A. (North Carolina State University), Ph.D. (University of Michigan), 2015. *Assistant Professor of Rhetoric and Composition; Director of Writing Center*
- Edward S. Potkanowicz**, B.S. (Youngstown State University), M.A., Ph.D. (Kent State University), 2011. *Associate Professor of Exercise Physiology*
- Jennifer Pullen**, B.A. (Whitworth University), M.F.A. (Eastern Washington University), Ph.D. (Ohio University), 2017. *Assistant Professor of Creative Writing*
- David W. Raack**, B.A. (University of Kansas), J.D. (University of Missouri), LL.M. (Temple University), LL.M. (Columbia University), 1984. *Professor of Law*
- Ramin Rabiee**, M.S. (Shiraz University of Technology), Ph.D. (Old Dominion University), 2019. *Visiting Assistant Professor of Civil Engineering*
- Ryan R. Rahrig**, B.Sc., M.A., Ph.D. (Bowling Green State University), 2010. *Associate Professor of Mathematics and Statistics*
- Maria Raiti**, B.S. (Stony Brook University The State University of New York), M.S., Ph.D. (University of Michigan), 2019. *Visiting Associate Professor of Mathematics*
- Shubha Gururaja Rao**, B.Sc., M.Sc. (Bangalore University), Ph.D. (University of Edinburgh), 2020. *Assistant Professor of Pharmacology*



**David A. Retterer**, B.S. (David Lipscomb College), M.S. (Vanderbilt University), 1979. *Visiting Associate Professor of Mathematics and Computer Science.*

**Stacey Rexrode Brewer**, PharmD (Ohio Northern University) 2019. *Pharmacy service Center Manager with faculty rank*

**Michael J. Rider**, B.S.M.E. (Ohio Northern University), M.E.M.E. (Texas A&M University), Ph.D. (Purdue University), 1979. *Professor of Mechanical Engineering*

**Leslie A. Riley**, B.S. (University of Dayton), M.S., Ph.D. (Washington State University), 2009. *Associate Professor of Biological Sciences*

**Joan E. Robbins**, B.A. (Boston College), M.F.A., D.F.A. (Yale University), 2001. *Dramaturge and Associate Professor of Theatre Arts*

**Lisa G. Robeson**, B.A. (University of Maryland), M.A. (Georgetown University), Ph.D. (Catholic University of America), 2002. *Professor of English*

**Laurence D. Robinson**, B.S. (University of Michigan-Ann Arbor), M.A., Ph.D. (University of California-Berkeley), 2002. *Associate Professor of Statistics*

**Andrew M. Roecker**, Pharm.D. (Ohio Northern University), 2002. *Professor of Pharmacy Practice; Chair, Department of Pharmacy Practice*

**Tena L. Roepke**, B.S., M.Ed., M.A., (Bowling Green State University), Ed.D. (University of Toledo), 1984. *Professor of Mathematics;*

**Yousif B. Rojeab**, B.S. (Jordan University), Ph.D. (University of Houston), 2007. *Professor of Pharmaceutics*

**Charles H. Rose III**, B.A. (Indiana University), J.D. (University of Notre Dame), LL.M. (Judge Advocate General's School United States Army), 2019. *Professor of Law; Dean, Pettit College of Law*

**Rebecca I. Rosenberg**, A.B. (Bryn Mawr College), LL.M. (Georgetown University), J.D. (Harvard University), 2017. *Associate Professor of Law*

**Kalyn M. Rossiter**, B.S. (Northern Illinois University), M.S. (Louisiana State University), Ph.D. (George Mason University), 2016. *Assistant Professor of Geography; Assistant Director, The School of Social Sciences and Human Interaction*

**David L. Rouch**, B.S. (Ball State University), M.S. Ed. (Eastern Illinois University), Ph.D. (The Ohio State University), 1988. *Professor of Technology*

**William Britton Rowe**, B.F.A. (Ohio Northern University), M.F.A. (University of Michigan-Ann Arbor), 1999. *Professor of Art and Design*

**Michael Rush**, PharmD (Ohio Northern University), 2010. *Director of ONU Healthwise & Pharmacy Residency Programs, Assistant Clinical Professor of Pharmacy Practice with faculty rank*

**Brian P. Sage**, B.A. (Western Michigan University), M.F.A. (Wayne State University), 2014. *Associate Professor of Theatre; Director, The School of Visual and Performing Arts*

**Jamie L. Sanford**, B.S. (Elmira College), Ph.D. (The Ohio State University), 2011. *Associate Professor of Biology*

**James E. Savage, Jr.** B.S. (Ashland University), M.F.A. (Pennsylvania State University), 2020. *Assistant Professor of Theatre*

**David M. Savino**, B.S.B.A., M.B.A. (Youngstown State University), 1979. *Associate Professor of Management*

**David R. Sawyers, Jr.**, B.S.M.E. (Rose-Hulman Institute of Technology), M.S.M.E., Ph.D. (University of Notre Dame), 2003. *Professor of Mechanical Engineering*

**Tammy J. Schakett**, A.S. (Columbus State Community College), B.A. (Northwood University), M.B.A., Ph.D. (Touro University International), 2010. *Associate Professor of Entrepreneurship*

**Sandra J. Schroeder**, B.S., M.A., Ph.D. (The Ohio State University), 2004. *Associate Professor of Mathematics; Associate Dean of the Getty College of Arts and Sciences*

**Theresa Schroeder Hageman**, B.S.N. (The Ohio State University), M.A. (American Public University System), M.A., Ph.D. (University of Kentucky), 2018. *Visiting Assistant Professor of Political Science*

**Harold E. Schueler**, B.A. (Kenyon College), M.S., Ph.D. (University of Cincinnati), 2017. *Assistant Professor of Forensic Biology*

**Robert Scott**, B.A. (University of Michigan-Ann Arbor), M.A. (University of Chicago), Ph.D. (Michigan State University), 1994. *Professor of English*

**Kanishka Sen**, B.A., M.A. (Jawaharlal Nehru University), M.A., Ph.D. (Arizona State University), 2003. *Associate Professor of Spanish*

**Seyed Mohammad Seyed Ardakani**, B.S. (K.N. Toosi University of Technology), M.S. (University of Tehran), Ph.D. (University of Nevada-Reno), 2017. *Assistant Professor of Civil Engineering*

**Henry Luther Sheets**, B.F.A. (Ohio Northern University), M.F.A. (Bowling Green State University), 2005. *Associate Professor of Art*

**Hui Shen**, B.S. (Tsinghua University), M.S. (Tongji University), Ph.D. (Penn State University), 2006. *Professor of Mechanical Engineering*

**Kelly M. Shields**, Pharm.D. (Butler University), 2003. *Professor of Pharmacy Practice; Associate Dean, Raabe College of Pharmacy*

**Darrin W. Snyder Belousek**, A.S. (Joliet Junior College), B.S. (Bradley University), M.A., Ph.D. (University of Notre Dame), 2011. *Visiting Assistant Professor of Philosophy*

**Kristen Sobota**, Pharm.D. (West Virginia University), 2007. *Professor of Pharmacy Practice*

**Angela Spallinger**, B.S.N. (Georgia Southern University), M.S.N. (South University), 2019. *Assistant Professor of Nursing*

**Jonathan T. Spelman**, B.A. (Ashland University), M.A. (University of Missouri-Saint Louis), Ph.D. (University of Colorado at Boulder), 2017. *Assistant Professor of Philosophy*

**Christopher E. Spiese**, B.S. (Juniata College), Ph.D. (State University of New York College of Environmental Science and Forestry), 2011. *Associate Professor of Chemistry*

**Bethany Spieth**, B.A. (Ohio University), M.S.L.I.S. (University of Illinois at Urbana-Champaign), 2016. *Instruction and Access Services Librarian with the rank of Assistant Professor, Heterick Memorial Library*

**Jeffrey W. St. Onge**, B.A. (Rhode Island College), M.A. (San Diego State University), Ph.D. (Indiana University Bloomington), 2017. *Assistant Professor of Communication Studies*

**Amy L. Stockert**, B.S. (Indiana University Purdue University Fort Wayne), M.S., Ph.D. (The Ohio State University), 2005. *Professor of Biochemistry*

**Hannah L. Stokes**, B.S. (Utah State University), Ph.D. (Brigham Young University), 2018. *Assistant Professor of Psychology*

**David Strittmatter**, B.A. (Marquette University), M. Litt. (University of St. Andrews, Scotland), Ph.D. (University at Buffalo The State University of New York), 2019. *Assistant Professor of History*

- Hannah Sturtevant**, B.S. (Western Washington University), Ph.D. (Purdue University), 2019. *Visiting Assistant Professor of Chemistry*
- Rema G. Suniga**, B.S., M.S. (University of Santo Tomas, Manila), Ph.D. (Clemson University), 1994. *Professor of Biological Sciences*
- Scott Swanson**, B.S. (Alma College), M.S. (Kent State University), Ph.D. (The Ohio State University), 1996. *Associate Professor of Exercise Physiology*
- William Theisen**, B.S., M.S., Ph.D. (University of Iowa), 1995. *Professor of Physics and Astronomy*
- Shane Tilton**, A.A.S. (Ohio University), B.A. (Muskingum College), M.A., Ph.D. (Ohio University), 2014. *Associate Professor of Multimedia Journalism*
- Erin Torres**, B.M. (Stetson University), M.M., D.M.A. (The Ohio State University), A.D. (University of Cincinnati College Conservatory of Music) 2020. *Visiting Assistant Professor of Music*
- Stephen C. Veltri**, B.A. (University of Pittsburgh), J.D. (Georgetown University), LL.M. (Columbia University), 1986. *Professor of Law*
- Srinivasa Vemuru**, B.S., M.S. (Indian Institute of Technology, India), Ph.D. (University of Toledo), 2001. *Professor of Electrical and Computer Engineering, Chair, Department of Electrical & Computer Engineering and Computer Science*
- Robert Verb**, B.S. (The University of Findlay), Ph.D. (Ohio University), 2001. *Professor of Biology*
- Lisa L. Walden**, B.S. (Ohio Northern University), M.A., Ph.D. (University of Findlay), 2010. *Assistant Professor of Laboratory Science; Director of Medical Laboratory Science Program*
- Jennifer L. Walton**, B.A., M.A. (Indiana State University), Ph.D. (Bowling Green State University), 2006. *Professor of Communication Arts;*
- Yong Wang**, Bachelor's (Nankai University) M.S., Ph.D. (Purdue University), 2015. *Associate Professor of Statistics*
- Bryan Ward**, B.A. (Ohio Northern University), J.D. (University of North Carolina-Chapel Hill), Ph.D. (The Ohio State University), 1999. *Professor of Law*
- Robert A. Waters, Jr.**, B.A. (University of Pennsylvania), M.A. (California State University Sacramento), J.D., Ph.D. (University of Mississippi), 2005. *Associate Professor of History*
- Sarah Waters**, B.M. (Ohio Northern University), M.M. (Western Michigan University), D.M.A. (The Ohio State University), 2005. *Associate Professor of Music*
- Katie Westgerdes**, PharmD (Ohio Northern University), 2018. *Healthwise Pharmacy Manager with faculty rank*
- Chao Wen**, B.S, M.S. (University of Electronic Science & Technology of China), Ph.D. (University of North Texas) 2020. *Associate Professor of Operations and Supply Chain Management*
- Bradley M. Wile**, B.Sc. (St. Francis Xavier University), Ph.D. (Dalhousie University), 2010. *Associate Professor of Chemistry; Director, The School of Science, Technology, and Mathematics*
- Harry James Wilson**, B.A. (Florida State University), M.A. (University of West Florida), Ph.D. (Louisiana State University and A&M), 2007. *Assistant Professor of Management and Geography*
- Kurt Wilson**, B.S. (Manchester University), M.A. (Western Michigan University), 1999. *Assistant Professor of Strength and Conditioning and Athletic Training*
- Michelle R. Wilson**, B.S. (East Stroudsburg University of Pennsylvania), M.S. (Marshall University), 1991. *Associate Professor of Athletic Training; Director of Athletic Training Program*
- Dexter R. Woods**, B.A., J.D. (Ohio Northern University), LL.M. (University of Florida), 1987. *Professor of Business Administration*
- Hongyu Wu**, B.A., M.A. (Sichuan Foreign Languages Institute), M.T.S. (Harvard University), Ph.D. (University of Pittsburgh), 2015. *Assistant Professor of Religion*
- Carrie D. Wysocki**, B.S., M.E., Ph.D. (The Ohio State University), 2019. *Assistant Professor of Education; Interim Director, Center for Teacher Education*
- Fan Ye**, B.S., M.S. (Southeast University), Ph.D. (Texas A & M University), 2013. *Associate Professor of Civil Engineering*
- John-David S. Yoder**, B.S.M.E., M.S.M.E., Ph.D. (University of Notre Dame), 2001. *Professor of Mechanical Engineering; Dean, T.J. Smull College of Engineering*
- Linda M. Young**, B.A. (Wittenberg University), M.S., Ph.D. (The Ohio State University), 1988. *Professor of Biological Sciences; Assistant Director, The School of Science, Technology and Mathematics*
- Amy F. Youngpeter**, B.A. (Bluffton University), M.A. (University of Dayton), 2016. *Instructor in English*
- Ziad Youssfi**, B.S., M.S., Ph. D. (Michigan State University), 2013. *Associate Professor of Electrical and Computer Engineering*
- Thomas Zechman**, B.S.C.E. (Southern Methodist University), M.S.C.E. (University of Dayton), 2008. *Assistant Dean T.J. Smull College of Engineering with faculty rank*
- Jake R. Zimmerman**, B.S. (Montana State University), Ph.D. (North Dakota University), 2006. *Professor of Chemistry*
- Phillip R. Zoladz**, B.A. (Wheeling Jesuit University), M.A., Ph.D. (University of South Florida), 2009. *Associate Professor of Psychology*

## ADJUNCT FACULTY (as of 7/24/2020)

- Summer M. Aebker**, B.M. (University of Cincinnati), M.M. (Bowling Green State University), D.M. (Indiana University), 2009. *Adjunct Instructor of Music*
- Micheal F. Anders**, B.S. (Lamar University), M.M. (Lamar University), Ph.D. (The Ohio State University), 2017. *Adjunct Instructor of Theatre Arts*
- Pamela Ashmore**, B.M. (University of Wisconsin-Eau Claire), M.M. (Bowling Green State University), 1999. *Adjunct Instructor of Music*
- Peter Lance Ashmore**, B.M., M.M. (Bowling Green State University), 1997. *Adjunct Instructor of Music*
- Thomas Barnhart**, B.S., M.A.T. (Purdue University), 2001. *Adjunct Instructor of Mathematics*
- Christina Basinger**, A.A.S. (James A. Rhodes State College), B.S.N. (The Ohio State University), 2019. *Adjunct Instructor of Nursing*
- Leslie Bostick**, A.A.S. (Owens State University), B.S.N., M.S.N. (Chamberlain University), 2018. *Adjunct Instructor of Nursing*
- Erica Bowling**, B.S.N. (Ohio Northern University), 2019 *Adjunct Instructor of Nursing*
- Lisa Bradley**, B.A., J.D. (Ohio Northern University), 2014. *Adjunct Instructor of Political Science*

- Ashley E. Buersmeyer**, B.F.A. (Kent State University), 2018. *Adjunct Instructor of Theatre Arts*
- Joyce Buetner**, B.S.Ed. (The Ohio State University), M.S.Ed. (University of Dayton), 2002. *Adjunct Instructor of Reading*
- Nicole Carlo**, A.A.S. (Rochester Institute of Technology), B.A., M.A. (Gallaudet University) 2020. *Adjunct Instructor of Modern Languages*
- Clayton J. Casey**, B.S. (Ohio Northern University), 2013. *Adjunct Instructor of Biological Sciences*
- Antoine T. Clark**, B.M. (Virginia Commonwealth University), M.M., D.M. (The Ohio State University), M.M. (University of Cincinnati), 2018. *Adjunct Instructor of Music*
- Hugh F. Crowell**, B.A. (College of Wooster), M.S. (The Ohio State University), 2016. *Adjunct Instructor of Biological Sciences*
- Norman Damschroder**, B.M. (Toledo), M.M. (Bowling Green State University), 2008. *Adjunct Instructor of Music*
- Darrel R. Davison**, B.S. (Iowa State University), J.D. (Cornell University Law School), 2009. *Adjunct Professor of Law*
- Russell J. Decker**, B.S. (University of Northwestern Ohio), M.S. (Tiffin University), Ph.D. (Capella University), 2009. *Adjunct Instructor of Political Science*
- Zachary Lewis Dunn**, B.S. (Ohio Northern University), 2018. *Adjunct Instructor of Education*
- Mary Jane Eichelberger**, B.M.Ed. (Heidelberg University), 1994. *Adjunct Instructor of Music*
- John Fallon**, B.A. (Miami University), M.A. (Ohio University), Ph.D. (Bowling Green State Univ), 2018. *Adjunct Instructor of English*
- Mary E. Fox**, B.A., J.D. (Ohio Northern University), 2001. *Adjunct Instructor of Business*
- Stacia Galford**, B.S.N. (Ohio Northern University), M.S. (Chamberlain University) 2019. *Adjunct Instructor of Nursing*
- Micah A. Graber**, B.M. (Bowling Green State University), 2007. *Adjunct Instructor in Music*
- Elizabeth Grant**, A.A.S.(University of Toledo), B.S.N. (Ohio Northern University), 2019. *Adjunct Instructor of Nursing.*
- Andrea M. Graytock**, B.S. (Marywood College), M.S. (St. John's University), Ph.D. (The Ohio State University), 2014. *Laboratory Instructor*
- James M. Green**, B.A. (Abilene Christian University), M.M. (Miami University), D.M.A. (The Ohio State University), 2014. *Adjunct Instructor of Music*
- Samantha Gruber**, A.A.S. (James A. Rhodes State College), B.S.N. (Ohio Northern University) 2018. *Adjunct Instructor of Nursing*
- Peter Haase**, B.S. (Ohio Northern University), Doctor of Veterinary Medicine (The Ohio State University), 2014. *Adjunct Instructor of Biological Sciences*
- Donald C. Hart**, B.S. (Ohio Northern University), 2005. *Adjunct Instructor of Pharmacy*
- Debra K. Hattery-Roberts**, A.A.S. (James A Rhodes State College), B.S.N. (Ohio Northern University), 2015. *Adjunct Instructor of Nursing*
- Ashley Hinkel**, B.S.N. (Ohio Northern University), 2020. *Adjunct Instructor of Nursing*
- Marjorie C. Hoying**, A.A.S. (Edison State Community College), B.S.N. (Ohio Northern University), 2014. *Adjunct Instructor of Nursing.*
- Debra Jackson**, B.A. (Ohio Northern University), M.S. (University of Dayton), 2013. *Adjunct Instructor of Education*
- Lilia M. Jmiai**, M.A. (Bowling Green State University), 2015. *Adjunct Instructor of Modern Languages*
- Patricia Lyn Johnson**, B.S., M.S. (The Ohio State University), 2015. *Adjunct Instructor of Mathematics and Statistics*
- Tonya Kerber**, A.A.S. (James A. Rhodes State College), B.S.N. (Western Governors University), 2019. *Adjunct Instructor of Nursing*
- Terry Kindig**, B.A. (Defiance College),M.A., (University of Toledo), 2020. *Adjunct Instructor of English*
- Georg Klaas**, B.A. (St. John's University), M.M. (Indiana University), 2008. *Adjunct Instructor in Music*
- Katie Kuhn**, B.A. (Ohio Northern University), M.E. (Ashland College), 2011. *Adjunct Instructor in Communication Arts*
- Dale Laukhuf**, B.M.Ed. (Bowling Green State University), 1972. *Adjunct Instructor in Music*
- Abigail E. Linhardt**, B.A., M.A. (The University of Findlay), 2018. *Adjunct Instructor of English*
- Omar Lozano**, B.A. (Lee University) M.M. (University of Akron), 2016. *Adjunct Instructor in Music*
- David E. Lusk**, B.S. (Ohio Northern University), 1991. *Adjunct Instructor of Chemistry*
- Vicki S. Mills**, B.S. (Ohio Northern University), M.M. (John Hopkins University) 2012. *Adjunct Instructor in Music*
- Magda M. Molnar**, B.S. (Ohio Northern University), 2016. *Adjunct Instructor of Biological Sciences*
- Heather Moore**, B.S.N. (Ohio Northern University), M.S.N. (Lourdes University), 2019. *Adjunct Instructor of Nursing*
- Jessica Niese**, B.S.N. (Ohio Northern University), 2019. *Adjunct Instructor of Nursing*
- Timothy L. Opp**, B.S. (University of South Carolina), B.A. (University of Findlay), M.S. (The University of Findlay), 2001. *Adjunct Instructor of Physics.*
- Gene Parker**, 2008. *Adjunct Instructor in Music*
- Rachel M. Rader**, B.S., MAT Mathematics (Bowling Green State University), 2000. *Mathematics Specialist and Adjunct Instructor of Mathematics*
- Shantanu Rao**, B.Pharm (DAVV University, India), Ph.D. (University of Toledo), 2019. *Adjunct Instructor of Pharmacy*
- Paul Reffner**, B.A. (Indiana University) 2018. *Adjunct Instructor in Business*
- Megan Rich**, B.S.B.A., M.P.P.A. (Ohio Northern University) 2019. *Adjunct Instructor in Business*
- Teresa Richard**, A.S.N. (University of Saint Francis), B.S.N. (Ohio Northern University), 2013. *Adjunct Instructor of Nursing*
- Janet Roll**, B.A. (Otterbein), M.S., Ph.D. (Bowling Green State University), 2003. *Adjunct Instructor of Mathematics*

**Aaron Sargeant**, B.S. (Ohio Northern University), D.V.M. (The Ohio State University), 2010. *Adjunct Instructor of Biological Sciences*

**Joanne B. Schietz**, B.S. (St. Joseph College), M.A. (The Ohio State University), 2015. *Adjunct Instructor in Management*

**Katie Schroeder**, B.S.N. (Ohio Northern University), 2012. *Adjunct Instructor of Nursing*

**Burlin L. Sherrick**, B.S.M.T. (Medical University of South Carolina), 2002. *Adjunct Instructor of Biological Sciences*

**Florin Simioanca**, B.M. (G. Dima Music Academy), M.M. (Bowling Green State University), 2010. *Adjunct Instructor in Music*

**Alan M. Smith**, B.M., M.M., D.M. (University of Texas at Austin), 2018. *Adjunct Instructor of Music*

**Jeffrey P. Smith**, B.S. (Miami University), M.A.TESOL (The University of Findlay), 2009. *Adjunct Instructor of ISTP; Director of Global Initiatives*

**April Spence**, A.A.S. (James A. Rhodes State College), B.S.N. (Grand Canyon University) 2019. *Adjunct Instructor of Nursing*

**Jessica Spiese**, B.S. (Alvernia University), Ph.D. (State University of New York College of Environmental Science and Forestry), 2017. *Adjunct Instructor of Chemistry*

**Pamela Rae Staton**, B.A. (Ohio Northern University), M.A. (Liberty University) 2019. *Adjunct Instructor of Art*

**Rory W. Stauber**, B.S.Ed. (Indiana University), M.Div (Christian Theological Seminary), M.Phil., Ph.D. (Drew University), 2011. *Adjunct Instructor of Religion*

**Shana Tachikawa**, B.A. (Ohio Northern University), M.B.A. (The University of Findlay), 2014. *Adjunct Instructor of Communication Arts*

**Adam Vermillion**, B.A. (Ohio Northern University), M.A. (Bluffton University), 2016. *Adjunct Instructor of History*

**Juergen A. Waldick**, BA (American University), JD (Ohio Northern University), 2013. *Adjunct Professor of Law*

**Heidi Waldock**, A.A.S. (James A. Rhodes State College) B.S.N. (Ohio University), 2019. *Adjunct Instructor of Nursing*

**Jonathan E. Wey**, B.A. (Indiana University), M.M. (Butler University), 2015. *Adjunct Instructor in Music*

**Amanda Wischmeyer**, B.F.A. (Ohio Northern University), 2019. *Adjunct Instructor of Dance*

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