

# Academic Calendar

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## 2017-2018

### Fall Semester 2017

Classes Begin	Wednesday, August 23
Last Day to Register/Add Classes	Tuesday, August 29
Last Day to Drop without a W	Tuesday, August 29
Labor Day, No Classes	Monday, September 4
Fall Break, No Classes	Saturday-Tuesday, October 7-10
Last Day to Drop/Withdraw with W	Friday, November 10
Thanksgiving Break, No Classes	Wednesday-Sunday, November 22-26
Reading/Study Day, No Classes	Thursday, December 7
Final Exams	Friday-Thursday, December 8-14
Last Day of Term	Thursday, December 14

### Spring Semester 2018

Classes Begin	Monday, January 8
Last Day to Register/Add Classes	Friday, January 12
Last Day to Drop without a W	Friday, January 12
Martin Luther King, Jr. Day, No Classes	Monday, January 15
Spring Break, No Classes	Saturday-Sunday, March 3-11
Easter Break, No Classes	Thursday-Sunday, March 29-April 1
Last Day to Drop/Withdraw with W	Friday, April 6
Reading/Study Day, No Classes	Thursday, April 26
Final Exams	Friday-Thursday, April 27-May 3
Last Day of Term	Thursday, May 3
Commencement	Saturday, May 5

**Summer 1 2018** Monday, May 14 - Friday, June 15

**Summer 2 2018** Monday, June 18 - Friday, July 20

# The University

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## History

The University of Evansville, an independent, United Methodist Church-affiliated university, holds a strong position in character and quality among institutions of higher education throughout the nation. With five colleges and schools, including the Harlaxton College in England, the University provides outstanding educational opportunities in the liberal arts and sciences as well as in selected professions. The University offers more than 80 academic areas of study and a full range of degree programs, including associate's, bachelor's, master's, and doctoral degrees, certification programs, and adult education classes. Approximately 2,700 full-time and part-time students in credit programs from 42 states and 55 countries study on its beautiful 75-acre campus.

Founded in 1854 as Moores Hill Male and Female Collegiate Institute in southeastern Indiana, the school was relocated to Evansville in 1919 and renamed Evansville College. In 1967, after continued growth and organizational restructuring, the name was changed to the University of Evansville with the approval of the Indiana General Assembly.

Metropolitan Evansville is located on the banks of the Ohio River in southwestern Indiana. The city of about 122,000 residents serves as the cultural, industrial, and retail center for the Tri-State region encompassing southern Illinois, western Kentucky, and southern Indiana. Evansville is a comfortable drive from Cincinnati, Indianapolis, Louisville, Nashville, and St. Louis.

## Mission

### A Mission of Learning

The University of Evansville is dedicated to active learning and scholarship. We are committed to the liberal arts and sciences as a basis for intellectual and personal growth. The University endeavors to prepare women and men for lives of personal and professional service and leadership. The University is aware of the challenges of living in an international community and therefore adopts a global view in its programs and its vision.

The University of Evansville preserves its independent nature and values its ties to The United Methodist Church. It emphasizes undergraduate education and supports an array of liberal arts and sciences and professional programs. The University selects talented and motivated students and faculty. The student-faculty ratio promotes individual attention and optimal learning. The University values learning as a means of attaining freedom from ignorance and prejudice. Because education is a lifelong process of critical inquiry, the University commits resources to continuing education programs in the greater community.

## Educational Objectives

The following educational objectives reflect the mission and character of the University of Evansville as well as nationally-recognized best practices for a liberal education that equips students to compete and thrive in an increasingly complex global society. Recognizing that a well-rounded education has important curricular and co-curricular components, the University envisions integrative learning that emphasizes connections within and between general education and the major course of study and that brings together diverse experiences from campus, community, and the larger world.

Graduates of the University of Evansville will:

### **Acquire broad foundational knowledge of the liberal arts and sciences through the general education program, including:**

- Appreciation for creativity and artistic expression
- Knowledge of historical and cultural developments
- Insight into human behavior and social relations
- Understanding of the physical and natural world
- Cultivation of an international perspective

### **Develop and improve intellectual and practical skills, including:**

- Written and oral communication
- Critical and creative thinking
- Quantitative literacy
- Problem-solving and research
- Collaboration and leadership

**Understand, develop, and demonstrate personal and social responsibility, including:**

- International citizenship
- Intercultural competence and appreciation of diversity
- Ethical reasoning and behavior
- Civic engagement, local and global
- Commitment to mental, physical, and spiritual well-being
- Commitment to lifelong learning
- Gain a depth of knowledge and competency in one or more disciplines of their choice

A University of Evansville education goes well beyond these objectives, which are intended merely to establish the common core of knowledge and skills upon which our students will build as they address contemporary and enduring questions, pursue personal growth, and prepare to engage the world as informed, ethical, and productive citizens.

## Accreditation

The University of Evansville is accredited by the Higher Learning Commission. Information about the University of Evansville's accreditation can be obtained through the Higher Learning Commission; 230 South LaSalle Street, Suite 7-500; Chicago, Illinois, 60604-1411; hlcommission.org; 800-621-7440.

The University of Evansville is approved by the University Senate of The United Methodist Church. Additional accrediting bodies include: Association to Advance Collegiate Schools of Business International, National Association of Schools of Music, Accreditation Commission for Education in Nursing, Council for the Accreditation of Educator Preparation, Indiana Department of Education, Commission on Accreditation of Athletic Training Education, Commission on Accreditation in Physical Therapy Education, and The Accreditation Review Commission on Education for the Physician Assistant. The civil, computer, electrical, and mechanical engineering programs are accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org). The computer science program is accredited by the Computing Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

Approved by the National Strength and Conditioning Association, American Chemical Society, and the American Music Therapy Association, The University of Evansville is also a member of the National Association of Independent Colleges and Universities, Association of Schools and Colleges of The United Methodist Church, and the Association for Continuing Higher Education.

Because of accreditation by or membership in these organizations, qualified graduates are regularly accepted with full credit by graduate and professional schools throughout the nation.

# Admission

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## Freshman Applicants

The University of Evansville seeks motivated students who desire an interactive learning experience within a close-knit academic and social community. In high school, students should follow a college preparatory program minimally including four years of English, three social sciences, three lab sciences, three mathematics courses, and strongly recommend two years of foreign language. Grade point average (GPA), course selection, standardized test scores, class rank, writing sample, and counselor evaluations are used to determine a student's admissibility. Extracurricular activities are also considered.

Students should submit the following information in applying to the University of Evansville: a completed application with official high school transcript and SAT or ACT scores. An essay and a counselor recommendation form are recommended. Early Action deadline is December 1, with notification by December 15. Applications are accepted on a rolling basis after December 1 as space is available. Accepted students deciding to enroll at the University should send a nonrefundable \$300 deposit by May 1 to reserve their place in the freshman class.

## Transfer Students

Transfer students are degree-seeking students who have graduated from high school or received their GED and have been enrolled at a regionally accredited college or university at any time since graduation or earning the GED. Courses with a grade of C- or higher will be considered for transfer credit to the University of Evansville. Interested transfer students should submit a transfer application and official transcripts from all post-secondary schools attended. Students with fewer than 24 credit hours must also submit an official high school transcript and standardized test scores. Transfer students may also submit a personal statement.

Transfer students are admitted on a rolling basis. Notification of admission status will be sent after a completed application is received, reviewed, and processed. Transfer students must send a nonrefundable \$300 deposit when they decide to enroll at the University.

## Re-entry Admission

Students who have formerly been enrolled at the University of Evansville as degree-seeking and who wish to re-enroll following a semester or more of absence need to complete an application for re-entry admission. If the student has been enrolled elsewhere since leaving UE, all transcripts and a Dean of Students Recommendation form from the most recently attended university are needed as well. Formerly admitted students who have earned 10 credit hours or more since their departure from UE are considered transfer students and need to reapply for admission as a transfer student.

Re-entry students are admitted on a rolling basis. Notification of admission status will be sent once the application has been fully reviewed and processed. Re-entry students must send a non-refundable \$300 deposit when they decide to re-enroll at the University.

For questions concerning graduation under a particular catalog, please refer to the section titled Academic Policies and Procedures.

## Part-Time Students

Students who wish to take classes toward a degree, whether they are full-time or part-time, must meet regular admission standards as stated by the Office of Admission.

For more information and application materials, students should contact:

*Office of Admission*  
University of Evansville  
1800 Lincoln Avenue  
Evansville, Indiana 47722  
812-488-2468  
800-423-8633, ext. 2468  
admission@evansville.edu  
www.evansville.edu

## International Students

The University of Evansville welcomes international students to our campus. International students should submit an international student application online, official transcripts of all high school and university work, official TOEFL or IELTS scores, and proof of financial support for the first year of college expenses. Undergraduate applicants must score at least 61 on the Internet-based TOEFL or 5.5 on the IELTS test unless otherwise specified by the degree program. Students not receiving the minimum TOEFL or IELTS score may choose to start at the University of Evansville's Intensive English Center. For more information, contact:

*Office of International Admission*  
University of Evansville  
1800 Lincoln Avenue  
Evansville, Indiana 47722 USA  
001-812-488-1392 or 001-812-488-2146  
international@evansville.edu  
www.evansville.edu

All students whose native language is not English must take the Michigan Test of English Language Proficiency in addition to the University's writing skills test as a part of registration for the first term. Test results determine placement in appropriate English credit-bearing courses.

## Special Students

Students not wishing to pursue a degree may take courses at the University as "special students." Special students are granted permission to earn up to 24 credit hours at UE. After earning the first 24 hours of credit, an application for admission must be submitted or a special student extension must be requested. Special students are defined as the following:

- Visiting/Transient Students are currently enrolled at another accredited college or university who wish to take courses at UE but plan to graduate from their home institution
- Concurrent Students are currently enrolled in high school or are homeschooled and wish to take courses at UE
- College Graduate Students have a college degree but need additional undergraduate credit to earn special licensing or to prepare for graduate school
- Personal Enrichment/Non-Degree Seeking Students have graduated from high school or earned their GED, regardless of age, who wish to take courses for personal enrichment

Admission criteria are different for each special student category. For more information and a special student application, contact:

*Office of the Registrar*  
University of Evansville  
1800 Lincoln Avenue  
Evansville, Indiana 47722  
812-488-2600  
registrar@evansville.edu  
www.evansville.edu

# UE Guarantee

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## New Students

Beginning with the incoming class of Fall 2016, new UE students will be covered by the UE Guarantee. The Guarantee will rely on each student's commitment to follow a list of practical guidelines in exchange for the University's assurance that required courses are available, personal academic plans are developed, and personal counseling is made available. To qualify for the Guarantee, students must pursue a course of study that is intended for four-year completion\*, have appropriate high school and English language proficiency preparation, and follow the guidelines below:

- Be a full-time, degree-seeking freshman student who follows the outlined course of study plan for graduation published by the academic department and maintains that program's academic progression and requirements.
- Successfully complete all prerequisite and required courses and GPA requirements each year to move forward in a declared major.
- Maintain full-time, consecutive enrollment for all four years in a course of study approved by the advisor.
- Maintain satisfactory academic progress as defined by the University registrar on page 45.
- Receive no academic or judicial sanctions as defined in the Student Handbook that would delay graduation.
- Some professional programs\* and some experiences (such as co-ops, GAP, and certain study abroad travel) may require more than four years to complete. For such programs, if the prescribed academic plan is followed and a student fails to graduate on time, UE will provide the hour or hours needed to complete the degree not to exceed one year (room and board not included).
- Changing majors after the first semester to/from programs like nursing, engineering, or music can prevent graduating in four years as these programs curriculum begin the first semester of the first year.

\*Programs requiring more than 4 years include: music therapy, music education, clinical laboratory science, and engineering. More than one major, or multiple minors may also extend required time for a degree.

## Current Students

The UE Guarantee applies to incoming freshmen who matriculate at the University of Evansville beginning in Fall 2016. However, since the Guarantee is based on the quality of our existing programs, all current enrolled students benefit directly from the institutional resources the Guarantee ensures.

- Small class sizes enable all students' one-on-one access to high quality faculty engagement and mentorship.
- Internships and experiential education opportunities are an integral part of a UE education that helps our graduates be successful. All students and alumni have full access to UE's Center for Career Development resources now and after graduation.
- All freshmen entering in the fall 2015, except those receiving financial support from a non-U.S. governmental entity, received institutional financial aid.
- All UE students have the opportunity to study abroad. Additionally, a student's financial aid package applies to study abroad at Harlaxton College, which makes the Harlaxton program particularly affordable.

If you are a current student and have questions about the UE Guarantee, please contact the Office of the Registrar at 812-488-2600 or [registrar@evansville.edu](mailto:registrar@evansville.edu).

# Financial Aid

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The University of Evansville is eager to see that students have the opportunity to obtain an education that will enable them to maximize their abilities and to be of the greatest service to society. It strives to adhere to a consistent and equitable approach in the awarding of student financial aid. Many students rely on financial aid to help with college costs, and over 90 percent of the University's full-time students receive some type of financial assistance.

The University demonstrates its commitment to making high quality education affordable by offering several types of merit scholarships and awards as well as need-based assistance in the form of grants, loans, and on-campus employment. Students often have some combination of the four types of aid. Students are free to accept or reject any part of the financial aid offered. First-time applicants to UE are considered for scholarships and merit awards when they apply for admission. These awards are made possible through the generous gifts of donors.

Although the University is eager to help students, it believes that the principal responsibility for financing an education lies with students and their families who are expected to contribute as much as is reasonably possible toward education costs. The University's financial aid program exists primarily to help students who, without such aid, would be unable to attend UE.

## Needs Analysis and Deadlines

The University adheres to the principles of financial aid administration established by the National Association of Student Financial Aid Administrators. To help judge student need and distribute financial aid fairly, the University asks that students and parents complete the Free Application for Federal Student Aid (FAFSA) on an annual basis. Submitting this form to the federal processor so that it is received by April 15<sup>th</sup> is mandatory to apply for assistance from the State of Indiana and is highly recommended for all students. Applications received after this date will be processed on the basis of funds available. To be eligible for virtually all of the assistance administered by the Office of Financial Aid, students must be enrolled full-time (12 or more credit hours).

## Establishing Financial Aid Eligibility

Students must first be admitted to the University of Evansville before any type of financial aid can be offered or processed. International students must apply through the UE Office of International Admission and are eligible only for UE scholarships and UE work-study.

In order to be eligible for federal and state financial aid, a student must:

- Have a high school diploma or GED
- Be a US citizen or eligible noncitizen
- Have a valid Social Security number
- Comply with Selective Service registration, if male
- Not be in default on any federal student loan or owe a refund on a federal student grant

Continuing eligibility for federal and state financial aid requires that students file the FAFSA annually, maintain satisfactory academic progress, not be convicted under federal or state law of the sale or possession of drugs while receiving federal student aid, and continue to be degree-seeking students enrolled in appropriate aid-eligible credits.

Incoming freshmen will be notified beginning in December about action taken on their applications. Returning students will receive their award notification in June.

## UE Merit-based Scholarships

Merit-based scholarships are awarded only at the time of acceptance to UE. The types of scholarships offered, standards for selection, amounts, and renewal criteria may change with each new academic year. Awards are administered throughout the student's UE career according to the policy in place at the time the award is offered. University of Evansville merit-based scholarships are available for full-time enrollment during fall or spring semesters. Details about renewing UE merit-based scholarship can be found in the UE Financial Aid Award Guide available online at [evansville.edu/financial\\_aid/policies.cfm](http://evansville.edu/financial_aid/policies.cfm).

Neither University of Evansville merit-based scholarships nor UE need-based grants are available for students in programs administered by the Center for Adult Education, RN to BSN, or Transition to Teaching; however, need-based aid from federal and State of Indiana sources may be available.

## Need-based Financial Aid

The University of Evansville assesses eligibility for all forms of need-based financial aid through the Free Application for Federal Student Aid (FAFSA). Need-based aid may come from federal, state, and University sources, and may include grants (gift assistance that is not repaid), student loans (repaid by the student after college), and federal work-study (a job on campus).

We encourage all UE students to file the FAFSA annually beginning October 1st each year for the next academic year. Indiana residents must file by April 15th each year to be considered for state grants. Students should file no later than May 1st to ensure maximum consideration for all forms of need-based aid for the next academic year. Each type of need-based aid has specific rules that govern its use, and details are offered in the UE Financial Aid Award.

## Veterans Benefits

Information on all veteran educational benefits is available from the Department of Veterans Affairs online at [www.gibill.va.gov](http://www.gibill.va.gov). Campus advisement of veterans regarding VA educational benefits is conducted through the Office of Financial Aid in conjunction with the UE Office of Veterans Affairs.

## Duration

Financial aid from the University and/or state resources for full-time students is normally available for eight semesters only or when requirements for the first bachelor's degree have been met, whichever comes first. However, students may apply for the continuation of University need-based aid for a fifth year if extenuating circumstances have precluded the student from obtaining a degree in four years. Federal Pell Grant and Federal Direct Loans may be available for a fifth year based on need as demonstrated on the FAFSA. UE students enrolled in programs designed to last longer than four years may be eligible for institutional aid for the standard length of their program.

## Satisfactory Academic Progress Policy

The United States Department of Education (Higher Education Act of 1965, as amended) requires that students maintain satisfactory progress toward completing their degree in order to receive financial aid. The Office of Financial Aid is required to check three standards: quantitative (pace of progression), qualitative (GPA), and maximum time frame for receiving aid.

These standards, known as Satisfactory Academic Progress (SAP), govern eligibility for students who want to establish or continue aid eligibility for all federal, state, and institutional financial aid programs including grants, scholarships, work-study, and student and parent loans. Many private loans also require SAP.

SAP applies to a student's entire degree program, including terms (fall, spring, and summer) in which financial aid was not applied for or disbursed.

**The UE Office of Financial Aid reviews all three standards of Satisfactory Academic Progress at the end of each semester (fall, spring, and summer). Satisfactory Academic Progress will be measured at the end of each semester for all students. Both Summer 1 and Summer 2 terms combine to create one summer semester for financial aid purposes.**

## Quantitative Standards (Pace of Progression)

Students must, at a minimum, successfully complete 67 percent of all credit hours attempted. Every May, after spring grades are posted, a student's total credit hours successfully completed (earned) will be divided by the credit hours attempted to determine whether the 67 percent completion rate requirement has been met.

**Completed (earned) credits:** Successfully completed credits include grades of A, B, C, or D (including plus or minus) and credits taken pass/fail, in which a P was earned. Unsuccessful grades consist of F, W, I, classes taken for audit, or any other grade that does not result in completed credits. Credits earned by examination will be considered completed credits.

**Attempted credits:** All credit hours for which a student registers at UE, those transfer credits that count toward the UE degree, and credits earned by examination are included in attempted credits. Grades of I or W will count as hours attempted, but not completed. If incompletes are later completed, they will be reflected when progress is again checked, or sooner, at the student's request.

**Transfer Credits:** Transfer credits that apply to a student's UE degree are included in both the credits attempted and the credits earned when calculating the completion percentage. Credits received for remedial courses or for courses that are not applicable to the student's UE degree are not included in either credits attempted or earned.

**Repeated Courses:** Courses that are retaken to improve a grade are counted in attempted hours each time the course is taken but only one passing grade is counted toward the credit hours earned in the completion rate. Students may retake a class for which they have previously received a grade of "F" as many times as it takes to successfully complete the class. However, students may only repeat a course one time in which they have received a passing grade. After one allowable time, the student cannot use federal assistance for future repeats. However, if the course is added to full-time enrollment of 12 or more credit hours, the



student can receive federal aid based on full-time status.

**Part-time Students:** Cumulative GPA requirements are the same as for full-time students. The number of semesters required to complete the program will depend on the hours registered. Students must successfully complete the majority of the credit hours attempted each semester and maintain a 67 percent cumulative completion rate. However no student will receive financial aid once 150 percent of the required credit hours to complete the program have been attempted.

**Second Degree Students:** Officially accepted credits that apply to the degree program will count toward both credit hours attempted and credit hours earned.

## Qualitative Standards (GPA)

Undergraduate students admitted to UE as freshman must have earned a minimum cumulative GPA of 2.0 by the end of their second academic year (4<sup>th</sup> regular semester) and each semester thereafter. Before the end of the 4<sup>th</sup> semester, these students must have the minimum cumulative GPA as shown below:

Credit Hours	Earned GPA
Fewer than 30	1.6
30-59.99	1.9

All other students must maintain a minimum cumulative GPA of 2.0 at the end of each semester.

**Note:** UE Merit-based Scholarships may have higher GPA expectations. View GPA requirements at [Evansville.edu/financialaid/scholarshiprenewal.cfm](http://Evansville.edu/financialaid/scholarshiprenewal.cfm).

## Maximum Time Frame for Eligibility

**Federal Aid Standards:** Federal regulations govern the maximum length of time a student may receive federal aid. For students pursuing a bachelor's degree, this timeframe is defined as 150 percent of the scheduled length of the program. For example, students in an academic program requiring 120 credit hours may attempt up to 180 credit hours (150 percent of 120 is 180 hours). Students pursuing an associate's degree requiring 72 credits may attempt up to 108 credit hours (150 percent of 72 is 108 hours). Other degree programs with differing credit hour requirements will have up to 150 percent of the required hours as their maximum. All UE attempted hours, including hours taken in a change from one major to another will apply toward the 150 percent total. For transfer students, the number of transfer credit hours accepted at the point of admission to UE will be used to calculate the student's remaining eligibility for the 150 percent maximum time frame calculation. Second undergraduate degree students are only eligible to receive loan funds. Students enrolled in a degree program which is equal to or lower than a degree already earned, will have the previous degree's accepted credit hours applied toward the student's current certificate or degree. The accepted credit hours will be counted toward the 150 percent maximum time frame calculation.

**State of Indiana Grants:** Full-time students in four-year degree programs may receive Indiana grant aid for a maximum of eight semesters or until the first bachelor's degree is earned, whichever comes first.

**University of Evansville gift-assistance:** For academic programs designed to last four years, University of Evansville gift-assistance (scholarships and grants) are available for four years, or eight semesters, or until the first bachelor's degree is earned, whichever comes first. If a student finds that he will not graduate in four years, the student may appeal for an extension of the aid. Appeal forms for Fifth Year of UE Aid are available in the Office of Financial Aid.

*Programs that are formally designed to last longer than four years have very specific policies governing aid renewal. See a counselor in the UE Office of Financial Aid for assistance.*

**Official aid denial notification:** Both a letter and an e-mail to the student's UE e-mail address will be sent each May notifying students who are ineligible for further financial aid until deficiencies are rectified. Students are responsible for maintaining awareness of their SAP status for aid renewal whether or not they receive the official notifications. The Office of Financial Aid is not responsible for address changes that are not reported or for other problems with postal mail or e-mail delivery.

**Correcting Academic Deficiencies:** Students who fail to meet the above standards will be ineligible for financial aid. The summer can be used at the student's expense to correct the deficiencies. It is important to remember that grade deficiencies can only be corrected at UE, but credits to correct a deficiency in credit hours earned can be taken elsewhere and transferred to UE through arrangement with the Office of Academic Advisement. Students may request a review of their progress when a grade is changed, regardless of when that change occurs.

**Appeals to regain eligibility:** A student who fails to meet these standards and has lost eligibility for financial aid may appeal this decision. Appeals must be in writing and must be accompanied by appropriate supporting documents. In the appeal, the student must explain why he or she was not making progress and what has changed so that he or she will begin making progress. Appeals should be submitted to the Office of Financial Aid at least three (3) weeks before the beginning of the student's next semester of attendance to allow time for processing.

Reasons that may be acceptable for appeal are: 1) serious illness or accident affecting the student; 2) death, accident, or serious illness in the student's immediate family; 3) change in academic program; 4) or other serious extenuating circumstances. The reasonableness and likelihood of the student's ability for improvement to meet the appropriate standards for the degree will be taken into consideration. The student is limited to two appeals. Appeals will be approved or denied in writing, and a letter sent with academic expectations attached. If approved, the student will be placed on Financial Aid Probation for one semester and aid will be granted. If the student cannot meet SAP by the end of the probationary semester, the student must complete and submit to the Office of Financial Aid a SAP academic plan that shows when the student will be meeting SAP.

If the appeal for aid is denied, the student may choose to enroll without using financial aid in an effort to repair the SAP deficiencies. Students may request a review of their record following any term. If the SAP standards are met at the time of review, financial aid eligibility may be regained for subsequent terms of enrollment that year.

## Financial Aid and On-Campus Residency Requirements

Most students are required to live in University-approved housing when they enter UE. For most students, the full renewal of UE financial aid (scholarships or grants) requires continued residency in UE-approved housing, even after satisfying their on-campus residency requirement. The residency requirements and associated aid policies differ for freshmen and transfers.

**FRESHMEN:** Freshmen\* **must live in UE-approved housing for two years**, or the equivalent of four semesters. The Office of Residence Life may grant an exemption if the student meets one of the following criteria:

1. The student's local residence is with parents or legal guardians in Vanderburgh or contiguous counties;
2. The student has attained the age of 21 prior to the start of the academic year;
3. The student is married and/or lives with a dependent.

*\* Residency requirement also applies to freshmen transfers (those entering UE in January after one semester at another institution). International students who have participated in the Intensive English Program may count their semester(s) in residence toward this requirement.*

**TRANSFER STUDENTS:** Transfer students who have not attained 60+ academic credit hours by the start of the academic year **must live in UE-approved housing when entering UE**. These hours can be a combination of hours earned at previous institutions and UE hours (excluding bridge, early-college, dual-credit, and advanced placement credit). Students with fewer than 60 hours may also request an exemption from the Office of Residence Life if they meet one of the following criteria:

1. The student's local residence is with parents, legal guardians, or immediate family members who are over the age of 21. Local residence must be in Vanderburgh or contiguous counties;
2. The student has attained the age of 21 prior to the start of the academic year;
3. The student is married and/or must live with a dependent.

**Office of Residence Life:** Information and details regarding housing and meal plans are found at [www.evansville.edu/residence/office](http://www.evansville.edu/residence/office).

**FINANCIAL AID REDUCTION:** Students who **were required to live in UE housing when entering UE**, and who choose to move off campus after satisfying the Office of Residence Life's residency requirement, will experience an annual reduction to their UE-funded financial aid of **\$4,500** (\$2,250 per semester). This reduction of aid will not apply to students who have elected to live on campus but later move off campus to live at home with parents in approved counties or to live with a spouse or dependent. Documentation may be required.

**Regaining aid:** Students who lost aid as a result of moving off-campus may regain the original value of their aid if they return to UE-approved housing.

**Harlaxton and study abroad:** Students attending Harlaxton College for a semester are considered to be living in University-approved housing and will NOT experience a reduction to their UE-funded financial aid. Students in UE-approved study abroad programs will not experience a reduction as long as the study abroad experience provides a housing opportunity similar to UE.

**Ridgway Award:** Recipients enrolling in 2011-12 or earlier are required to live on campus to retain the Ridgway Award. Students who wish to return to live with parents should consult with the Office of Financial Aid for an evaluation of alternative UE merit scholarship eligibility.

Students who entered UE prior to Fall 2013 may view the policy related to financial aid and housing status at online at [evansville.edu/tuitionandaid/current.cfm](http://evansville.edu/tuitionandaid/current.cfm).

## Summer Aid

Work on campus, Federal Pell Grants, Federal SEOG, Federal Direct Loans, Direct PLUS loans, and private educational loans are the only forms of financial assistance available for students who wish to take summer classes. Students must take a minimum of six credit hours to be eligible for a federal loan in the summer. Summer is a "trailer," so eligibility for a federal loan in summer is based upon the year's eligibility for fall, spring, and summer. If a student borrows the maximum amount in the fall and spring, there will be no summer Direct Loan eligibility. Work on campus is not contingent upon enrollment during the summer, but only students who have not graduated and who will be returning to campus the following year will be eligible to apply. Students should contact

the Office of Financial Aid to obtain a summer application in late March before the summer term begins.

## For More Information

Details and specific information about all financial aid, including that from the University of Evansville as well as the federal and state governments, are in UE's annually published Financial Aid Award Guide.

## University of Evansville Financial Information Privacy and Safeguarding Guidelines

### Background

Adequately securing customer information is not only the law, but it also makes good business sense. Above all, it is our ethical responsibility to safeguard this information while it is in our possession. When we show that we care about the security of personal information, we increase the level of confidence in our institution. Poorly managed customer data can lead to identity theft. Identity theft occurs when someone steals a consumer's personal identifying information to open new charge accounts, order merchandise, or borrow money.

### Information Collected and Stored

As an educational institution, the University of Evansville collects, retains, and uses non-public financial information about individual students, as allowed by law, to provide services. Non-public financial information is collected from sources such as:

- Applications and/or other forms
- Financial transactions (checks, credit cards, and ACH)
- Information about transactions with us, our affiliates, or others
- Information we receive from consumer reporting agencies
- Information from governmental agencies

### Information Shared

The University of Evansville may disclose non-public financial information about students with our business affiliates and other affiliated third parties under certain circumstances to provide services. Any non-public financial information sharing is conducted in strict adherence to applicable law. The University of Evansville will not disclose any non-public personal information to anyone except as permitted under law.

### Who Receives Information and Why

The University of Evansville does not disclose any non-public financial information about our students, or former students, to anyone, except as permitted by law. We may exchange such information with our affiliates and certain nonaffiliated third parties (under limited circumstances) to the extent permissible under law to service accounts, report to credit bureaus, provide loan services, or provide other financial services related activities.

### How Information is Protected

The University of Evansville understands that the protection of non-public financial information is of the utmost importance. Providing for administrative, technical and physical safeguarding of students' privacy is our obligation. We restrict employee access to customer information only to those who have a legitimate business reason to know such information, and we educate our employees about the importance of confidentiality and customer privacy.

# Tuition and Fees for the Academic Year 2017-2018

TUITION	<u>Semester</u>	<u>Annual</u>
Full-time Undergraduate (12-18 Hours)	\$17,150.00	\$34,300.00
Each Additional Hour	960.00	
Part-time Undergraduate (Per Hr. 1-11 Hours)	960.00	
Physician Assistant – Graduate Level	19,150.00	38,300.00
HSA, MPH, and MSCE Programs (Per Hour)	920.00	
RN to BSN Program (Per Hour)	305.00	
Organization Leadership (Per Hour)	565.00	
Summer Sessions (Per Hour)	525.00	
Transition to Teaching	399.00	
Teaching (Associate/2 <sup>nd</sup> Degree)	315.00	
Public Services Administration (PSA)	5,070.00	10,140.00
Masters in Leadership	5,070.00	10,140.00
Masters in Athletics Training	11,340.00	22,680.00
<b>HARLAXTON - TUITION/ROOM/BOARD</b>		
Comprehensive Fee (Tuition, Room and Board)	23,140.00	
Services Fee – Harlaxton (Transports, Technology, Health & Wellness)	1,070.00	
<b>REGISTRATION AND/OR ACTIVITY FEES</b>		
Registration Fee – (Per Session) (Excludes FT students in Fall and Spring Semester)	50.00	
Student Activity Fee – Evansville and Harlaxton	163.00	326.00
Services Fee – Evansville	385.00	770.00
Technology Fee – (Excludes FT students in Fall and Spring Semester)	95.00	190.00
Technology Fee – Summer Session and Winter Session (Per Session)	35.00	
<b>HOUSING</b>		
<b>Residence Halls (Double Occupancy/Standard):</b>		
Hughes	2,825.00	5,650.00
Morton, Brentano, Hale, Moore, Powell and Schroeder	3,205.00	6,410.00
Jones Hall (formerly North Hall)	4,425.00	8,850.00
Villages	3,740.00	7,480.00
Townhomes	4,520.00	9,040.00
<b>MEALS</b>		
<b>Residence Hall Occupants</b>		
Purple 7	2,875.00	5,750.00
Prime 7	3,030.00	6,060.00
Orange 5	2,785.00	5,570.00
White 135	2,785.00	5,570.00
<b>Seniors in Residence Halls, Villages, and Townhouses</b>		
Ace Basic 60	1,210.00	2,420.00

Applied Music, per credit	400.00	Parking, per year	50.00
Practice Teaching – Administrative Fee	60.00	Credit by Exam, per credit hour	115.00
Practice Teaching, per week	32.00	Tuition Exchange, per year	250.00
Bridge/Dual Credit Program, per credit	125.00	Nursing Course Fee – Harlaxton	440.00
Co-Op, per period	390.00	Senior Scholars/Age 62 and up, per credit	125.00
Late Registration	190.00		

**Variable Section/Course Fees:** May apply depending upon specific course registration.

**Finance Charge:** 1.5 percent per month calculated on the month-end unpaid balance.

**Special Notes:** Independent Study classes for undergraduates are charged full/part-time rates. Rates are subject to change without notice.

## Institutional Charges and Financial Aid Refund Policy

All institutional financial aid will be refunded according to the institutional charges refund schedule shown below. In other words, all UE financial aid will be refunded according to the 100 percent, 80 percent, 60 percent, 40 percent, or 20 percent determination during the first four weeks. After four weeks, there are no refunds for such aid.

**Institutional Charges:** Tuition, on campus room and board, and the following fees: activity, registration, services, applied music, and any mandatory course related fees.

**Non-Institutional Charges:** All other fees and costs (special fees, books, insurance fees, off-campus living expenses, transportation expenses, and the like).

The amount of institutional charges that will be refunded is determined as follows:

- UE classes begin on Wednesday in fall and Monday in spring. Students who withdraw on or before the first day will receive a 100 percent refund.
- Students who withdraw or leave within the first week of class (Thursday through Wednesday in fall or Tuesday through Monday in spring) will receive an 80 percent refund.
- Students who withdraw or leave within the second week of class (next Thursday through Wednesday in fall or Tuesday through Monday in spring) will receive a 60 percent refund.
- Students who withdraw or leave within the third week of class (next Thursday through Wednesday in fall or Tuesday through Monday in spring) will receive a 40 percent refund.
- Students who withdraw or leave within the fourth week of class (next Thursday through Wednesday in fall or Tuesday through Monday in spring) will receive a 20 percent refund.
- After four weeks, there are no refunds for the above listed institutional charges.

## State Aid Refund Policy

The Indiana Commission of Higher Education (CHE) policy for refunds dictates that to be eligible for these awards, a student must be enrolled full-time at the end of the first week of the semester (census date). Hence, if a student completely withdraws from the University before the end of the first week, the student is not eligible for the state award, and the University must return 100 percent of the semester's award to CHE. After the first week, the student's state aid would be 100 percent earned, and like the UE aid and private aid mentioned above, there would be no refund if the student leaves. State aid consists of the Higher Education Award, Freedom of Choice Award, Student Performance Incentives, Twenty-first Century Scholarship, Minority Teacher and State Nursing Scholarships, Mitch Daniels Scholarship, and part-time grants.

## Veterans Benefits Refund Policy

The U.S. Department of Veterans Affairs requires all changes of enrollment to be certified within 30 days of action. For VA purposes, the effective date is the date the student withdrew or dropped the class. The U.S. Department of Veterans Affairs will process the information regarding change of enrollment and may establish a debt on the student, based on the effective date of the change. It is the responsibility of the student to satisfy any debt established on the student by the VA.

Students withdrawing from all classes in a semester will have the current, and any future certifications terminated. If the student completely withdraws on or before the first day of the term, the University of Evansville will return the tuition and fees payment received, directly to the VA, upon receipt of school debt letter. If the date of complete withdrawal is after the first day of the term, any credit balances that result from a refund of institutional charges will be issued to the student. In this case, the student will receive a debt letter from the Department of Veterans Affairs with balance due.

For students dropping a class or classes, an enrollment update will be submitted to the VA. Tuition and fees are reported specific to the remaining credit hours, as if those were the only courses taken during the entire enrollment period. The VA will determine if the change in hours/charges requires some percentage of repayment from the student. If debt is established, the student will receive a debt letter from the Department of Veterans Affairs with balance due.

## Federal Aid Refund Policy

Students are encouraged to meet with the Office of Financial Aid before changing enrollment by dropping a class or withdrawing from the University so they can be informed of the financial impact of their enrollment changes. Enrollment is set at census date each term (end of first week).

### I. All Programs, Except Center for Adult Education

This policy applies to all University programs, except those administered by the Center for Adult Education (CAE) and operate on a different academic calendar. Students enrolled in one of the University's CAE programs should refer to section (II) for the CAE refund policy. Refund information for summer is provided annually when summer course registration information becomes available to students.

#### Dropping Below Full-Time

Dropping a class starts with the Office of the Registrar. When a student drops a course(s) but continues as a part-time student (fewer than 12 semester hours), the tuition refund will be the difference between the initial billing and the revised billing multiplied by the percentage refund as outlined in the Institutional Charges Refund Policy. Students who drop below full-time during this refund period will have their eligibility for financial aid recalculated. Enrollment for federal and state financial aid will be set at census date each term, and federal and state grants will not be adjusted after census.

If a student drops below full-time after the first four weeks of the semester, there is no refund of charges or reduction of financial aid.

#### Students Withdrawing from All Classes

The official withdrawal process begins in the Office of the Dean of Students. The policy that determines the return of Title IV funds is defined by federal regulation and calculates earned federal financial aid on a per diem basis up to the 60 percent point in the semester. Federal financial aid that is considered "unearned" is returned to the appropriate source. The amount of earned federal aid is calculated by dividing the number of calendar days completed by the total number of calendar days in the semester. A calendar is developed each year and maintained in the Office of Financial Aid that outlines the percentage of federal aid earned during the first 60 percent of the term. There are no refunds (or return of Title IV funds) if the student attends classes after the 60 percent point as Title IV aid is considered to be 100 percent earned at that point.

There are two parts to a refund determination when the student withdraws from all classes.

1. Refund of institutional charges. The student's withdrawal date for institutional charges is the date the student submits the completed withdrawal form to the Dean of Student's Office. However, UE can determine a withdrawal date related to extenuating circumstances for a student who:

- (a) left without notification because of extenuating circumstances, or
- (b) withdrew because of extenuating circumstances but another party gave notification on the student's behalf.

Extenuating circumstances include illness, accident, grievous personal loss, or other such circumstances beyond the student's control. The dean of students makes the determination in such matters.

2. Reduction (refund to the program) of institutional, state, or federal financial aid. The student's withdrawal date for financial aid is determined based on whether the student officially withdrew from the University or stopped attending (walked away). For those who officially withdrew, the withdrawal date is the date the student signs the withdrawal form that is submitted to the dean of student's office. For those who stopped attending and failed all classes, the withdrawal date is the latter of the midpoint of the semester, the date the student last attended classes, or the last date of academically related activity such as taking a test.

#### Walk-Away Students

Students who simply "walk away" during a semester without officially withdrawing, and who earn all Fs or Incompletes will be assessed a \$500 administrative fee for subsequent processing of their refund calculation, once that has been determined.

### II. CENTER FOR ADULT EDUCATION PROGRAMS REFUND POLICY

If a student in the organizational leadership, global leadership, or public service administration program finds it necessary to completely withdraw from the University before the end of a semester, the withdrawal process begins in the office of the director of adult education where an official date of withdrawal is determined for institutional charges refund purposes. A

student's withdrawal date is determined using the same process as for the federal financial aid refund policy. The director of adult education may determine a different withdrawal date for institutional charges due to extenuating circumstances if such conditions exist and can be documented.

The University's Adult Education Program institutional charges refund policy treats each five-week class in the semester as a separate class. Students register and are billed for the semester at the beginning of the term, but refunds will be calculated based upon the five-week classes completed and/or the time in the five-week class when the withdrawal occurs. Full refunds for the semester will be given if the student cancels the enrollment before attending any class in the term. Refunds that occur during the semester will be calculated as follows for each five-week class:

During week one 75% refund\*

During week two 50% refund\*

During week three 0% refund\*

All other information relative to the withdrawal process is described in the regular policy and conforms to it.

### **Dropping Adult Program Courses in the Semester**

Federal financial aid eligibility is established by attending class. Students with Federal Pell Grants must begin attendance in each module. Because of the nature of the federal withdrawal policy, students who do not begin attendance in all modules and successfully complete those modules may have their aid prorated based on return of Title IV funds regulations.

### **Walk-Away Students from Adult Programs**

Students who simply "walk away" during a semester without officially withdrawing, and who earn all Fs or Incompletes will be assessed a \$500 administrative fee for subsequent processing of their refund calculation, once that has been determined. Students will be responsible for any amounts owed the University from the adjustment made under the refund policy.

### **III. Returning Federal Financial Aid to Accounts**

Unearned federal financial aid will be returned in the following order:

Federal Direct Unsubsidized Stafford Loan

Federal Direct Subsidized Stafford Loan

Federal Perkins Loan

Federal Direct PLUS Loan

Federal Pell Grant

Federal SEOG

TEACH Grant

Iraq Afghanistan Service Grant

The amount of aid to be returned is determined by the Federal Title IV Return of Funds calculation as provided by the U.S. Department of Education.

Any refunds of charges will be applied to the student's account and all adjustments for aid, loans, fines and non-refundable fees or deposits will be made before eligibility for a cash refund is determined. If there is a student account balance resulting from the adjustments, the student is responsible for payment.

Sample Return of Funds calculations are available in the Office of Financial Aid.

### **IV. ADMINISTRATIVE FEES**

#### **Official Withdrawals**

Students who officially withdraw from the University will be assessed a \$100 administrative fee.

#### **Unofficial Withdrawals (Walk-Away Students)**

Students who simply "walk away" during a semester without officially withdrawing, and who earn all Fs or Incompletes will be assessed a \$500 administrative fee.

### **V. Student and Institutional Responsibilities in Regard to the Return of Title IV funds**

The University's responsibilities include:

- a. Providing each student with information about the refund policy.
- b. Identifying students who are affected by the policy.
- c. Completing the Title IV return of funds calculation for those affected. Notice will be sent/given to student within 30 days of the withdrawal date of the amounts that must be returned to UE.
- d. Returning federal financial aid within 45 days to the Title IV programs any funds that were disbursed directly to the

student and which the student was determined to be ineligible for via the Return of Title IV funds calculation.

The student's responsibilities include:

- a. Cooperating with UE in establishing satisfactory repayment arrangements if it is determined that a repayment is due for a Pell Grant because of the withdrawal.
- b. Returning his or her share of unearned aid attributable to a loan under the terms and conditions of the promissory note.
- c. Making payment to the University for any student account balance that results from the adjustments to the account.

Payment in full or payment arrangement should be made within 30 days of the student receiving notice of what is owed.

*This policy conforms to the Federal Return of Title IV Funds (Section 668.22) regulations of the 1998 changes to the Higher Education Amendments. Title IV funds refer to the following federal financial aid programs: subsidized and unsubsidized Direct Stafford Loans, Federal Perkins Loans, Federal Direct PLUS Loans, Federal Pell Grants, Federal SEOG, and TEACH grants. Federal work-study funds are excluded from the refund calculation.*

## Cancellation of Housing and Food Service Contracts

When a student completely withdraws from all classes in the middle of the semester, UE housing and meal plan charges and refunds are governed by the Institutional Charges Refund Policy as "institutional charges." However, the policies governing new or continuing students who remain enrolled but wish to cancel housing and/or meal plan charges are administered by the UE Office of Residence Life.

Completion of the Housing and Meal Plan Registration on WebAdvisor constitutes a legal and binding agreement between the student and the University of Evansville. A personalized and dated contract is generated upon completion of the online agreement on WebAdvisor. All housing contracts are binding for the duration of the academic year. There are specific provisions and restrictions regarding contract cancellation requests. Information regarding these policies is found online at [www.evansville.edu/residencelife](http://www.evansville.edu/residencelife), in the student's personal contract, and in the Residence Life Handbook.

## UE Financial Aid Credit Balance Refund Policy

Students whose financial aid results in a credit balance will receive a refund within 14 days of the credit balance occurring unless the credit balance occurred before the term began, in which case, the refund will be issued within 14 days of the start of the term. A student may authorize UE to hold a credit on their account for future charges, but all credits will be refunded at the end of the award year.

Credit balances that result from a Federal Parent PLUS loan will be refunded or held per the borrower's request on the PLUS Loan Authorization form. Parents may choose to have the balance refunded to them, refunded to the student, or held on the student account for future charges.

Should a credit balance occur as the result of an overpayment, the excess will be refunded to the payer.

Refunds are processed automatically at least weekly once the term begins and enrollment has been verified. If the student has elected an electronic refund, it will be processed as a direct deposit into the student's bank account, using bank information provided by the student. If a student does not elect direct deposit, a paper check will be issued and mailed to the student's permanent home address. Refund checks will be held for pick-up in the Office of Student Accounts upon request. Unclaimed checks will be mailed to the permanent home address after seven days.

Regardless of any authorization provided by the student and/or parent, credit balances that resulted from a federal loan will be refunded to the student/parent at the end of the award year in which they were disbursed.

Uncashed and unclaimed refund checks will be credited back to the student's account and the funds returned to the program from which they came.

## Payment Policy

A schedule is published annually listing registration, billing, and payment dates. As a general rule, payment may be made in full or under a two-payment plan. The two-payment plan carries a 1.5 percent-per-month finance charge calculated on the month-end outstanding balance. (Copies are available upon request.)

## Responsibility of Charges

Students are responsible for all institutional charges. If any payment is not made when due, the entire balance, including accrued interest, shall, at the discretion of the University of Evansville, become due and payable on demand. In the event of any default, the student will be obligated to pay all collection costs and/or attorney fees incurred by the University of Evansville in the collection of these charges.



For more information about bills and payments, call the Office of Student Accounts at 812-488-2565.

# Campus Life

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In keeping with the mission of the University, a variety of programs and services are offered to students as part of the total educational process. The goal of this developmental effort is to assist all students in reaching their maximum potential. Both out-of-class learning experiences and support services are part of this effort.

## Student Handbook

Further information on student services and guidelines for student life are outlined in the Student Handbook available on AceLink or on the Student Life web page at [www.evansville.edu/offices/deanstudents](http://www.evansville.edu/offices/deanstudents). The Student Handbook includes important information regarding excused absences, formal grievance procedures, and the student code of conduct, sexual misconduct policy, and the academic honor code. Every student is expected to be informed regarding University policies and regulations as described in the Student Handbook and to abide by such policies. Any student desiring more than these brief descriptions is invited to call or stop by to meet the staff for information or assistance.

## Student Affairs

The University offers a distinctive educational experience that encourages personal transformation through a wide range of opportunities for intellectual, emotional, spiritual, and physical growth. By intentionally creating an environment of self-discovery, the Office of Student Affairs plays a key role in the educational mission of the University. Partnering with the campus to foster character development and community engagement, the office commits itself to personal interaction, quality services, collaborative education, and student empowerment. This commitment encourages and supports the journey of relevant and responsible adult life.

The Office of Student Affairs consists of the Offices of the Vice President for Student Affairs and Dean of Students, Center for Career Development, Counseling Services (including disability services), Cultural Engagement and International Services, Residence Life, Safety and Security, and Student Publications, as well as the Center for Student Engagement (includes Greek life and volunteer opportunities), the Crayton E. and Ellen Mann Health Center, and the Student Fitness Center.

Our staff is dedicated to the philosophy that student development begins with entry into the University, includes in-class and out-of class opportunities for personal growth and development, and continues through and after graduation.

## New Student Orientation

During the summer, Summer Orientation and Academic Registration (SOAR) sessions are held for all new students. During this program, new students have an opportunity to become acquainted with the campus, meet faculty members, administrators, and other students, and learn about academic procedures and student life. During SOAR, each new student meets with an academic advisor and registers for classes. Orientation programs are also provided for parents of new students.

An additional Welcome Week orientation takes place just prior to the start of fall classes. This multi-day program provides students with an opportunity to meet other freshmen as well as upperclassmen. Orientation participants are exposed to a variety of involvement opportunities available throughout the college experience. Information on campus life, academic assistance, and college adjustment issues is readily accessible to students through this special orientation program. Complete information on the orientation programs is mailed according to the following schedule: SOAR information is mailed in the spring; Welcome Week information is mailed in mid-summer. A special orientation for transfer students, STAR, is also held each semester.

## Safety and Security

The Office of Safety and Security is staffed 365 days a year, 24 hours a day. Information regarding services, policies, crime statistics, and emergency response procedures can be found at [www.evansville.edu/safety](http://www.evansville.edu/safety). For general assistance, students may call 812-488-2051. All emergencies should be reported to 812-488-6911.

## Counseling Services

The University of Evansville offers counseling services that are designed to help students with a variety of life issues as they make their way through the college experience. It is recognized that interpersonal, psychological, and developmental issues can interfere with learning, and ultimately, personal success. The University of Evansville provides a counseling program with nationally certified and licensed professional counselors to respond to the unique needs of university students so they can achieve maximum benefit from

their UE experience.

## Personal Development Counseling

Individual counseling is available for psychological or developmental issues such as school adjustment problems, self-esteem enhancement, relationship issues, depression, anxiety, substance abuse issues, and eating disorders. Health education and wellness programs are offered to assist students in making healthy lifestyle choices during their college careers.

## Crisis Intervention

Counseling Services is open from 8:00 a.m. to 5:00 p.m. Monday through Friday in the Ridgway University Center. Appointments may be made by calling 812-488-2663. Emergency counseling services are available after hours by calling the Office of Safety and Security at 812-488-2051 and asking for the counselor on call.

## Academic Counseling

Academic counseling is available to aid students in study skills, stress management, test anxiety, and time management.

## Health Education and Wellness Programs

The health education and wellness programs are offered to assist students in making healthy lifestyle choices during their college careers and as a foundation for lifelong lifestyle choices. These programs provide students with education, prevention, and intervention programs related to substance abuse and issues such as responsible sexual behavior, stress management, adjustment, anxiety, depression, and sexual assault.

## Information Disclosure

The Counseling Services staff abides by the professional ethical standards of the National Association of Social Workers. A counselor may not reveal information to anyone about a client unless the client gives written permission to do so. For more information, contact Counseling Services at 812-488-2663.

## Disability Support Services

The University of Evansville is committed to providing an accessible and supportive environment for students with disabilities and to treating all individuals in a fair and equitable manner. It is the policy and practice of the University of Evansville to comply with the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973. Under these laws, no otherwise qualified individual with a disability will be denied access to or participation in courses, programs, services, or activities at the University of Evansville.

## Procedures to Establish Eligibility

Students who wish to request accommodations must first establish eligibility by providing appropriate written documentation of the disability to Counseling Services, Room 204, Ridgway University Center. As the designated disability service providers for the University of Evansville, the counseling staff of the Office of Counseling Services coordinate the provision of appropriate and reasonable academic accommodations and support services for any qualified student with a properly documented disability. Each student should schedule an appointment to meet with the disability service coordinator (812-488-2663) for an individual consultation. During the consultation, the counselor and student discuss the current impact of the disability in the academic setting. After reviewing the student's medical and/or diagnostic records and meeting with the student and faculty member(s) as appropriate, the counselor makes recommendations for services or reasonable academic accommodations for the student. The medical records and disability documentation will be maintained in Counseling Services and used in accordance with applicable confidentiality.

## Procedures for Communicating with Faculty

If the student chooses to receive recommended services that require assistance from an instructor or other staff member, a release form signed by the student will allow the counselor or disability services coordinator to inform the necessary staff members about the student's disability. The counselor or disability services coordinator will be responsible for notifying each professor in writing about the student's approved accommodations as well as offering assistance to implement the accommodations if necessary.

It is the student's responsibility to request the accommodations from individual professors as needed. The student should make an appointment with each professor to discuss the accommodations that are needed for that particular course and to verify that the professor has received the accommodation letter. The student should give the professor two weeks advance notice of accommodation needs to allow adequate time for the professor to make arrangements. Professors often report that they receive an accommodation letter from the Office of Counseling Services, but that the student does not follow up by requesting the accommodations. This sometimes happens because a student feels that he or she will not require an accommodation in a particular course due to the manner in which the material is presented. It is the student's responsibility to request the accommodations he or she wants to use.

## Procedural Difficulties with Accommodation Requests

The professor is only required to make available the accommodations that are specified in the accommodation letter issued by Counseling Services. If students or faculty have difficulty with specific accommodation needs, the counselor or disability services coordinator should be contacted for assistance. If, as the semester progresses, the student feels that additional accommodations are warranted, the student should consult with the counselor or disability services coordinator to discuss other support services or options.

## Disability Advisory Committee

The Disability Advisory Committee is a committee set up to review atypical requests regarding disability accommodations and to make recommendations regarding requests that involve accommodations related to changes in curriculum or program. This committee is composed of representatives from the faculty, counseling and disability services, academic affairs, academic advising, and the registrar's office. The committee acts in an advisory capacity and submits written recommendations on each request to the vice president for academic affairs, who makes final decisions on the requests.

## Grievance Process Regarding Disability Accommodations

If a student is dissatisfied with the accommodations recommended by the counselor or disability service coordinator, the student should discuss this with the disability services coordinator or director of Counseling Services. If the student is still dissatisfied with the decision, the student will complete a grievance/appeal petition (available from the dean of students' office) and the request or complaint will be reviewed by the Disability Advisory Committee. The written petition must be submitted within 180 days of the initial complaint. The Disability Advisory Committee makes a recommendation to the executive vice president for academic affairs, who makes the final decision on the request.

## Subsequent Semesters

Students who wish to have academic accommodations must contact the Office of Counseling Services at the beginning of each semester to review progress, review the student's schedule and needs for the semester, and secure appropriate releases for notification of professors. The student is responsible for scheduling the appointment.

## Further Information

For further information contact Sylvia Buck, director of counseling services, or Debbie Brenton, coordinator of disability services, at 812-488-2663. Information regarding documentation guidelines and grievance procedures are available upon request.

## Center for Career Development

The Center for Career Development provides a primary link to the off-campus world of work for both students and alumni by offering a variety of career and job search related services. The office monitors employment trends; posts up-to-date online listings of full-time, part-time, temporary, and summer job opportunities; schedules on-campus interviews; maintains student résumé files in UE JobLink; compiles employer information; and coordinates a wide range of programs and activities designed to provide useful information on preparing for the world of work.

Actively involved in the University's experiential educational efforts, the office administers the cooperative education program and assists students who seek internships. Additionally, it offers individual career advising, career guidance software programs, and resources for students who are exploring various careers and majors. The office also provides mock interviews, group workshops in career research strategies, effective résumé and cover letter writing, interview techniques, and preparation for graduate school. A comprehensive website and entry into the world of work is found on the office's web page at [www.evansville.edu/careercenter](http://www.evansville.edu/careercenter).

## Community Service Initiatives

University of Evansville students, faculty, and staff enjoy a rich tradition of volunteerism within the Evansville community. Volunteering enhances life skills development and builds a sense of civic responsibility characteristic of an educated individual. These characteristics are highly valued by employers and critical to members of a democratic society.

Under the supervision of the director of student engagement, student volunteer coordinators match student volunteer interests with the needs of the surrounding community. Located on the second floor of the Ridgway University Center, students may call the office at 812-488-2538 from 8:00 a.m. to 5:00 p.m. Monday through Friday.

## Residence Life

Several housing options are available for full-time students. Seven residence halls are located on campus for single students. Six fraternities have living accommodations for their members. Several additional alternate housing units (the University Villages), including small cooperative houses, townhouses, and apartments, are also available to upperclassmen. Other students commute from their homes or prefer off-campus living in privately owned facilities.

Effective Fall 2013, all students must reside on campus for a minimum of two academic years or the equivalent of four full term semesters. Transfer students with less than 60 academic credit hours earned at previous institutions (excluding bridge, early-college, dual-credit, and advanced placement credit) are also required to live on campus or in University-sponsored housing.

Students who meet one of the following criteria may request an exemption:

1. The student has attained the age of 21 prior to the start of the academic year
2. The student's local residence is with parents or legal guardians (Transfer students may have a local residence with immediate family over the age of 21)
3. The student is married and/or must live with a dependent.

A complete description of residency requirements for students (including transfers) can be found on the University website and in the Student Handbook.

The residence halls are an integral part of the UE academic community and have been developed, staffed, and programmed to provide an environment that enriches the educational experience. Further information on the residence units, including regulations for residential living, may be found in the Student Handbook.

## Health Center

The Crayton E. and Ellen Mann Health Center is staffed by three licensed registered nurses and a part-time physician. Basic first aid, medication, and treatment for minor illness are provided at the center. Students who are seriously ill or require hospitalization will be referred to other facilities. In addition, the center provides health information and health counseling.

Full-time UE students are eligible for treatment of minor illnesses at the health center. A registered nurse is available during regular hours. Each student must be evaluated by a staff nurse prior to an appointment with a physician. Emergency procedures are in place at the center for students needing immediate care.

The University provides a health information form that must be completed by all students prior to registration for the first semester. The health information form requires immunization information and allows for the student to share health insurance information. Note: The University of Evansville strongly recommends that all students carry adequate health insurance.

The Crayton E. and Ellen Mann Health Center is located in Sampson Hall, next to the McCurdy Wing of the Schroeder Family School of Business Administration Building. The center's telephone number is 812-488-2033. The health center hours are posted on the University website on the student health center link at the beginning of each school year.

During summer sessions, the center's hours are limited. The health center is closed during semester breaks and some holidays. Hours may vary according to University needs.

## Diversity Initiatives

The University of Evansville is committed to creating an environment that celebrates the diversity of all cultures. The campus environment fosters a broader sense of community by providing all students with cross-cultural experiences and supporting the needs and interests of all students.

Programs offered throughout the year include guest speakers, film presentations, panel discussions, workshops, and forums designed to enhance awareness of cross-cultural issues and race relations.

## Religious Life

As a United Methodist Church-affiliated institution, the vision of the Office of Religious Life is to connect the soul of God to the heart of the University.

The mission of the Office of Religious Life seeks to support the expression of religious commitment through worship, service, study, and fellowship.

Neu Chapel represents the heart of religious life on campus and is a safe place for spiritual growth and interfaith exploration, where students can engage the spiritual dimension of life and be vitally connected to their faith tradition. Our freestanding chapel, built in 1965 includes a 350-seat sanctuary, the Office of the Chaplain, the Office of the Neu Chapel Organist, Grabill Lounge, the John Wesley Gallery, and the Kell Interfaith Prayer Room.

Ecumenical worship services and Roman Catholic Mass are held weekly in Neu Chapel, drawing vital leadership from across the campus and the local community. University Worship, led by students and the University chaplain, is held on Sunday at 10:30 a.m.; Roman Catholic Mass is held on Sundays at 1:00 p.m. and on Wednesdays at 9:30 p.m. A number of diverse Bible studies and fellowship groups are offered throughout the week by a team of campus ministers who represent a variety of religious traditions. The University chaplain is also available for individual spiritual formation and counseling.

Realizing our identity as a church-related institution, we are called to initiate and promote better relationships between Christians and other faith communities of the world based on informed understanding, critical appreciation, and balanced perspective of one another's basic beliefs. The Office of Religious Life seeks to implement interfaith initiatives by intentionally bringing together people of diverse religious traditions for the educational benefit of UE students and the larger community.

## Dining Facilities

The University of Evansville contracts with Chartwells to provide quality dining for University residents. Dining on the Evansville campus is offered through a number of venues. For details see the residence life web page [evansville.edu/residencelife/dining.cfm](http://evansville.edu/residencelife/dining.cfm).

## Cultural Events

Numerous cultural and educational events are available to students throughout the year. These include art exhibits, drama productions, readings, concerts, recitals, and lectures.

## Recreation and Athletics

By promoting physical well-being, mental stimulation, and social interaction, recreational and athletic activities at the University form a key component of the total educational program. Students are encouraged to participate in sports instruction, activities, and competitions.

As a member of the National Collegiate Athletics Association, the University sponsors intercollegiate teams for men in baseball, basketball, cross country, golf, soccer, and swimming and diving, and for women in basketball, cross country, golf, soccer, softball, swimming and diving, tennis, and volleyball. In addition, UE has a well-balanced intramural and recreational activities program.

## Student Engagement

Located in the Ridgway University Center, the Center for Student Engagement serves as the central clearinghouse for all student organizations and campus activities. Core services include student organization and campus-wide events registration, volunteer services, civic engagement, Greek life, and leadership programming. The center strives to link student interests and skills with campus and community programs that enhance the student's overall education.

## Cultural Engagement and International Services

The Office of Cultural Engagement and International Services assists international and American students in a variety of ways related to the international dimensions of their education. As the central office on campus for matters concerning international students, the office assists students in their adjustment to the University and the Evansville community and provides support services to ensure that each student's educational experience is successful. The office advises students on immigration and academic, personal, financial, and professional concerns. In addition, the office provides programs designed to enhance each student's academic experience and to help everyone learn more about each other and the world in which we live. Regular programs include cultural events sponsored by the International Club, the International House, and the UE Global Friends and Families Program.

## UExperience: An Experiential Transcript

UExperience, UE's experiential transcript, is an official record of a student's co-curricular experiences. The transcript records participation in recognized student organizations, community service, and other co-curricular activities. Students may create, update, and submit their transcripts for validation via AceLink ([acelink.evansville.edu](http://acelink.evansville.edu)). Once validated, an official transcript bearing the University seal is printed.

## Leadership Academy

The Leadership Academy is a two-year, three-tiered program for selected students wishing to enhance and apply their leadership potential. The academy focuses on personal development (Tier I); group development (Tier II); and community involvement, volunteer service, mentor programs, and presentation development (Tier III). The academy is under the supervision of a student advisory council and the Student Government Association.

## Student Government Association

The Student Government Association provides a sounding board for student ideas, fosters academic freedom and responsibility, promotes student rights and responsibilities, recruits students to serve on administrative and faculty committees, and seeks to improve inter-University communication and relations.

## Student Congress

Members represent students from residence halls, commuters, alternative housing, and all organizations. The congress serves as the legislative body of the Student Government Association and has authority to advise and initiate legislation on issues of student interest or concern.

## Student Activities Board

The Student Activities Board initiates campus-wide social and educational programming, including concerts, films, lectures, and recreational opportunities.

## Freshman Council

Members of the freshman class may petition to be placed on the Freshman Council election ballot each fall. Eight elected members are allocated funding through the Student Government Association to design programs that focus on freshman social interests and educational needs.

## Student Media and Publications

### ***Crescent Magazine***

A monthly magazine printed for the UE community by students, the *Crescent Magazine* serves as a forum for campus news and opinions through its editorials, columns, and letters to the editor. Coverage of national, local, and campus issues are included in each issue.

### ***LinC***

The *LinC* is the University yearbook compiled by students and published annually. As a pictorial and literary representation of UE, the yearbook attempts to interpret and evaluate campus activities and aspirations.

### **WUEV-FM**

Broadcasting an eclectic format 24 hours a day, WUEV provides diverse music, information, and programming within a multicultural educational setting. Featured musical genres include jazz, blues, hip-hop/rap, Christian rock, heavy metal, and adult contemporary. In addition WUEV is your local sports leader in the Tri-State, broadcasting UE men's and women's soccer, men's and women's basketball, baseball, and softball. During the summer months, WUEV is the exclusive home of Evansville Otters baseball. WUEV is a unique learning resource that serves the UE community, surrounding Tri-State area, and the world. On January 16, 1996, WUEV became Indiana's first Internet radio station by simulcasting its signal. WUEV continues to be recognized by state and national broadcast organizations for its achievements and programming.

### **Literary Review**

Two literary magazines, the *Evansville Review* and *Ohio River Review*, are produced by students.

## Student Organizations

Students are encouraged to create or join student organizations based on the Student Handbook guidelines. Student organizations enhance the college experience by providing practical learning opportunities with fellow students and faculty. A

current list of all student organizations is available in the Center for Student Engagement or online at [evansville.edu/organizations](http://evansville.edu/organizations).

### **Academic, Professional, Honorary**

Classroom learning is enhanced through informal faculty and student interaction among academic organizations. Students apply what they learn in class through programming, regional and national competition, workshops, field trips, and professional conferences. Many disciplines also offer selective honorary societies that recognize outstanding achievement and character.

### **Athletics Support**

Athletics support organizations support varsity athletic teams through dance and cheer teams. Membership is offered through try-outs in the fall.

### **National Social Fraternities and Sororities**

Membership is offered in the form of “bids” or invitations after a series of recruitment events. Social fraternity and sorority membership provides opportunities for social, civic, academic, and leadership development, as well as brotherhood and sisterhood. Current men’s fraternities include Lambda Chi Alpha, Phi Gamma Delta (Fiji), Phi Kappa Tau, Sigma Alpha Epsilon, Sigma Phi Epsilon, and Tau Kappa Epsilon. Women’s fraternities (referred to as sororities) include Alpha Omicron Pi, Chi Omega, Delta Omega Zeta (local sorority), Phi Mu, and Zeta Tau Alpha. Visit [greeklife.evansville.edu](http://greeklife.evansville.edu) for more information.

### **National Fraternity and Sorority City Chapters**

City-wide Greek chapters are offered to students who seek a broader base of membership that may include members from one or more local colleges and universities. Alumni chapter members often help facilitate these organizations through their close contact. Historically African American fraternity and sorority city chapters include Alpha Phi Alpha Inc., Kappa Alpha Psi Fraternity Inc., Alpha Kappa Alpha Sorority Inc., and Delta Sigma Theta Sorority Inc.

### **Student Publications**

The student magazine (*Crescent Magazine*), yearbook (*LinC*), and literature reviews (*Evansville Review* and *Ohio River Review*) offer journalistic training and literary expression with national award-winning publications.

### **Religious**

Students are encouraged to pursue their personal faith journeys through regular meetings, worship, spiritual retreats, volunteer service, and social activities. Most major religions and Christian denominations are represented at UE.

### **Social, Civic, Recreational**

The majority of student organizations fall into this category. These organizations offer broad social, cultural, and community service opportunities. Membership is open to all students with similar interests.

### **Student Government**

Leadership, governance, and student service epitomize the philosophy and mission of student government. Full-time student activity fees fund these organizations, which in turn provide an array of programs and services for the entire student body. Membership is by election and appointment.

### **University Committees and Task Forces**

Many University departments offer rewarding personal and leadership development experiences that also serve to assist administrative functions. Membership is offered through administrative selection processes and appointments.

# University of Evansville Libraries

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University of Evansville Libraries provides an array of information services that underwrite the curricular and research programs of the University. Services range from traditional library collections and electronic full-text databases to individualized reference assistance and library instruction. Information on library holdings is available through the online catalog known as ACE, which is accessible across campus as well as remotely.

UE Libraries' collections include more than 240,000 bound volumes of books and periodicals, access to more than 21,000 scholarly e-journal titles, and access to many important online research databases. Collections are supplemented by an active interlibrary loan service through which the resources of other libraries are made available to students and faculty. Circulation policies permit books, journals, DVDs and CDs to be borrowed.

UE Libraries is open extensive hours each week during academic semesters. Professional librarians are eager to assist students with research assignments as well as with general information needs. UE Libraries offers extensive quiet study areas for individuals and groups, including private study rooms that may be reserved in advance. Specialized services and resources include the University Archives as well as the Multimedia Learning Resources Center located in Graves Hall. UE Libraries supports study and teaching at Harlaxton College by providing access to online databases available on the Evansville campus.

Visit the Libraries' web site ([evansville.edu/libraries/](http://evansville.edu/libraries/)) or contact the Information Desk at 812-488-2482 for more information.



# Degrees, Curriculum, Academic Opportunities

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## Degrees

### Associate Degrees

The University of Evansville offers a specialized Associate of Science (AS) degree in physical therapist assistance.

### Baccalaureate Degrees

UE offers undergraduate programs leading to the Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Music (BM), and Bachelor of Science (BS) degrees. A complete list of majors, concentrations, and preprofessional programs follows.

### Graduate Degrees

UE offers the following graduate degrees: Master of Physician Assistant Science, Master of Science in Athletic Training, Master of Science in Health Services Administration, Master of Science in Public Health, Master of Science in Public Services Administration,, and Doctor of Physical Therapy.

### Certificates

UE offers two certificate programs: Integrating Business and Career Education (iBACE) and an Energy Engineering Certificate. iBACE is open to all students outside of the School of Business and the Energy Engineering Certificate is open to engineering students.

## Organizational Structure and Programs of Study

The University's instructional program is organized into four academic colleges, and schools, two specialized centers of education and the special study abroad campus of Harlaxton College in England.

### College of Arts and Sciences

The college provides quality liberal education in the arts, humanities, the natural and social sciences, as well as professional training in the fine and performing arts and creative writing. The programs of study are organized into departmental units (where appropriate) as follows:

- Department of Archaeology and Art History
  - Archaeology
  - Art History
- Department of Art
  - Art Education
  - Art and Associated Studies; Studio Art
  - Pre-Art Therapy Concentration
  - Visual Communication Design
- Department of Biology
  - Applied Biology
  - Applied Biology – Education
  - Pre-dentistry\*
  - Pre-medicine\*
  - Pre-optometry\*
  - Pre-veterinary Medicine\*
  - Professional Biology
- Department of Chemistry
  - Chemistry
  - Chemistry – Education
  - Biochemistry
  - Business Emphasis
- Classical Studies
- Department of Communication
  - Communication
    - Advertising and Public Relations Specialization
    - Journalism Specialization
    - Multimedia Production Specialization
    - Organizational Communication Specialization
    - Sports Communication
- Department of Creative Writing
  - Creative Writing
  - Writing
- Department of English
  - Literature
- Environmental Studies
  - Environmental Administration
  - Environmental Science
- Department of Foreign Languages and Cultures
  - French                      Latin
  - German                    Russian
  - Greek                      Spanish
- Gender and Women's Studies\*
- Department of History
  - History
- Interdisciplinary Studies
- International Studies
- Department of Law, Politics, and Society
  - Criminal Justice

- Political Science
- Sociology
  - Anthropology Specialization
  - Gerontology Specialization
  - Sociology Specialization
- Department of Mathematics
  - Applied Mathematics
  - Mathematics
  - Mathematics – Education
  - Predoctoral Mathematics
- Department of Music
  - Music
  - Music Management Specialization
  - Music Education
  - Music Performance
  - Music Therapy
- Department of Philosophy and Religion
  - Cognitive Science
  - Ethics and Social Change
  - New Testament Greek
  - Philosophy
  - Religion
- Department of Physics
  - Physics
  - Physics – Education
- Department of Psychology
  - Neuroscience
  - Psychology
- Department of Theatre
  - Stage Management
  - Theatre
  - Theatre Design and Technology
  - Theatre Education
  - Theatre Management
  - Theatre Performance

## Schroeder Family School of Business Administration

The school offers the following programs within the confines of its organizational umbrella:

- Accounting
- Finance
- Global Business
- Management
- Marketing

Also available is a Bachelor of Arts and a Bachelor of Science degree with a major in Economics.

## College of Education and Health Sciences

The College of Education and Health Sciences offers a number of programs in education and health sciences that share common pedagogical approaches to teaching through supervised teaching and clinicals.

- School of Education
  - Multi-Grade Education
  - Music
  - Special Education
  - Elementary Education
  - Senior High, Junior High, Middle School Education
  - Art
  - English

- Foreign Languages
- Mathematics Science: Life Science, Chemistry, Physics
- Social Sciences: Historic Perspectives, Civics and Government, Economics, Psychology, and Sociology
- Social Studies
- Theatre
- School of Health Sciences
  - Athletic Training (bachelor's and master's degrees)
  - Clinical Laboratory Science
  - Exercise Science
  - Health Services Administration (bachelor's and master's degrees)
  - Public Health (bachelor's and master's degrees)
- Dunigan Family School of Nursing
  - Nursing
- Department of Physical Therapy
  - Physical Therapist Assistance (associate's degree)
  - Physical Therapy (doctoral degree)
- Department of Physician Assistant Science
  - Master of Physician Assistant Science

## College of Engineering and Computer Science

The College of Engineering and Computer Science provides an array of professional programs in computer science, civil engineering, computer engineering, electrical engineering, mechanical engineering, and software engineering organized in two units as follows:

- Department of Electrical Engineering and Computer Science
  - Computer Science
  - Computer Engineering
  - Electrical Engineering
  - Software Engineering
- Department of Mechanical and Civil Engineering
  - Civil Engineering
  - Mechanical Engineering

## Harlaxton College

Harlaxton College offers a semester of intense academic and experiential learning in British and European culture. An interdisciplinary course, The British Experience from the Celts to the Present Day, is taught by a team of excellent British professors and is integrated with superb travel programs. In addition, courses are offered in traditional academic subjects by visiting professors from several US universities.

## Center for Adult Education

- Individualized Study
- Leadership (master's degree)
- Organizational Leadership
- Public Service Administration (master's degree)

## International Student Programs

- Intensive English
- English Language
- Custom Programs

## Preprofessional\*

Pre-dentistry	Pre-pharmacy (two-year)
Pre-law	Pre-physician assistant
Pre-medicine	Pre-theology
Pre-optometry	Pre-veterinary Medicine

# General Requirements for Baccalaureate Degrees

## Summary of Requirements

To receive a baccalaureate degree, a student must:

- Complete at least 120 semester hours of credit (or more as required for specific programs)
- Complete the Enduring Foundations General Education Program (41 hours)
- Complete a major program of study – at least 51 percent of the course work in the major must be completed at UE (see specific requirements for each major)
- Earn a minimum grade point average of 2.0 in both the major and the total program of study
- Complete at least 48 semester hours of credit at UE
- Complete at least 39 semester hours of credit in courses numbered 300 or above
- Satisfy the foreign language proficiency requirement
- Satisfy the residency requirement
- Formally apply for the degree no later than one year before anticipated graduation

Specific degree program requirements are stipulated by the academic unit offering the degree.

No credit toward graduation is awarded retrospectively to lower-level course work based solely upon satisfactory completion of more advanced course work in the same subject area, except for academic sequence courses in foreign languages completed at the University of Evansville.

## Credit Limits for Bachelor of Arts Degree

No more than 45 hours in any single subject area may be counted toward the Bachelor of Arts degree.

## Writing Proficiency Requirement for Freshmen

All incoming freshmen are tested for writing skills through the SAT or ACT as a part of registration for their first terms in residence on campus. Students who do not meet the criteria of entry level college writing through achievement of a specified score on the writing portion of the selected exam will be required to enroll in First-Year Seminar 111. Those meeting the minimum writing proficiency will be placed into First-Year Seminar 112.

## Writing Proficiency Requirement for Transfer and Part-Time Students

All transfer and part-time students are tested for writing skills through the SAT or ACT prior to their first terms in residence. Those students who do not have an SAT or ACT score will be required to complete UE's writing placement exam. Students who do not meet the criteria of entry-level writing through achievement of a specified score on the writing placement exam will be required to enroll in First-Year Seminar 111 in their first year to provide extra help in developmental writing skills. Students who meet the criteria on entry-level writing through achievement of a specified score on the writing placement exam will be enrolled in First-Year Seminar 312.

## Writing Proficiency Requirement for International Students

All international students may be required to sit for a writing placement exam prior to their initial registration at the University of Evansville. This exam will be administered by the Office of Cultural Engagement and Student Services and will be read by the director of the Writing Center, who will determine the appropriate writing sequence for each student.

International students who are required to enroll in English language courses must take First-Year Seminar 111E before taking First-Year Seminar 112. Students must obtain at least a C in English Language (EL) 111 before enrolling in First-Year Seminar 111E.

Students should begin the First-Year Seminar sequence as soon as possible after successfully completing English language courses in order to maintain progress in reading and writing, and to develop the academic skills necessary for success at UE.

Note that a maximum of nine hours of English language courses may count toward elective requirements for a degree.

International transfer students will be placed in appropriate writing and reading courses on the basis of the writing exam and the Michigan Test of English Language Proficiency. Course work would be selected from English Language 102, 103, 106, 107, 110, and 111.

## Foreign Language Proficiency Requirement

All students entering the University are required to demonstrate proficiency in a foreign language equivalent to the completion of a university-level, first-year foreign language course numbered 112.

All Bachelor of Arts degree candidates are required to demonstrate proficiency in a foreign language equivalent to the completion of a university-level, second-year foreign language course numbered 212.

The Bachelor of Arts degree in international studies requires proficiency in reading and speaking a foreign language at a level equivalent to that achieved by satisfactory completion of a foreign language through the third year; or two years of college-level competency in two foreign languages.

These requirements shall be met in one of two ways: by satisfactory completion of the appropriate level of foreign language course work at the University of Evansville or another accredited institution of higher education. Course credit will not be awarded through the placement exam, but students may meet the foreign language proficiency requirement (equivalent to 112 for BS degrees, equivalent to 212 for BA degrees) by achieving particular scores on the proficiency exam. The tests are administered only during freshman registration and placement scores expire after one year. See details below.

The foreign language proficiency requirement will be met through the second-year University level if a student successfully completes one of the following: (a) completion of a third-year college course in a foreign language or introduction to literary analysis (b) completion of the College Board Advanced Placement Exam with a grade of four or five. Advanced placement examinations are administered in May at approved testing centers. Should a student take both the Spanish Literature AP exam in addition to the Spanish AP exam and receive a four or five on both, students will place into Spanish 311 and receive 3 credits for a UE elective course not in Spanish.

## Foreign Language Placement Testing

1. Placement testing is required for all students with previous foreign language experience. Placement scores expire after one year and students waiting longer than one year to enroll into the course in which they place, must retake the placement exam through the department of Foreign Languages and Cultures.
2. Students taking a placement exam may enroll in a higher-level class than the exam warrants, with the advice and consent of the student's advisor and the chair of the Department of Foreign Languages and Cultures.
3. Course credit will not be awarded through the placement exam, but students may meet the foreign language proficiency requirement (equivalent to 112 for BS degrees, equivalent to 212 for BA degrees) by passing a proficiency exam.
4. Students who begin their foreign language study above the 111 level will receive up to six hours of non-graded credit in introductory or intermediate level courses below that level if they successfully complete the upper-level course with a grade of C or higher at UE. Example: Student places into French 211. Upon successful completion of French 211 at UE, the student will receive six hours of non-graded credit for French 111, 112. The Office of the Registrar will process these retroactive credits.
5. No additional credits will be granted to students who are awarded transfer credits in foreign language from approved academic institutions.

## International Students

All students whose native language is not English take the Michigan Test of English Language Proficiency in addition to the University's writing skills test as a part of registration for their first term in residence on campus. Placement in appropriate English language improvement courses will be made to provide students with the skills necessary to demonstrate English proficiency. A student may apply no more than nine hours of English language courses toward graduation requirements if the student's program permits free electives.

Students whose native language is not English will satisfy the foreign language requirement by meeting the University's writing requirement; however, no credit hours are granted toward graduation. (Refer to the "Writing Proficiency Requirement" section for details). Furthermore, native speakers of a foreign language may not earn hours toward graduation for foreign language classes in the 111-212 courses or 300 level conversation courses in their native language.

## Residency Requirement

In order to ensure that degrees awarded meet the standards and expectations of the University, all degree-seeking students, regardless of major, must earn in residence at the University:

1. At least 48 degree-applicable semester hours;

2. The majority of hours in the major, subject to requirements of specific majors; and
3. The last 15 credit hours toward the degree.

The number of credits a student may transfer to the University of Evansville once he or she has matriculated is limited to three courses (maximum of 10 semester hours). Such transfer credit must have the prior approval of the student's academic advisor and the registrar on a Transfer Credit Request form filed with the Office of the Registrar.

Requests for exceptions to the residency requirements must be submitted in writing to the Admissions and Standards Committee.

## Requirements for an Additional Degree

After earning a baccalaureate degree at the University of Evansville, to be eligible for an additional baccalaureate degree, a student must earn a minimum of 30 additional hours in excess of those required for the previous degree and meet all specified requirements for both degrees. A minimum grade point average of 2.0 must be earned in the total program of study. The same courses may be used to meet the requirements for an additional degree. Completion of a double major does not automatically mean requirements for two degrees have been met.

## Requirements for an Additional Major

To earn an additional major, a student must complete all requirements for that major as listed in the catalog, including all ancillary courses. A minimum grade point average of 2.0 must be earned in the additional major. At least 51 percent of the hours in the major must be completed in residence. Completion of an additional major does not necessarily mean requirements for two degrees have been met.

## Requirements for a Minor

A minor is not required for graduation, although one may be recommended by various departments. If a department offers a minor, the requirements will be listed in that department's section of this catalog. A minor will generally require at least 18 semester hours of course work (some of which may be specified) in the minor subject area, and completion of at least 51 percent of the course work in residence at UE. A minimum grade point average of 2.0 must be earned in the minor.

# Enduring Foundations General Education Program

The University of Evansville is committed to the liberal arts and sciences serving as the center of every student's education. The breadth of knowledge and engagement that is characteristic of a liberal education is central to developing strong students from across all majors at the University who are prepared to live and thrive as global citizens in our increasingly complex, diverse, and changing world. The Enduring Foundations General Education Program provides students with that strong foundation in the liberal arts and sciences and supports the University's international focus and commitment to social responsibility. The program is framed in terms of student learning, clearly identifying the variety of ways that students will develop knowledge and skills, exercise creativity and innovation, engage big questions, and learn to make a difference in their world. The Enduring Foundations General Education Program makes up approximately one-third of every undergraduate degree at the University.

## General Education Objective

Engaged in the human quest for wisdom in its varied expressions and informed by a core cultural, analytical, and scientific literacy, graduates will be prepared to think critically, communicate effectively, judge ethically, act responsibly, and lead full, rich, and productive lives as global citizens.

## General Education Outcomes

As a result of this curriculum, graduates shall demonstrate:

1. Critical reading and thinking (3 hours)
2. Engagement with imaginative expressions of the human condition (3 hours)
3. Knowledge of human history and the historical context of knowledge (3 hours)
4. Engagement with fundamental beliefs about human identity, core values, and humankind's place in the world (3 hours)
5. Understanding of human aesthetic creation and artistic creativity (3 hours)
6. Linguistic and cultural competence in a language other than one's own (6 hours)

7. Quantitative literacy (3 hours)
8. Scientific literacy (7 hours)
9. Understanding of core concepts of society, human behavior, and civic knowledge (6 hours)
10. Knowledge and responsibility in relation to health and wellness (1 hour)
11. An ability to think critically and communicate effectively, orally, and in writing. (3 hours)

In addition to these outcomes, all students must meet university requirements for writing across the curriculum.

## General Education Courses

A list of specific courses that satisfy the core general education and overlay graduation requirements outlined below can be found on the Enduring Foundations General Education website or the registrar's website.

## General Education for Transfer and Part-Time Students

As with traditional matriculating freshmen, transfer and part-time students will need to complete the same general education requirements. Often, but not always, students who transfer in courses from another institution will meet some or even many of the general education requirements through those transferred courses, depending on the nature and number of what is transferred. Evaluation of transfer applications will provide specific information on what requirements are met through a particular student's transferred courses.

## Assessment of Academic Programs

All academic programs at the University of Evansville assess student learning on a regular basis. The mission of student learning assessment is to improve student learning and enhance the effectiveness of the academic programs at the University of Evansville by objectively measuring learning outcomes and using the results to inform both continuity and change. The assessment of student learning is conducted at the program level but is coordinated and evaluated by an Academic Assessment Committee consisting of a faculty member who serves as chair, other faculty members, the dean of the College of Arts and Sciences, and administrators from the Office of the Vice President for Academic Affairs, Student Life, and the Office of Institutional Research. The information gathered is used by the academic programs to continually monitor whether the knowledge, skills, and attitudes of students are meeting learning outcomes of the program and the educational objectives of the University.

## Special Educational Opportunities

### Honors Program

The Honors Program offers highly motivated and talented students the opportunity to participate in unique academic and extracurricular experiences alongside peers and faculty who share the love of learning and desire to excel. Honors students are known for their passion and collegiality, and they serve as catalysts who propel the University's academic excellence forward.

The Honors Program provides curriculum that challenges students to maximize their potential in all areas of study and fosters independent thinking. Honors students enroll in at least 15 hours of Honors courses, which are designed to offer a particularly stimulating learning experience and the occasion for close collaboration with faculty and other Honors students. Honors Program students also complete an Honors project, which serves as the capstone of the Honors experience and provides a unique opportunity for students to explore an area of study about which they are passionate. Students present this culmination of their work to faculty and other students during the Honors Program presentation sessions held each spring. In addition to these requirements, students must maintain a minimum GPA of 3.5 to remain in the Honors Program.

The Honors Program also enhances one's social experience at the University by fostering a lively community life among its participants. Honors students have the opportunity to live in the Honors residence hall (Powell) and engage in Honors-sponsored events, including informal gatherings, trips, and the annual Nerd Wars trivia competition. The Honors Program also encourages its students to engage in a variety of other extracurricular and cultural activities across the campus and in the community.

Both prospective and current students who meet admission requirements are encouraged to apply. As application criteria can change from year to year, anyone interested in applying to the program should consult with the Office of Admission or Honors Program staff regarding the current requirements.



## Undergraduate Research Program

Developed with support from the Lilly Endowment Inc., the undergraduate research program known as UExplore provides students and faculty the opportunity to work together on research by providing funding for joint projects. Undergraduate research is defined in a broad sense as research, scholarship, or creative activities, and thus includes projects from the sciences, humanities, fine arts, and professional programs.

For student-generated proposals, the student researcher is responsible for the majority of the concept development, project design, and proposal writing. Student and faculty collaboration, however, is an essential part of learning. In most cases, research results are presented at campus seminars, regional and national conferences, or published.

Eligible students may participate in fall-semester, spring-semester, or summer research projects. Financial support is available in the form of summer research stipends with free double-occupancy housing during the 10-week summer research period and grants for materials, equipment, or services. Semester projects are limited to grants for materials, equipment, or services. Travel grants are also available for students presenting papers at the National Conference on Undergraduate Research or other discipline-specific conferences.

## Cooperative Education (Co-op)

Cooperative Education at the University of Evansville is paid, career-related employment integrated with academic programs requiring at least three measurable learning objectives, self/employer evaluation and reflective writing. A flexible cooperative education plan is available for all undergraduate majors. There are two options available: Traditional (Full-Time) and Concurrent (Part-Time). The University of Evansville's Cooperative Education Program is managed by the Center for Career Development in full collaboration with each College or School.

Traditional co-op requires most students to complete a 5 year program, as compared to a traditional 4 year academic program. A paid educational employment experience that is full-time, 30-40 hours of work per week for 12-15 weeks. Students must complete at least 3 separate work periods and will usually, but not always rotate between work sessions. Some traditional co-op opportunities may be in consecutive semesters of work, which may provide flexibility with course sequencing and academic requirements. All students should maintain communication with their academic advisor, Center for Career Development and have a degree completion plan.

Prerequisite: EXED 090, Building Your Professional Image; **zero or one credit hour, Pass/Fail, Does not count toward graduation.**

UE Courses: College of Engineering and Computer Science: COOP 091-095, **one credit hour, does not count toward graduation, Pass/Fail.**

**All other students: EXED 073, one credit hour, Pass/Fail.**

Concurrent co-op is a paid educational employment experience, usually 8-20 hours of work per week for usually a minimum of 12 weeks. Concurrent co-op is available for students enrolled full time, in at least 12 credit hours. May be taken only in the fall and spring.

Prerequisite: EXED 090, Building Your Professional Image; **zero or one credit hour, Pass/Fail, Does not count toward graduation.**

UE Courses: College of Engineering and Computer Science **ENGR 081, one credit hour, does not count toward graduation, Pass/Fail.**

**All other students: EXED 072, one credit hour, Pass/Fail.**

### Traditional Co-op

This co-op plan combines classroom education with full-time professional work experience and provides students with opportunities for earning a part of their University expenses. Through the co-op program, students are offered a variety of professional experiences, ranging from assisting technical staff members to independent research and development. Upon satisfactory completion of the program, the student is designated a co-op graduate and awarded a co-op certificate at the time of graduation.

Under the traditional co-op plan, the student spends alternate or consecutive academic semesters working full time for the co-op employer and studying as a full-time student. Normally, a co-op student is able to earn a bachelor's degree and work four semesters over a period of five calendar years, provided the student follows the prescribed schedule for work and school shown in the following plan (may vary depending on the major program and year in school).

<b>Schedule One</b>	Fall	Spring	Summer
First Year	School	School	
Second Year	School + EXED 090 or	School + EXED 090	Work Rotation 1
Third Year	School	Work Rotation 2	Work/School/Open
Fourth Year	Work Rotation 3	School	Work Rotation 4
Fifth Year	School	School	

A second option in the Traditional Program is the 3 or 4 semester consecutive rotations schedule. In this plan, a student would finish at least three semesters of full-time coursework at the University of Evansville.

<b>Schedule Two</b>	Fall	Spring	Summer
First Year	School	School	
Second Year	School EXED 090	Begin Rotation 1	Complete Rotation 2
Third Year	Complete Rotation 3	School	Internship/School/Open
Fourth Year	School	School	Internship/School/Open
Fifth Year	School	School	

This same pattern may be applied after completing four, five or six semesters of full time academic coursework.

### **Concurrent Co-op**

Not every student has the opportunity to locate a traditional co-op position providing professional full-time experience. Many opportunities exist in Southwest Indiana that provide critical hands-on experience for a wide variety of careers in a part-time capacity. Numerous employers have long-standing relationships hiring students in professional and paraprofessional capacities for their small businesses, nonprofits and global corporations. Students possess in-demand skills such as computer knowledge, creativity, business fundamentals, social media savvy, communication and customer service coupled with flexible schedules and professional energy. A concurrent co-op is a viable option for most majors and provides a way to connect academics to practical training. Careers associated with local part-time paid positions include: engineering, computer science, information technology, marketing, graphic design, communication, media, religion, management, accounting, finance, writing, modeling, analysis, education, health care and human services. When needed, the Center for Career Development will facilitate the concurrent co-op program for students with existing part-time positions that qualify and support others in their search for a suitable opportunity. The concurrent co-op program is a simple and direct way to link professional part-time employment with curriculum and allow the student to earn the University's Co-op Certificate.

### **General Information**

Students must satisfy the same course requirements whether they pursue the regular four-year study plan or the five-year co-op plan. All students participating in the co-op program should consult with their academic advisors prior to accepting a co-op job offer. To avoid course scheduling problems that would likely cause a delay in the expected date of graduation, the student and advisor should develop and map an academic advising plan that takes into account the choice of cooperative education for the remainder of the student's educational program. Students may delay entering the co-op program from the second summer to the third spring semester provided that they are able to complete at least three semesters of employment.

Application for admission to the co-op program is normally made during the fall semester of the second year by enrolling in Experiential Education 090, which is a zero or one credit seminar managed by the Center for Career Development staff. To be eligible for admission to the co-op program, a student must have a cumulative grade point average of at least 2.25 for Engineering and Computer Science (2.50 for all other majors) based on at least three semesters of full-time study. In addition, the eligible applicant must have completed the equivalent of the first three semesters of their desired degree at the time of the first work period and be able to plan to complete at least three semesters of work.

Some employers require U.S. citizenship or permanent residence status. International students holding an F or J type visa completing an experiential experience in the United States must abide by the requirements stated in the CPT Guidelines and must coordinate these activities with the UE Designated School Official (DSO). A copy of the CPT Guidelines may be obtained from the Center for Career Development's Website: <http://careerservices.evansville.edu>. The Center for Career Development partners with International Student Services, advisors and international students to facilitate their participation in the co-op program.

Transfer students are invited to apply for the co-op program after consulting with their academic advisor to ensure that co-op course schedules will permit satisfactory progress toward their desired degree. Transfer students must satisfactorily complete one semester of full time course work at the University of Evansville and meet all other guidelines/requirements.

The Center for Career Development staff will seek to identify suitable employment for all eligible applicants. However, final admission to the program is governed by the availability of jobs, and employment in the program cannot be guaranteed. Normally a student is eligible for co-op job commitment only once and is expected to remain employed by the initial co-op

employer until the program is completed. If the student requests a change of employer, the Senior Director or designee will review the merits of the request and grant it at his or her discretion. Additional requests for change of employer will normally be denied and may necessitate additional fees.

Students admitted to the co-op program must be regularly enrolled each semester in either full-time studies at UE and/or in the appropriate Cooperative Education course. A cumulative GPA of at least 2.25 must be maintained to continue in the program. A co-op fee is charged for enrollment in the Traditional Program, Cooperative Education 91, 92, and 93; EXED 073 and must be paid in accordance with the University's standard schedule for payment of tuition and fees. Co-op fees are used to help offset the costs of administering the program. There is no cost for enrollment in Concurrent Co-op, EXED 073 as long as a student is enrolled as a full time student with 12-18 hours of credit.

During their co-op employment, students are regular employees of the company and are paid at a rate commensurate with the type of work they are doing within that company's compensation schedule. Co-op students are given assignments of increasing complexity and responsibility as they demonstrate their capability to progress. The student's performance is regularly reviewed by the employer and the Center for Career Development staff with the assistance of the student's academic advisor. The student is expected to maintain communication with the Center for Career Development and their academic advisor while they are enrolled in the co-op program.

Employers participating in the co-op program are located throughout the nation and include large global companies, smaller local companies, public utilities, government agencies, nonprofits, health care, and laboratories. Given marketplace limits, effort is made to meet each student's preference for employer and job location. New co-op firms are often added based on student interest.

Students interested in participating in the co-op program should meet directly with their academic advisor or department chair prior to scheduling a meeting with the Center for Career Development.

### **Engineering Internship**

The University of Evansville College of Engineering and Computer Science Internship Program is managed by the Center for Career Development. It is a paid educational experience, 30-40 hours of work per week for a minimum of 8 weeks and usually available only during summer sessions. Students enrolled in an Engineering Internship must have earned at least 18 earned credit hours at the University of Evansville, with at least nine hours of cumulative progress toward a degree in the College of Engineering and Computer Science during the previous two academic terms. Student must be in good academic standing with a cumulative GPA of at least 2.25. Transfer students should consult with their academic advisor or department chair to ensure that course schedules will permit participation. Transfer students should satisfactorily complete one semester of full time course work at the University of Evansville and meet all other guidelines/requirements. Specific academic requirements include developing at least three measurable learning objectives, self/employer evaluation and reflective writing. The position description and potential learning objectives require prior approval by the Senior Director of the Center for Career Development or designee.

Prerequisite: EXED 090, Building Your Professional Image; **zero to one credit hour**, Pass/Fail.

UE Course: College of Engineering and Computer Science: ENGR 071, Zero Credit, Pass/Fail, **May be repeated.**

### **Experiential Education EXED Internship**

EXED 071 is a noncredit internship option open to students enrolled in: College of Arts and Sciences, School of Business Administration, College of Education and Health Sciences and Center for Adult Education. It is a paid or unpaid, full or part-time experience for a period of 8-16 weeks in a professional or paraprofessional role associated with a student's major or career interest, requiring a minimum of 50 accumulated work hours per session. Specific academic requirements include developing at least three measurable learning objectives, self/employer evaluation and reflective writing. The position description and potential learning objectives require prior approval by the Senior Director of the Center for Career Development or designee. May be repeated. EXED 071 was designed as an internship option for students whose schedule or circumstances do not allow them to complete an internship in their major. It is meant to be a flexible option and not a substitute for departmental internships.

A student must be in good academic standing with a minimum GPA of 2.25, have earned at least 18 credit hours at the University of Evansville with at least nine hours of cumulative progress earned toward a degree in the College of Arts and Sciences, School of Business Administration or College of Education and Health Sciences during the previous two academic terms. Students in the Center for Adult Education must be enrolled in a Degree Program and have successfully completed one semester as a full-time student in their curriculum. Transfer students should consult with their academic advisor or department chair to ensure that course schedules will permit participation. Transfer students must satisfactorily complete one semester of full time course work at the University of Evansville and meet all other guidelines/requirements.

Prerequisite: It is highly recommended that participants successfully complete EXED 090, *Building Your Professional Image*, prior to enrolling in this course.

Course: EXED 071, zero credit, Pass/Fail, May be repeated.

### **Professional Preparation**

EXED 090 Building Your Professional Image

A person's choice of vocation is just one element in an interconnected web of life-roles, values, and influences. It is important to consider a holistic perspective in life and career choices to better understand the influence of how personal history, characteristics, and priorities impact one's vocational direction. A commitment to a co-op or internship experience is a major step in establishing a professional image and exploring possible career paths.

The course is designed for students who will be completing an internship, co-op or other academically-related work experience. It focuses on self-knowledge and résumé development, professional communication and job search correspondence, mock interviews and interviewing processes, cultural communication competencies, etiquette, networking and job search techniques. The course content is delivered in an active learning environment.

EXED 090 is recommended for all students who have successfully completed one or more years of higher education and plan to have an experiential education experience within the next 12 months. This course was previously listed as COOP 090.

Course: EXED 090, **may be taken for zero or one credit hour**, pass/fail and does not count toward graduation.

### **GOALS**

- Students develop self-understanding and discipline specific professional business communication: résumés, cover letters, thank you cards, interviewing techniques, and oral presentations.
- Students improve their ability to connect and articulate their UE experiences with their career goals as they interface with the workforce.
- Students practice the many steps required to present themselves as educated, enthusiastic and competent professionals.

The purposes of this course are to prepare students in developing the skills and approaches to make informed and satisfying career decisions, conduct an effective and professional co-op/intern employment search, and present themselves in a manner that emphasizes the professionalism, relevant skills and background of a chosen field.

## **Harlaxton College and Other Study Abroad Programs**

The University of Evansville maintains a strong commitment to internationalization. This commitment is shown in the emphasis on studying abroad for all students, and the ability for UE students to choose locations all over the world to earn credits towards degree completion and to learn to become global citizens.

The Office of Study Abroad also assists students with applications for various national scholarship programs in support of study abroad, including the Fulbright and Gilman Scholarships.

Students are welcome to study abroad through three different types of programs: Harlaxton College, Faculty Led Programs, International Exchanges, and Provider Programs. The Office of Study Abroad, located in SOBA, is available to help students explore these options and select the best fit for a student's field of study and personal goals. Each of these program types are clearly explained on our website and a study abroad advisor will help you through the process of applying and preparing for your time abroad. Although students must be at least sophomores to participate in study abroad, planning should begin as early as the freshman year. Close consultation with the Office of Study Abroad and the student's academic advisor is essential.

### **1. Faculty-Led Programs**

The University of Evansville offers a variety of faculty-led programs abroad, usually over Spring Break or the summer term. Locations and course topics change annually, with some programs running biennially. Trips typically range from one week to five weeks.

Interested students should look for information on the Study Abroad website throughout the year or come to the office to learn more about programs being offered. Recent faculty led trips have included:

- Designing a marketing plan and then visiting a non-profit organization in Havana, Cuba

- Visiting and shadowing teachers in rural schools in Trinidad
- Participating in a Habitat for Humanity Build in Nicaragua
- Studying Biology in Costa Rica
- Studying Political Science in South Korea

## 2. Harlaxton College

Harlaxton College, housed in a nineteenth-century manor house, is situated in the East Midlands, just outside Grantham, England, and one hour north of London. Academic programs are rigorous yet personal as the British and American educational systems combine to produce a unique scholastic environment in which experiential learning plays a large part. Classes are often complemented by field trips to enhance the classroom setting. All parts of the United Kingdom, as well as Paris, Rome, Florence, and Ireland, are common destinations for Harlaxton students.

Harlaxton College operates a semester-length program each fall and spring and a five-week summer session. Costs of the semester-length Harlaxton program are comparable to charges on the Evansville campus, and UE financial aid applies. Tuition for the summer program is identical to Evansville summer course tuition.

The centerpiece of the Harlaxton College curriculum is a six-hour course in British studies, offering an interdisciplinary introduction to British life and culture. Literature, art history, economics, history, and political science are part of the course, which combines lectures, seminars, and travel. In addition, a wide range of humanities and social science courses are offered each semester to enable students to maintain normal progress in their respective academic programs. Approximately 30 courses are offered each semester from which the student may select two or three in addition to the British studies courses, which are required of all students. Courses are taught both by British faculty and visiting faculty from the United States.

## 3. Exchange and Provider Study Abroad Programs

In addition to studying for a semester or summer at Harlaxton College, University of Evansville students can choose from a wide variety of programs in other locations around the world. Students approved on these programs can typically use their UE financial aid packages during the fall and spring, and the Office of Study Abroad will work to find a program that fits individual interests, goals, and academic requirements.

## Major Discovery Program for Undeclared Students

Students who have not declared a major upon entering the University of Evansville have the freedom to explore various disciplines while meeting their general education requirements. The Major Discovery Program is specifically designed to assist incoming freshmen and transfer students in the discovery of an academic area or areas of study in which to major. The program encourages exploration of academic majors, self-discovery, and participation in cocurricular activities offered by the University. Undeclared students are encouraged to take Discussion 100, Journeys and Discoveries, a one-credit course designed to help them make wise and thoughtful choices about their future through participation in readings, discussions, lectures, and activities that guide their exploration of the University, major fields of study, and career opportunities.

Students are advised by faculty members who have a special understanding of the variety of opportunities available at the University and are aware of events that help students connect to campus and to their future studies.

Major Discovery students have a broad range of interests and faculty encourage students to embark on academic explorations without pressure to declare a major before they are ready. Moreover, because undeclared students are often academically strong, they are not discouraged from exploring disciplines beyond the introductory level. Indeed, it may be useful to remember that at least 60 percent of the students who enter the University with declared majors change to another major at least once. Students who enroll in the Major Discovery Program are encouraged to find a major by the end of their freshman year to ensure on-time graduation, but are not pressured to make a decision before they have explored every possible outcome that interests them.

## Faculty/Student Discussion Groups

Students may participate in faculty-sponsored discussion groups. These are organized on an ad hoc basis throughout the academic year and are available for academic credit.

### **Discussion 300 Faculty Sponsored Discussion Group (1)**

This course provides a forum in which teachers and students meet in small groups to discuss readings each week. The course may be repeated for a total of three credit hours to be used as free elective credit only. The prerequisite is permission of the instructor. A grade of P (for passing) or a grade of F (for failure) will be assigned upon completion of the course.

Each discussion group is centered on a single topic. Students are required to read one-and-a-half to two hours per week and then meet for one hour per week with the group (including a faculty member) to discuss the reading assignment. Students are limited to one discussion group enrollment in a semester.

## ROTC – Army Reserves Officers’ Training Corps

The Army Reserves Officers’ Training Corps (ROTC) is available to UE students. Qualifying students are eligible for up to full-tuition, merit-based scholarships, and other financial assistance through the US Army. ROTC provides hands-on leadership development in addition to regular college courses. Typically students take two military science “MSL” ROTC courses each year. Course descriptions are listed in the back of the catalog under the undergraduate course descriptions section, under MSL. UE cadets meet with cadets from University of Southern Indiana to do weekly physical training. These sessions include cardiovascular fitness, muscular strength, and muscular endurance training. Physical training sessions and courses may be held at USI or at UE, dependent upon enrollment numbers.

To learn more about ROTC scholarships and admission to the program, go to [Armyrotc.com](http://Armyrotc.com). For specific information about UE’s ROTC program, please see the UE Office of Veterans Affairs web page at [evansville.edu/veteransaffairs/rotc.cfm](http://evansville.edu/veteransaffairs/rotc.cfm), or contact:

ROTC Scholarship/Enrollment Counselor  
University of Evansville ROTC  
812-461-5304  
Office of Veterans Affairs  
800-423-8633, ext. 2141, or 812-488-2141  
E-mail: [cl29@evansville.edu](mailto:cl29@evansville.edu)

# Academic Policies and Procedures

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Students are responsible for familiarizing themselves with the portions of this catalog pertaining to their course of study, University requirements, requirements for their major, academic policies, regulations, and procedures. Students should seek regular assistance from their academic advisors throughout their course of study; however, the student is ultimately liable for keeping up with program changes and for meeting all requirements.

The University reserves the right to change the fees, rules, and calendars regulating admission and registration, to change regulations concerning instruction in and graduation from the University and its various academic units, to withdraw courses, and to change any other regulation affecting the student body. Information in this catalog is not to be regarded as a binding contract between the student and the school.

The University also reserves the right to deny admission to any applicant, to dismiss a student when formal academic action is taken by the Admissions and Standards Committee, to discontinue the enrollment of any student when personal actions are detrimental to the University community, or to request withdrawal of a student whose continuance in the University would be detrimental to his or her health or to the health and safety of others.

## Academic Honor Code

In its mission, the University clearly states its intention to be value-oriented in all endeavors. The Academic Honor Code was created by the University community, students and faculty alike, to create an atmosphere conducive to this high ideal and to academic integrity.

The primary purpose of the Academic Honor Code is to enable students and faculty to conduct their academic duties in an atmosphere of freedom. This is an ideal that requires the commitment of both students and faculty. Members of the faculty affirm a commitment to the Academic Honor Code by defining clearly what is or is not unauthorized aid. Student commitment to the Academic Honor Code is implied by his or her matriculation at the University of Evansville. The code, which follows, is appropriate for all academic work that is to be submitted for credit.

*I understand that any work I submit for course credit will imply that I have adhered to this Academic Honor Code: I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*

Commitment to the University of Evansville Honor Code is a condition of matriculation at the University. Under the honor system, faculty members often use honor-based testing devices, such as take-home exams and examinations without a proctor. Each instructor is obligated to define unauthorized aid clearly as it relates to assignments within his or her specific course(s). Instructors should discuss the importance of academic integrity, review related items in the syllabus, and clarify the definitions of cheating and plagiarism. When in doubt, the student is obligated to obtain an understanding of the instructor's use of the term. Ignorance is not accepted as a valid excuse for a violation of the Academic Honor Code.

The non-toleration clause ("nor will I tolerate an environment that condones the use of unauthorized aid") is integral to the Academic Honor Code as the honor system relies on the active participation of all students. Each student, therefore, is responsible for his or her own personal honor and the academic integrity of the University community. The academic honor system functions only when students value their personal honor and that of the community enough to guard it. This is not to say that students must constantly watch for violations; however, it is the student's responsibility to uphold the integrity of the Academic Honor Code. Any observations or knowledge of misconduct should be reported immediately.

The honor system and the implementation of its procedures fall under the administrative jurisdiction of the faculty and the president. The Office of the Dean of Students keeps records of violations and hearings and may be consulted by the Honor Council chair regarding procedures and past violations.

For more information about the Academic Honor Code and procedures, please reference the Student Handbook.

## Academic Advising

The University of Evansville emphasizes the development of individual initiative, responsibility, and self-discipline by students in the planning of their own educational programs. The academic advising system is designed to assist students in the development of educational plans and career goals and to teach them the skills necessary to pursue those goals. In both academic and career areas, planning is a development process to be fostered during the entire period of a student's involvement with the University.

Faculty advisors, with the support of the Center for Academic Advising work closely with students to help them develop intelligent, responsible self-management.

## Freshman Advising Program

The Freshman Advising Program provides guidance from the moment a student enters the University. Assigned faculty advisors who are familiar with the students' academic preparation and areas of interest offer freshmen not only direction in the choice of courses but also insight into the nature and importance of a university education. Faculty advisors help to plan incoming students' academic programs on the basis of their backgrounds, abilities, interests, and goals.

When a prospective freshman indicates an area of interest or a major, an advisor is assigned on the basis of academic specialty. For freshmen with wide-ranging interests who are undecided about a major field of study, advisors especially interested in working with undeclared students are assigned, taking into account each student's stated areas of interest.

Whenever possible, a freshman's advisor will also be one of his or her instructors, ensuring the student's opportunity to seek help at anytime. This classroom contact also cultivates the advising and counseling relationship between students and faculty advisors. Students comfortable with an advisor they have come to know as professor and friend find it easier to discuss not only which courses to take next term but also which academic programs and career paths to consider.

## Transfer Student Advising

Transfer students are assigned to faculty advisors according to their academic interests or intended majors. Advisors, aided by the Office of the Registrar, help transfer students assess standing toward the degree in their chosen field of study and work with them in long-range academic and career planning. A transcript evaluation is completed by the Office of the Registrar after official transcripts are submitted from previous colleges the transfer student attended. It is advisable that all transfer students go over the necessary graduation requirements with their new academic advisor upon matriculating to the University of Evansville.

## Academic Load Fall/Spring Semesters

**Full-Time:** A student enrolled in 12 or more hours per semester

**Part-Time:** A student enrolled for fewer than 12 hours per semester

The normal load for a full-time undergraduate student is 12 to 16 hours of class and laboratory work per semester. If a student, in consultation with his or her academic advisor, elects to carry more than 16 hours, the grade point average should be a guide in determining the maximum number of hours to be attempted (exclusive of music ensembles and exercise and sport science activity courses). The recommended load limits are:

Up to 1.99 GPA – 16 hour maximum

2.0 to 2.99 GPA – 18 hours maximum

3.0 to 4.0 GPA – 20 hours maximum

**Overload:** Because academic performance frequently suffers when an overload is taken, a student in good standing wishing to take 21 hours or more and a student on academic probation wishing to exceed 16 hours must petition the dean of his or her major's college for approval and have the support of the academic advisor in doing so.

Most academic failure results from insufficient study outside the classroom. If a student has a job or other non-academic activity requiring 20 or more hours each week, he or she is advised to carry a reduced academic load. Students should allow sufficient time outside the classroom for study (use the guideline of two hours of study for each hour spent in class) as an investment in academic success and their professional future.

## Class Attendance

The University is committed to the promotion of a sense of academic community in which the student and instructor join in a shared learning experience. The student and instructor alike assume responsibility for the general well-being of the academic process, each having something to contribute to as well as to gain from a given course.

The University expects regular class attendance by all students and places the responsibility on the student. Students are considered sufficiently mature to appreciate the necessity of regular and punctual attendance, to accept this personal responsibility, and to accept the consequences of failure to attend. An instructor or academic unit may require attendance in courses or types of courses. Instructors are expected to maintain absence policies in keeping with the nature of their courses and may consider attendance in evaluating performance in their courses.

When an absence occurs due to an emergency or medical condition, students are expected to notify their instructors of the absence prior to class or to seek the assistance of the Office of the Dean of Students in notifying instructors. The dean of students has the authority to review and grant requests, if appropriate, for excused absences for documented medical, psychological, or personal reasons.



## Classification of Students

Students are classified on the following basis:

Senior: 90+ credit hours earned

Junior: 60-89.9 credit hours earned

Sophomore: 30-59.9 credit hours earned

Freshman: 0-30 credit hours earned

## Registration Procedures

### Eligibility for Course Registration

A student must confer with his or her advisor and secure the advisor's approval for all course registrations or changes of registration. Registration for continuing students will take place during the preceding regular semester according to the schedule published by the Office of the Registrar. Registration for new students will be held during special orientation and registration periods or on the opening days of a term as designated by the University calendar.

In general, courses are numbered to suggest the appropriate level of eligible enrollment by students:

0-99	Non-credit
100-199	Freshman Level
200-299	Sophomore Level
300-399	Junior Level
400-499	Senior Level
500-799	Graduate Level

Exceptions to the undergraduate enrollment eligibility guide may be made by the advisor if there are no other prerequisites to enrollment.

### Cancellation of Registration

Cancellation of enrollment is permitted prior to the first day of class. The Office of the Dean of Students must be notified. Students who cancel their enrollment by this deadline will be given a full refund for tuition and room and board.

### Change of Registration

The student is held responsible for each course in which he or she officially registers. Once enrolled, students may change their course schedule by dropping or adding one or more, but not all, courses. After the first week of classes, an official drop/add form must be filed in the Office of the Registrar with the signature of the academic advisor and the instructor.

### Dropping a Course

A course may be dropped without a designated grade through the last day to register or add a course (see the academic calendar for exact dates). From that date through the 11th week, a grade of W is assigned. After the 11th week, a grade of F is assigned. Discontinuance of attendance does not automatically constitute a withdrawal. Students failing to file a proper drop/add form by the appropriate deadline must complete classes for which they are registered or receive a grade of F.

### Independent Study

The purpose of independent study is to provide students an opportunity to pursue in detail special topics or projects within the discipline when such topics are not sufficiently covered in existing courses. Normally, such enrollment is restricted to the regular academic year. The student shall be registered for independent study credit in the semester during which the majority of the work is done. Independent study is not to be used as a substitute for regularly scheduled academic offerings except in rare special circumstances, which will be defined by each academic unit. In such cases, the student and sponsoring instructor must submit the approved proposal for independent study form explaining why the course must be taken as an independent study. Tuition for independent study is charged at undergraduate tuition rates.

### Auditing Courses

When space is available after the registration of regularly enrolled students, others may request permission of the instructor and the Office of the Registrar to enter a lecture course as auditors. An auditor is subject to attendance regulations and other conditions

imposed by the instructor. The audit status for a course must be declared by the last day established for course additions. Laboratory sections of lecture courses, clinical experience in nursing and health sciences, internships and field experience throughout the University, and cohort degree programs are excluded from this policy.

Audit courses are not included in determining full-time enrollment status are not graded, and do not apply towards graduation requirements. An audit course may not be changed to a credit course under any circumstances, which precludes a student attempting to earn credit by departmental or CLEP examination at a later date for a class previously audited. Credit courses may not be changed to audit courses. The tuition charged for audit classes is the same as for credit.

## Graduating Seniors as Part-Time Graduate Students

A last semester senior at the University of Evansville lacking no more than nine credit hours for graduation and having a cumulative undergraduate grade point average of at least 2.7 may register for graduate credit course work. Written consent of the student's college or school dean is required. Approval of graduate credit registration is also required by the appropriate graduate program director and the registrar. The total course load, graduate and undergraduate, must not exceed 15 credit hours. Requirements for the undergraduate degree must be completed during the semester in which the student is allowed to register for part-time graduate work. Graduate course work does not apply toward the undergraduate degree.

## Summer School Registration

Students are limited to a maximum enrollment of three courses (maximum 10 credit hours) during a single summer regardless of the number of sessions or universities attended. Students who wish to take more than 10 credits must have a 2.0 minimum cumulative GPA, submit a petition to the dean of his or her major's college for approval, and have the support of the academic advisor in doing so. Students planning to take courses at another institution must have written approval on a transfer credit request form signed in advance by the student's academic advisor and the registrar.

## Withdrawal from the University

A student who finds it necessary to withdraw from all credit courses must apply for formal withdrawal through the Office of the Dean of Students. This process requires the completion of a University withdrawal form, an exit interview and, for students under the age of 18, parental permission. Final approval is subject to clearance from the Office of Student Accounts. If this procedure is not followed, grades of F will be assigned.

After the official last date to withdraw (see the academic calendar), approval for withdrawal from the University without grade penalty will be given for only one of two reasons: medical or psychological problems. A letter from a doctor or psychologist is required.

Failure to complete the term does not cancel the student's obligation to pay tuition and all other charges in full. For specific details regarding refunds and adjustments, refer to the section on tuition and fees in this catalog.

## Credit from Other Institutions, Advanced Placement, CLEP, International Baccalaureate, and by Examination

### Transfer Credit

The University of Evansville evaluates and may accept credit earned at other regionally accredited educational institutions. The majority of credit hours required for a University of Evansville degree must be earned from a bachelor's degree program. No more than 60 semester hours of credit from a junior college or community college may be transferred to the University, except in cases where an articulation agreement has been established.

At least 48 hours, including the last 15 hours and the majority of hours in the major, must be completed in residence to earn a baccalaureate degree from the University of Evansville, subject to the requirements of specific majors.

Once matriculated, a University of Evansville student may take no more than three courses (maximum 10 credit hours) from another institution for transfer credit to be applied to his or her degree. Prior written approval from the student's academic advisor and the registrar via the transfer credit request form is required for each course the student takes for transfer credit. Failure to obtain prior approval may result in credits not transferring. The three course limit for transfer credit may not apply to students participating in an approved study abroad program not available through the University of Evansville.

Transfer credit is awarded only upon receipt of an official transcript sent directly to the UE registrar's office from the transfer institution. Each course is evaluated separately (except in cases of articulation agreements) to determine if it can apply toward a UE degree. The University reserves the right to accept or reject courses for transfer credit. Courses with a grade of D or lower and institutional exams will not be accepted for transfer credit. Grades are not transferred, only credits are transferred. Credits from other accredited educational institutions will not be posted to a student's transcript unless the credit applies to a student's degree

program.

The University of Evansville has articulation agreements with Ivy Tech Community College of Indiana, Vincennes University, Kentucky Community and Technical College System, Henderson Community College, and Owensboro Community and Technical College.

## Credit from Advanced Placement, CLEP, International Baccalaureate, and by Examination

The University of Evansville allows students to earn an unlimited number of hours of credit prior to entrance through the College Board Advanced Placement (AP) testing program, providing a grade of four or better in each examination has been achieved, and through the International Baccalaureate (IB) program, providing a grade of five or better in higher level subjects has been achieved. Exceptions may apply. Contact the Office of the Registrar for details.

Students may also obtain course credit by submitting the results of the College Entrance Examination Board's College Level Examination Program (CLEP) or by taking University of Evansville proficiency examinations administered by an academic department. The number of hours of credit that can be counted toward the total hours required for graduation through CLEP or departmental credit by examination, however, is limited to two courses.

Departmental examinations in specific courses are available to qualified students upon approval of the academic advisor and the chair and/or dean of the academic department in which the examination is to be taken. Credit by examination forms are available from the Office of the Registrar. A nonrefundable departmental examination fee will be charged (see tuition and fees section) by the Office of Student Accounts. Credit for the course will be granted provided the student passes the examination with a grade of C or better. No exam may be repeated if a grade lower than the equivalent of a C is earned. A grade of P is recorded on the transcript for credit earned by examination.

Students are not permitted to schedule departmental examinations in courses that have been audited, in courses in which unsatisfactory grades have been earned, or in courses that have been dropped with a grade of W. No credit toward graduation is awarded retrospectively to lower level course work based solely upon satisfactory completion of more advanced course work in the same subject area except for academic sequence courses in foreign languages.

## Credit Hour Policy

The University of Evansville assigns credit on the basis of the semester hour. UE has established a credit hour policy consistent with the Federal definition of a credit hour. A semester credit hour consists of one clock hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester, or an equivalent amount of work through laboratory, practicum, internship, studio, or other academic activity. This equates to 45-75 hours of academic experiences for each semester credit hour. Alternatively, courses may meet the credit hour policy using a learning outcome standard. This requires that the student demonstrates, to the satisfaction of the department awarding the credit, evidence of actual achievement of course objectives that are at least equal to the intended learning outcomes for a course that meets the clock hour requirement described above.

## Grades

### Grading System

At the conclusion of each semester students receive letter grades indicating the adjudged quality of their work in each course. Grade points are assigned for each semester hour of credit as follows:

A	Excellent	4.0
A-		3.7
B+		3.3
B	Good	3.0
B-		2.7
C+		2.3
C	Average	2.0
C-		1.7
D+		1.3
D	Poor	1.0
F	Failure	0.0
FW	Failure to complete	0.0
I	Incomplete	
NG	No grade	
P	Pass	
W	Withdrew from course	

All A, B, C, and D grades are passing grades. Grades of I, NG, P, or W are not included in computing grade point averages. The grade point average is the quotient resulting from dividing the total points earned by the number of hours attempted (including failure and excluding pass and incomplete).

## Midterm and End of Semester Grades

The University does not mail grades at the end of each semester. Students can access their grades on the University's student information website. Midterm grades are not permanently recorded but are used by students and their advisors for information and guidance. End of semester grades become a part of the student's permanent record.

## Pass/Fail Option

A student may register for an elective course on a pass/fail basis. The option is intended to encourage the student to explore new academic areas without endangering the student's grade point average unless the grade earned is an F. Limitations on pass/fail registration are:

- Junior or senior status
- Only one course per semester may be taken pass/fail
- No course required for the major or minor and no course being used to meet a general education requirement may be taken pass/fail
- Pass/fail courses must be listed at the time of registration and must not extend beyond the approved academic load
- A course may not be changed from pass/fail, or vice versa, after the last day established for course additions

Courses offered only on a pass/fail basis are not subject to these regulations, except they must not extend beyond the approved academic load.

## Incomplete Grades

All course work is to be completed within the semester it is attempted. If an emergency prevents a student from completing some portion of the required assignments, an instructor may give an I or incomplete grade only if the following circumstances are met:

1. The student's other work in the course would earn a passing grade.
2. The outstanding task can be completed without further class attendance.

Outstanding course work normally should be completed within six weeks of the class ending, but the instructor may allow up to one year from the end of the term for which the I grade is granted. It is the student's responsibility to have this deficiency removed within the agreed-upon period or within one year, whichever is less. (Registering for a course a second time does not remove an incomplete grade.) If the instructor has not submitted a grade change after the grace period, the registrar is authorized to change all grades of I to F.

## Repeating Courses

Any student who wishes to better the grade in a course taken at the University of Evansville may elect to repeat that course for grade improvement but must do so at UE. The cumulative grade point average (but not the semester grade point average) will reflect only the higher grade earned for a specific course. Both grades will remain on the transcript. Credit is awarded only once for the course unless otherwise indicated. Some courses may not be repeated; these are determined by the faculty of the appropriate academic unit of the University.

## Dean's List

To merit the honor of being placed on the Dean's List for a given semester, a student must have carried a full academic load of 12 hours or more, excluding pass/fail courses, and have earned a grade point average of 3.5 or above.

## Grade Appeals

Any student who questions a course grade should speak to the instructor. If the instructor is unwilling to change the grade and the student is not satisfied with the reasons given, the student may commence a formal appeal.

Any student wishing to contest a course grade formally must do so in writing within 60 calendar days after the last day of the semester. Correspondence should be addressed to the instructor with a copy to the immediate supervisor. A change of grade will occur if both the instructor and his or her immediate supervisor approve and both sign a change of grade form, which is forwarded

to the Office of the Registrar.

If either the instructor or the immediate supervisor disapproves of the change of grade, the student has the right to appeal to the Admissions and Standards Committee within two weeks of receiving written disapproval. If the student receives no response from either party within 30 calendar days of filing the appeal, the student may appeal directly to the Admissions and Standards Committee. Any appeal to the Admissions and Standards Committee must be filed during the semester (exclusive of summer terms) immediately following that in which the disputed grade was received.

When appealing to the Admissions and Standards Committee, the student must send a copy of the appeal to the instructor and immediate supervisor. The student, the instructor, and the immediate supervisor will be requested to appear before the committee. In exceptional circumstances, the committee may allow other parties to attend the hearing to provide additional information. The committee chair will notify all parties of the decision.

It is the student's responsibility to retain all dated correspondence until the final decision is reached.

## Academic Standards

Graduation requires a minimum grade point average of 2.0 in both the major and the total program of study. Additional GPA requirements may be imposed by particular programs. The University reserves the right to dismiss at any time a student whose academic standing or progress is regarded as unsatisfactory.

### Academic Good Standing

Good standing refers to the normal academic progress of students who are not on probation or on academic dismissal.

Cumulative grade point averages required for good standing:

After the first semester – not less than 1.6

After completing 30 hours – not less than 1.9

After completing 60 hours or more – not less than 2.0

### Progress Toward Degree

All students enrolled for credit are expected to make regular and satisfactory progress toward completion of a degree in a reasonable time. This is especially true for those students using financial aid grants or loans to meet the cost of education.

#### Expectations

1. All students must maintain scholastic averages that place them at or above good academic standing (see above).
2. Full-time students (i.e., any student enrolled in 12 or more hours in one semester) are expected to accumulate an average of 12 hours of credit for each semester (fall/spring) enrolled.
3. Part-time students (i.e., any student enrolled for fewer than 12 hours per semester) are expected to accumulate a minimum of 24 hours of credit for each 30 semester hours enrolled.

Summer terms are not computed as regular semesters of enrollment; however, credit hours earned during the summer may be applied to degree requirements.

Satisfactory academic progress requirements for financial aid differ from those outlined above. The Office of Financial Aid should be contacted for those guidelines.

Academic good standing (minimum and cumulative grade point averages) will be reviewed at the end of each semester (fall/spring).

### Academic Probation

Students will be placed on academic probation when they fail to maintain good academic standing, which requires cumulative grade point averages as follows:

Hours of Credit	GPA
Fewer than 30	1.6
30-59.9	1.9
60 or more	2.0

### Academic Dismissal

Students who fail to remove probationary status for two consecutive semesters (exclusive of summer terms) may be dismissed from the University.

The University reserves the right to dismiss a student not making satisfactory progress toward a degree at the end of any

semester in which minimum academic standards are not met.

As long as a student has not been dismissed from the University, classes may be taken during summer sessions to improve the cumulative grade point average and/or to accumulate earned hours toward satisfactory progress. Transfer credit will only apply to accumulated earned hours and not the cumulative grade point average.

Students who have been academically dismissed from the University may not apply for readmission until at least one full semester (excluding summer terms) has passed. Readmissions are considered on a case-by-case basis, and documentation must be provided indicating conditions favorable toward readmission and future academic success. Recommendations from advisors should be included with the petition. If a student takes courses at another university after being dismissed from UE, an official transcript with all grades must be included in the petition for readmission. The petition for readmission must be filed with the Admissions and Standards Committee through the Center of Academic Advising. All completed documentation must be submitted by December 1 for spring semester readmission and by August 1 for fall semester readmission.

Students dismissed a second time by the University may not apply to be readmitted.

## Access to Education Records

The University of Evansville complies with the Family Education Rights and Privacy Act of 1974 (FERPA), as amended (Public Law 93-380), which is designed to protect the privacy of students by giving them rights concerning their education records. Education records include records directly related to a student and maintained by the University. Among other provisions, the act gives students (1) the right to inspect their records, (2) the right to challenge incorrect information in those records, and (3) the right to keep their records private. Students attending the University will be notified of their FERPA rights annually in the Student Handbook. Each University office maintaining educational records must implement this policy by appropriate means.

FERPA further provides that certain information about the student, designated as directory information, may be released by the University unless the student has informed the University in writing that such information may not be released. The following is considered directory information: name, home address, local address, telephone listings, major field of study, full-time or part-time status, participation in officially recognized activities (in athletics, the weight and height of members of athletic teams), dates of attendance, degrees earned, awards received, photographs, and most recent previous school attended.

A student who desires that the above-listed directory information not be released must inform the Office of the Registrar in writing within one week of the beginning of each semester each academic year. Students may rescind their request in writing at the Office of the Registrar. While the University will honor a student's request to withhold directory information, it cannot assume responsibility to contact the student for subsequent permission to release such information. Regardless of the effect upon the student, the University assumes no liability as a consequence of honoring instructions that directory information be withheld.

Also, it is the student's responsibility to seek correction for any apparent errors in end of semester grades. Failure on the student's part to seek correction within a reasonable period indicates that records are accurate as stated.

Effective as of 2012, certain agencies of the federal government may access and release students' records without their consent to any third party designated by a federal or state authority to evaluate a federal or state supported education program or to researchers performing certain types of studies.

## Transcript of Academic Record

Students may obtain a certified statement of their academic record from the Office of the Registrar upon written request with signature. There will be a fee charged for each request. Transcript requests will be processed within five working days. Transcripts will not be released if the student has an unpaid financial obligation to the University or if there is an unresolved disciplinary action against the student.

## Graduation

Upon the recommendation of the faculty and the approval of the Board of Trustees, the University of Evansville confers its academic degrees. Only those candidates who have fulfilled all scholastic requirements for a degree and who have met their financial obligations to the University will be recommended for the degree. Degrees are conferred five times a year at the end of the following terms: fall semester, winter intersession, spring semester, first summer term, and second summer term.

## Application for a Degree

A candidate for a degree must file an application for the degree in the Office of the Registrar one year prior to the intended date of graduation. While the registrar will conduct a degree audit on behalf of the University, it is the student's responsibility to ensure that all graduation requirements are met.

## Graduation under a Particular Catalog

University policy allows a student seven years to graduate under the catalog in effect at the time of initial enrollment at the University of Evansville unless the student is readmitted after a one-calendar-year or more break in attendance. Students who are readmitted to the University after a one-year or more absence will follow the catalog in effect at the time of their re-entry.

Students who are pursuing two (or more) degrees simultaneously or who wish to earn an additional degree (see "Requirements for an Additional Degree") after completing the first may follow the same catalog as for the first degree if (a) no more than seven years have elapsed since their initial enrollment at the University and (b) there has not been an absence from the University of more than one academic year.

This policy does not apply to students initially admitted to part-time academic programs. Students admitted to part-time academic programs should consult with the Office of the Registrar for applicable policies.

## Candidate Clearance

The University will be responsible for including on the list of graduates only those students who have submitted the application for degree and have met all academic requirements and all financial obligations. Deficiencies in academic requirements, such as incomplete grades and course substitutions, must be cleared no later than two weeks prior to the expected date of graduation.

## Graduation with Honors

Bachelor degree candidates who have maintained their scholastic standing at a high level will graduate with honors. Students acquiring a grade point average of 3.85 will receive their degrees summa cum laude; students acquiring a grade point average of 3.70 will receive their degrees magna cum laude; and students acquiring a grade point average of 3.50 will receive their degrees cum laude. Only grades earned at UE are included in the calculation. Students must earn at least the minimum number of hours to comply with the University's residency requirement in order to be eligible for honors.

## Commencement

Commencement exercises are held annually in May and December. Students completing degree requirements in the spring semester and following summer sessions may participate in the May ceremony. The December ceremony is for students completing degree requirements in the fall semester.

# William L. Ridgway College of Arts and Sciences

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*Ray Lutgring, Dean*

The William L. Ridgway College of Arts and Sciences provides quality liberal education in the arts, humanities, and natural and social sciences, as well as professional training in the fine and performing arts. While baccalaureate degree work includes studies in fundamental disciplines and applied specializations, these are complementary to the overall goals of individual intellectual growth and cultural development through broad study of the nature of humans and the universe.

The college offers baccalaureate degrees in archaeology, art history, art (art education, pre-art therapy, studio art, visual communication design), biology, biochemistry, chemistry, classical studies, cognitive science, communication (advertising and public relations, journalism, organizational communication, multimedia production, sport communication), creative writing, criminal justice, environmental science, environmental administration, foreign languages (French, German, Spanish), history, interdisciplinary studies, international studies, legal studies, literature, mathematics, music (music education, music management, music performance, music therapy), neuroscience, philosophy, physics, political science, psychology, religion, sociology (anthropology, gerontology, pre-social work), theatre (theatre design and technology, theatre education, theatre management, theatre performance), and writing.

Many preprofessional programs, minors, and concentrations are offered in most of the baccalaureate fields, as are , Latin American, and Russian studies, and gender and women's studies. In conjunction with the College of Education and Health Sciences, the college offers bachelor degrees in senior high, junior high, and middle school education with teaching majors in English, language arts, mathematics, music, science, social studies, theatre, and visual arts.

Degrees granted in the College of Arts and Sciences are awarded upon successful completion of all University requirements and those of specific departments and degree programs. Major requirements are outlined within each section describing the academic discipline. Students are required to consult with their faculty advisors before completing class schedules.

## **iBACE: Integrating Business and Career Education**

The iBACE program offers non-business students an opportunity to earn a certificate in business fundamentals. It provides arts and sciences students and health sciences students with educational, hands-on business experiences that improve their marketability and career success. The program builds upon students' foundations by adding marketing, management, and finance skills that are essential to many careers.

The iBACE program includes three components: course work, professional preparation seminars, and practical work experience.

### **Course Work**

The iBACE program requires nine credit hours of course work that introduces the three building blocks of business training: Accounting 210; Marketing 325; Management 377.

### **Seminars**

Students in the iBACE program are required to enroll in Experiential Education 90, a non-credit career exploration and preparation course. This course covers résumé preparation, job interviewing, and professional development activities. Students are encouraged to attend additional lectures, seminars, or workshops that provide enriched preparation for leadership, entrepreneurship, or service.

### **Internship**

Students in the program are required to complete a three credit internship in a position related to their arts and sciences major but with a business component. Appropriate internships should be selected in consultation with the student's advisor and must be approved by the dean of the College of Arts and Sciences. To earn three credit hours, students must complete 150 hours of work experience. To qualify for the internship, two of the required business courses must be completed before the internship or, alternatively, one can be completed and another taken simultaneously.

Interested students should complete an application form to enroll in the program. The enrollment form can be found online at [ibace.evansville.edu](http://ibace.evansville.edu). A certificate will be awarded at the completion of the program.



# Archaeology and Art History

Faculty: Ebeling, Kaiser (Chair), Strobel, Thomas

## Bachelor of Arts with a Major in Archaeology

The major in archaeology concentrates on providing students with an introduction to the discipline of archaeology and to the civilizations of the ancient Mediterranean area, the Near East, and Western Europe. It is intended to engage students in a broad-based, interdisciplinary approach that will not only provide a firm foundation for those wishing to pursue the discipline further at the graduate level but also serve as a liberal arts core for undergraduates planning careers in professional areas such as law or library science.

Majors are encouraged to spend at least one semester abroad, either at Harlaxton College or at a program directly related to Mediterranean archaeology (e.g., College Year in Athens or the Intercollegiate Center for Classical Studies in Rome). Harlaxton College is located in an area rich with remains of the Roman civilization in Britain. It is possible to spend a semester in England or even to pursue study-abroad for an entire year and still complete all degree requirements within four years. Students are encouraged to participate in an archaeological field school. In addition to its own field methods class, the department sponsors an excavation at the site of Jezreel in Israel; students may participate in other excavation practica as well. The department contributes to an interdisciplinary major in classical studies, which is described in its own section of this catalog.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 38 hours

Archaeology 105, 106, 192, 285, and 206 or 207; Engineering 283; one from Anthropology 200, Art History 208, History 311, 312, 313, Interdisciplinary 250, 325, or Philosophy 211; the same history or interdisciplinary class may not fulfill both this and the next requirement; one course from History 311, 312, or Interdisciplinary 325

Three courses in archaeology at the 300 level – no more than two field practica (Archaeology 340, 394, 395) may be counted toward this requirement

Two courses in archaeology at the 400 level – the senior seminar, Archaeology 400, may be counted toward this requirement, but majors may take any senior seminar; no more than one directed study (Archaeology 493) or internship (Art History 495) may be applied to the 400-level requirement

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 35 hours

Students contemplating graduate school are strongly encouraged to pursue advanced work in a language or to study more than one language. A particular language is not required, but French, German, or an ancient language (Greek, Latin, Hebrew) are recommended.

Students contemplating careers in archaeological conservation should take chemistry courses through organic chemistry.

### Archaeology Minor (18 hours)

Archaeology 105, 106; any two 300-level archaeology courses; one 400-level archaeology course; History 311 or 312 or Interdisciplinary 325

## Bachelor of Arts with a Major in Art History

The art history major offers a baccalaureate degree as preparation for graduate study in art history or for careers related to the visual arts, as well as providing an excellent liberal arts education. The program is international in scope, offering study at the Evansville campus and Harlaxton College. Study abroad may also be pursued through institutionally-approved programs in consultation with the Office of Study Abroad. Internships in major art institutions are recommended. The program offers an emphasis in ancient art and archaeology, Renaissance, Baroque, eighteenth, nineteenth, and twentieth century art, with hands-on experience in museum collections. Students are encouraged to begin their course of study with surveys of art (Art History 208 and 209) to establish a basis for more advanced courses. Independent study and seminar classes are also available to permit individual research projects supervised by a member of the faculty.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 36 hours

Art 210 or 220; Art History 208, 209, 389; one from Archaeology 305, 306, 307, 308, 309, 311, or Art History H383; one from Art History H378, H379, 384, 385, 386, or H387; History 111, 112

Art history electives at the 300 level – 6 hours

Art history electives at the 400 level – 6 hours

Archaeology courses may be taken to fulfill art history electives.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 37 hours

A semester of study at Harlaxton College is encouraged.

An apprenticeship or internship with a professional individual or organization in the field of the visual arts is strongly recommended for qualified students interested in pursuing professional careers. Prior approval for credit must be sought from the student's advisor, the faculty museum liaison, and the department chair.

Students contemplating curatorial work should prepare for graduate-level study; those interested in arts management should consider courses in accounting, marketing, or management; those interested in conservation should take courses in studio art and organic chemistry. Electives from history, literature, philosophy, religion, and theatre are also highly recommended.

## Art History Minor (18 hours)

A minor in art history is recommended for students majoring in anthropology, archaeology, communication, English, history, international business, international studies, languages, nursing, philosophy, political science, religion, or in any area of study where a broad knowledge of Western culture is essential.

Art History 208, 209, 389; one from Archaeology 206, 207, 305, 306, 307, 308, 309, or 311; one from Art History H383, 384, or 385; one from Art History H378, H379, 386, or H387

## Art

Faculty: Frasier (Chair), Larmann, Matteson

The Department of Art offers the following degrees: Bachelor of Fine Arts (BFA) in studio art (ceramics, painting, sculpture); Bachelor of Arts (BA) in art; Bachelor of Science (BS) in art and associated studies; Bachelor of Science (BS) in art education; Bachelor of Science (BS) with a pre-art therapy concentration; Bachelor of Science (BS) in visual communication design; a minor in studio art for non-art majors; and a minor in visual communication design for non-art majors. The BFA and BS degree programs in art are designed for students who plan to enter the preprofessional fields of creative studio art, visual communication, art education, and art therapy. The BA degree program serves students who seek an educational experience in the liberal arts.

## Departmental Requirements

Majors in the Department of Art are required to complete 51 percent of the departmental requirements at the University of Evansville.

A maximum of three hours of credit may be earned per course, per semester in courses numbered 320 and above. Upon completion of nine hours in a 300-level studio course students may, with faculty permission, enroll for six hours credit in their studio major. Internship and practicum hours require permission of the supervising instructor.

**Note:** Art majors are advised to complete the core curriculum before repeating studio courses for additional credit.

## Bachelor of Fine Arts with a Major in Art

The Bachelor of Fine Arts degree with a major in art with studio area concentrations in ceramics, painting, and sculpture prepares students for graduate study and to enter the professional field as artists, teachers, designers, and other related professions.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Art 401

For additional departmental general education requirements, please consult the department.

*Major* – 69 hours

Studio core curriculum – 23 hours: Art 210, 220, 221, 325, 340, 360, 370; one from Art 330, 345, 350

Minimum of 15 hours (in addition to the core courses) in a studio area for a major; select one – ceramics, painting, sculpture

Minimum of 12 hours, representing at least two studio areas other than the studio major, from Art 214, 314, 315, 316, 322, 325, 330, 340, 345, 350, 360, 370, 410, 417

Art electives to total 57 hours in art – 7 hours

Art history and archaeology – 12 hours: Art History 208, 209; six additional hours in archaeology or art history

*Electives* – 10 hours

### **Portfolio and Admission Requirements**

BFA students are required to hold a minimum GPA of 2.7 in studio core art courses and submit a portfolio of their creative work for review by a faculty committee which will determine if admission to the BFA program will be granted. Portfolios should be presented for review during the semester following the student's completion of the core curriculum. A minimum of 18 hours in studio art and/or art history must be completed after full admission to the program and before graduation. Admission to the BFA degree program and graduation may not occur within the same academic year.

### **Graduation Requirements**

Prior to graduation with a BFA degree, studio majors must meet the following requirements: Hold a minimum GPA of 2.7 in studio art courses, pass an exit review, and submit a display of their studio work for approval by an art faculty committee.

## Bachelor of Arts with a Major in Art

The Bachelor of Arts degree with a major in art is offered to meet the needs of students interested in art as a discipline of study within a liberal studies education.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Art 401

For additional departmental general education requirements, please consult the department.

*Major* – 42 hours

Studio core curriculum – 23 hours: Art 210, 220, 221, 325, 340, 360, 370; one from Art 330, 345, 350

Studio art electives to total 36 hours in art – 13 hours

Art history and/or archaeology – 6 hours

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 31 hours

## Bachelor of Science with a Major in Art Education

Information on the Bachelor of Science degree with a major in art education may be found in the College of Education and Health Sciences section.

## Bachelor of Science with a Major in Art and Associated Studies

The Bachelor of Science degree with a major in art is designed for students who want to combine a general art major with an associated field of study such as archaeology, art history, business, communication, history, psychology, or literature.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Art 401

For additional departmental general education requirements, please consult the department.

*Major* – 69 hours

Studio core curriculum – 23 hours: Art 210, 220, 221, 325, 340, 360, 370; one from Art 330, 345, 350

Art courses – 18 hours of which nine hours must be in major studio (ceramics, painting, sculpture)

Art electives to total 45 hours in art – 4 hours

Art history and/or archaeology – 6 hours

18 to 24 hours in an associated area of study, including a minimum of nine hours in one area of study outside the Department of Art

*Electives* – Electives for remainder of 120 hours

## Bachelor of Science with a Pre-art Therapy Concentration

The Bachelor of Science degree with a pre-art therapy concentration is designed to prepare students for a master's degree program in art therapy or to work in a related field.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Art 401

For additional departmental general education requirements, please consult the department.

*Major* – 68 hours

Studio core curriculum – 23 hours: Art 210, 220, 221, 325, 340, 360, 370; one from Art 330, 345, 350

Art therapy requirements – 11 hours: Art 201, 301, 405, 495

Art electives – 9 hours

Psychology – 16 hours: 121, 226, 245, 259, 467

Psychology elective – 3 hours

Art history and/or archaeology – 6 hours

*Electives* – Electives for remainder of 120 hours

## Bachelor of Science with a Major in Visual Communication Design

The Bachelor of Science degree with a major in visual communication design is designed for students who wish to pursue a career in art with an emphasis in computer technology.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Art 401 or Communication 487

For additional departmental general education requirements, please consult the department.

*Major* – 52 hours

Art and Communication – 40 hours: Art 210, 213, 220 or 221, 315, 316, 322, 410, 417, 490, 495; Communication 211, 251, 312, 352

Art electives – 6 hours

Art history – 6 hours

*Electives* – 27 hours, with a minimum of 9 hours outside art and communication

### Studio Art Minor (20 hours)

The art (studio) minor is designed for students who desire a program of study for their own personal growth and enjoyment or for an adjunct to other major interests such as art history, archaeology, anthropology, business, communication, foreign languages,

history, literature, philosophy, or religion.

Art 210, 220 or 221, 325; one course from Art 330, 340, 345; one course from Art 350, 360, 370; one course from Art History 208, 209; three hours in studio electives

## Visual Communication Design Minor

(18 hours)

The visual communication design minor is designed for students who prefer to supplement their interest in computers as the artist's tool.

Art 210, 213, 220 or 221, 315, 316, 410 or 417

## Biology

Faculty: Aldred, Davis, Edwards (Chair), Gordon, Hochwender, Powell, Stamm

The Bachelor of Arts and Bachelor of Science degrees with a major in professional biology provide background for further education in one of the health professions (including medicine, dentistry, optometry, and veterinary medicine) or for further graduate study in all specialized areas of the biological sciences. The Bachelor of Arts and Bachelor of Science degrees with a major in applied biology prepare students for careers as laboratory or research assistants, for high school teaching, or for government service. Both biology majors offer a broad knowledge of the biological sciences, including exposure to cell biology, developmental biology, ecology, evolution, genetics, microbiology, molecular biology, physiology, organismal biology, and systematics. Undergraduates are encouraged to conduct in-depth research and, depending upon career goals, student projects may involve topics from gene cloning to complex ecosystem interactions. Students pursuing the Bachelor of Arts must meet the foreign language proficiency requirements at the second-year level and may not earn more than 45 hours of biology credit toward graduation.

Secondary education students who major or minor in biology should refer to the appropriate section under the College of Education and Health Sciences.

### Harlaxton College in Grantham, England

It is possible, with advanced planning, to spend a semester or an academic year in England and still complete all degree requirements within four years by taking general education courses at Harlaxton College.

In addition, professors from the University of Evansville or our partner universities frequently offer biology courses at Harlaxton College. Course listings are available two years in advance, and specific semester course offerings can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

### Gulf Coast Research Laboratory Affiliation

In 1995 an affiliation was established with the Gulf Coast Research Laboratory of the University of Southern Mississippi in Ocean Springs. Students may obtain transfer credit through summer study in marine science areas such as marine ecology, marine invertebrate zoology, marine psychology, and oceanography. See Dr. Edwards for details.

## Bachelor of Arts or Bachelor of Science with a Major in Applied Biology

### Requirements (120 hours)

*Enduring Foundations General Education* – 41-42 hours, including Biology 482; Chemistry 118; Mathematics 134 or 221; Physics 100 or 121 or 210

#### *Major* –

33 hours for Bachelor of Arts

40 hours for Bachelor of Science

Biology 110\* or 430, 118, 119, 120, 320; additional biology courses in the 200, 300, and 400 categories to total a minimum of 29 hours for the Bachelor of Arts or 36 hours for the Bachelor of Science (including Biology 482); Chemistry 240

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives –*

42-43 hours for Bachelor of Arts

41-42 hours for Bachelor of Science

**Specializations in Association with a Major in Applied Biology**

**General Framework**

The applied biology major is intended for students who plan career paths in biology-related areas in the private sector. Although students can earn a general Applied Biology degree with no specialization, this major also allows students to emphasize one type of career within a variety of options associated with the life sciences (see specialization options below). One key component of a specialization is an internship, which is included within a specialization in order to provide students with a working experience in the business, industry, or the career area of their choice. Specializations require at least 15 hours of course work in designated areas, in addition to the internship experience. In some specializations, those courses involve coursework entirely outside of the biology major. In other cases, courses are fulfilled within the department of biology or within the natural sciences. In all cases, biology credits fulfill course hours for the major, as well as for the specialization. The current proposal includes **BIOL340 (Cellular and Molecular Biology); this course is being submitted to the Curriculum Committee. If Curriculum Committee does not approve BIOL340, BIOL440 will replace BIOL340 throughout the text of this document.**

**Options**

1. Business/Administration
2. Political Science/International Studies
3. Scientific Communication
4. Organismal
5. Biotechnology
6. Allied Health:
  - A. Pre-Physician Assistant
  - B. Pre-Physical Therapy

**1. Business/Administration specialization (18 hours)**

This specialization is targeted for students who intend to use their Applied Biology degree in the areas of business, administration, marketing and/or finance. To improve marketability, this specialization augments a student's biology degree with courses that provide a general background in economics, management, and/or marketing.

Requirements involve the following:

One course (3 hours) from Accounting 210, Economics 101, 102

One course (3 hours) from Management 300, 377, Marketing 325 (must be in at least 5<sup>th</sup> semester of Management course work

Two electives (6 hours) from Finance 361 (requires both Economics 102 and Accounting 210), Law 201, Quantitative Methods 227 or Biology 415 .

Having one elective from above list means that students who wanted Finance 361 but took Economics 101 could take Economics 102 and Finance 361. Also, it means that students could elect several Management classes or a Management and a Marketing course, depending upon their interests.

Internship (3 hours): Biology 498

**2. Political Science/International Studies (18 hours)**

This specialization benefits students interested in careers associated with intellectual property law, lobbying, wildlife law and policy, and environmental law and policy.

Requirements involve the following:

One course (3 hours) from Political Science 100, 143, 160

Three courses (9 hours): Political Science 343, 344, 440

One course (3 hours) from Political Science 313, 345, 349, 361, 363

Internship (3 hours): Biology 498

**3. Scientific Communication (18 hours)**

This specialty is designed for biology majors who are interested in learning the art and discipline of science writing with the intention of contributing to public understanding of science and medicine. Career options for students interested in pursuing an Applied Biology degree with a writing/communication specialization include: magazine, and newspaper journalism; staff writing at university news offices, federal agencies, museums, botanical gardens and zoos.

Requirements involve the following:

One course (3 hours) Writing 204

Two courses (6 hours) from Writing 205, 308, Communication 231 (requires Communication 130), Communication 332 (requires Communication 231)

Two courses (6 hours) from Biology 305, 310, 315, 323, 333, 423, 427, 450, 460

Internship (3 hours): Biology 498 or Writing 494

#### **4. Organismal Biology (18 hours)**

**This specialization prepares students with a strong foundation in organismal biology and ecology. Students considering the following careers may be interested in this focus: education naturalists, fish and wildlife technicians, field botanists, natural resource managers, forestry manager, veterinary technicians, zookeepers, or horticulturists.**

Requirements involve the following:

One course (3-4 hours) from Biology 215, 225, 315, 414

One course (3-4 hours) from Biology 214, 333, 350, 434

One course (3-4 hours) from Biology 305, 310, 323, 423, 450

Additional courses (3-6 hours) Biology 331, 415, Chemistry 360, Environmental Studies 360, 440

Internship (3 hours): Biology 498

#### **5. Biotechnology (19 hours)**

**This specialization prepares students for a career as a lab technician at universities or in industrial settings** by augmenting a student's biology degree with courses that provide experiences associated with laboratory techniques.

Requirements involve the following:

Biology 331 (4 hours):

Three electives (12 hours) from Biology 340, 427, 440, 442, 445, 455, Chemistry 360, **370/371**

Internship (3 hours): Biology 498

Biology 430 is required for this specialization but falls within earlier requirements for the applied biology major (so Biology 110 plus 1 hour lab credit is not an option for this specialization).

#### **6. Allied Health (26 or 27 hours)**

This specialization provides a rigorous course of study that prepares students for admission into allied health graduate programs, including physical therapy and physician assistant programs.

##### **A. Pre-Physician Assistant (26 hours)**

Requirements involve the following:

Exercise and Sport Science 112, 113, Psychology 121, Biology 415

Two courses from Biology **331, 340, 425, 434, 442**

Internship (3 hours): Biology 498

##### **B. Pre-Physical Therapy (27 hours)**

Requirements involve the following:

Exercise and Sport Science 112, 113, Physics 121, 122, Physical Therapy 100

Two courses from Biology **331, 340, 425, 434, 442**

Internship (3 hours): Biology 498

Biology 430 is required for this specialization but falls within earlier requirements for the applied biology major (so Biology 110 plus 1 hour lab credit is not an option for this specialization).

## **Bachelor of Arts or Bachelor of Science with a Major in Professional Biology**

Requirements (120 hours)

*Enduring Foundations General Education* – 42-43 hours, including Biology 482; Chemistry 118; Mathematics 134 or 221; Physics

121 or 210

*Major –*

41 hours for Bachelor of Arts

49 hours for Bachelor of Science

Biology 118, 119, 120, 320, 331, 340; additional biology courses in the 200, 300, and 400 categories to total a minimum of 32 hours for the Bachelor of Arts or 40 hours for the Bachelor of Science (including Biology 482); Chemistry 240, 341

A fourth semester of chemistry and a second semester of physics are recommended

*Additional foreign language –* 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives –*

34-35 hours for Bachelor of Arts

32-33 hours for Bachelor of Science

## Bachelor of Science with a Major in Life Science Education

Information on the Bachelor of Science degree with a major in life science education may be found in the College of Education and Health Sciences section.

### Biology Minor (18 hours)

Biology 107 or 118, 119, 120; additional 200, 300, and 400 level courses in biology to total a minimum of 18 hours (of the additional courses, six hours must be 300- or 400-level biology courses)

### Certificates (16 hours)

The Department of Biology awards a certificate in each of four areas upon the completion of a minimum of 16 hours selected from among the courses listed in an area. Up to four hours of independent research (Biology 460) in a specific area may be applied toward the completion of the certificate requirements. Certificates are not reflected on the academic transcript.

Botany: Biology 215, 225, 305, 414, 428

Zoology: Biology 214, 333, 350, 425, 427, 434, 450

Field biology: Biology 214, 215, 320, 360, 414, 423

Microbiology: Biology 305, 331, 340, 110 or 430, 434, 442

Students may also concentrate in the area of biotechnology. The biotechnology certificate requires successful completion of a degree program in biology or chemistry, including the following courses: Biology 107, 119, 331, 340, 430; Chemistry 118.

## Preprofessional Health

### Pre-medicine Recommendations

Biology 107 or 119, 120, 331, 425, 427, 430, 440; Chemistry 118, 240, 341, 370/371; Mathematics 221, 222; Physics 210, 211

Only rarely is a student admitted to medical school after three years of undergraduate study. Most students earn a baccalaureate degree in a specific area. In biology, the student has BA and BS degree options. Further information is available from the pre-medicine advisor, Dr. Mark Davis.

### Pre-dental Recommendations

Biology 107 or 119, 120; Chemistry 118, 240, 341, 280 or 370/371; Communication 130; Physics 121, 122; Psychology 121

Additional recommended courses: Art 350; Biology 331, 430; Economics 101; Exercise and Sport Science 112, 113; Management 300 or 377

Certain dental schools require at least one semester of human anatomy and physiology. A student who elects to complete four years at the University of Evansville must fulfill a major in a specific subject area. See the previously listed baccalaureate degree options. Further information is available from the pre-dental advisor, Dr. Joyce Stamm.



## Pre-optometry Recommendations

Biology 107 or 119, 120, 430; Chemistry 118, 240, 341, 280 or 360 or 370/371; Mathematics 221; Physics 121, 122; Psychology 121, 245, 355; at least two humanities and fine arts courses; one year of a foreign language required by some optometry schools

A minimum of 90 semester hours is required for admission to most optometry schools, although most students admitted have earned a baccalaureate degree. Further information is available from the pre-optometry advisor, Dr. Dale Edwards.

## Pre-veterinary Medicine

### Recommendations

Biology 107 or 119, 120, 331; Chemistry 118, 240, 280, 341; Mathematics 221, 222; statistics course; Physics 210, 211; humanities electives (six hours)

These are the minimum requirements for admittance to most schools of veterinary medicine, but the majority of students admitted to a veterinary medicine school have completed a baccalaureate degree. Further information is available from the pre-veterinary medicine advisor, Dr. Noah Gordon.

# Chemistry

Faculty: Kaufman, Lampkins, Lynch, Miller (Chair), Slade, Thananathanachon

The University of Evansville is approved by the American Chemical Society for undergraduate professional training in chemistry. The professional chemistry major described below meets the guidelines formulated by the Committee on Professional Training of the American Chemical Society. The Department of Chemistry offers three chemistry majors, a co-op program for interested professional chemistry majors, and a major in biochemistry.

It is possible, with advanced planning, to spend a semester in England and still complete all degree requirements within four years by taking general education courses at Harlaxton College.

## Bachelor of Arts or Bachelor of Science with a Major in Chemistry

Bachelor of Arts or Bachelor of Science degrees may be earned with the basic chemistry, professional chemistry, or biochemistry majors. A Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212. Only a Bachelor of Science may be earned with the chemistry-business administration major.

### Requirements (120 hours)

#### Professional Chemistry Major

*Enduring Foundations General Education* – 42 hours, including Mathematics 221; Physics 210

For additional departmental general education requirements, please consult the department.

*Major* – 53 hours

Chemistry 118, 201, 240, 280, 301, 341, 351, 360, 370, 452, 461, 483; one credit hour chosen from Chemistry 371, 493 (with lab), 495; Mathematics 222, 323; Physics 211

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

19 hours for Bachelor of Arts

25 hours for Bachelor of Science

### Requirements (120 hours)

#### Basic Chemistry Major

*Enduring Foundations General Education* – 42 hours, including Mathematics 221; Physics 121 or 210

For additional departmental general education requirements, please consult the department.

*Major* – 41 hours

Chemistry 118, 201, 240, 280, 301, 341, 351, 360, 370, 371; one from Chemistry 452, 461, 473 with 474, 483; Mathematics 222; Physics 122 or 211

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

31 hours for Bachelor of Arts

37 hours for Bachelor of Science

## Requirements (120 hours)

### **Chemistry-Business Administration Major**

*Enduring Foundations General Education* – 42 hours, including Mathematics 221; Physics 121 or 210

For additional departmental general education requirements, please consult the department.

*Major* – 53 hours

Accounting 210; Chemistry 118, 201, 240, 280, 301, 351, 360, and one chemistry elective; Economics 102; Finance 361; Management 331; Marketing 325, 380; Mathematics 222; Physics 122 or 211; Quantitative Methods 160

*Electives* –

25 hours

## Requirements (120 hours)

### **Biochemistry Major**

*Enduring Foundations General Education* – 43 hours, including Biology 119; Mathematics 221; Physics 121 or 210

For additional departmental general education requirements, please consult the department.

*Major* – 56 hours

Biology 120, 331; one from Biology 340, 427, 430, 442; Chemistry 118, 201, 240, 280, 301, 341, 351, 360, 370, 371, 473, 474; one from Chemistry 452, 461, 483; Mathematics 222; Physics 122 or 211

*Electives* – 21 hours

## Bachelor of Science with a Major in Chemistry Education

Information on the Bachelor of Science degree with a major in chemistry education may be found in the College of Education and Health Sciences section.

## Chemistry Minor (20 hours)

Chemistry 118, 240, 280, 360; one from Chemistry 341, 351, or 370 and 371

## Co-op Program

A cooperative education plan for chemistry majors is available as an alternative to the traditional four-year plan. The co-op plan combines classroom education with full-time work experience in industry. Please refer to Special Educational Opportunities located in the Degrees, Curriculum, Academic Opportunities section of the catalog.

## Classical Studies

Faculty: Kaiser (Archaeology/Art History), Stein (Philosophy/Religion), Thomas (Archaeology/Art History), Ware (Philosophy/Religion)

The major in classical studies is an interdisciplinary liberal arts major intended for students who wish to study Greek and Roman antiquity with an emphasis on classical language, literature, and history. The major requires that students have a minimum of three years of either Greek or Latin, or two years of both Greek and Latin. Other classes will be selected from archaeology, history, philosophy, and world literature. These courses will provide a broad perspective on Greek and Roman civilization, while the facility that students develop with the classical languages enables them to use primary source material in their studies.

Students develop powers of critical analysis, an appreciation of literature, and an understanding of the documents and traditions which constitute the foundations of Western civilization. The major provides a superior liberal arts education offering excellent college preparation for a number of professional fields such as law or library science. The major also prepares students for graduate studies in classics or to obtain a master's degree in teaching Latin for preparatory and high schools. The minor will

be of particular interest to students majoring in archaeology, literature, history, Biblical studies, or a foreign language.

Majors are encouraged to spend at least one semester abroad, either at Harlaxton College or at another approved study abroad program such as College Year in Athens or the Intercollegiate Center for Classical Studies in Rome. Harlaxton College is located in an area rich with remains of the Roman civilization in Britain. It is possible to spend a semester in England or even to attend study-abroad programs for an entire year and still complete all degree requirements within four years.

## Bachelor of Arts with a Major in Classical Studies

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Archaeology 400 or History 490 or Philosophy/Religion 499

For additional departmental general education requirements, please consult the department.

#### *Major* – 33 hours

At least four courses in Latin or Greek numbered 200 or above

At least four courses from History 311, 312; Interdisciplinary 250, 325; Philosophy 211; Religion 210, 330

At least three courses from among Archaeology 105, 106, 305, 306, 307, 308, 309, 320, 395, 492

Other courses may be substituted upon approval of the Classical Studies Committee. The courses in Greek or Latin which satisfy the major requirement also satisfy the University's foreign language requirement.

#### *Electives* – 46 hours

## Bachelor of Arts with a Major in Classical Studies and a Concentration in Language and Literature

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Archaeology 400 or History 490 or Philosophy/Religion 499

For additional departmental general education requirements, please consult the department.

#### *Major* – 36 hours

At least seven courses in the classical languages numbered 200 or above; must include courses in both Greek and Latin – students choose an area of primary competence in one classical language (Greek or Latin) and an area of secondary competence in the other classical language (or in the other classical language and Hebrew)

- Primary competence: at least four courses \numbered 200 or above
- Secondary competence: at least two courses numbered 200 or above or Greek/Latin 211 and Hebrew 112

At least three courses from History 311, 312; Interdisciplinary 250, 325; Philosophy 211; Religion 210, 330

At least two courses from Archaeology 105, 106, 305, 306, 307, 308, 309, 320, 395, 492

Other courses may be substituted upon approval of the Classical Studies Committee. The courses in Greek or Latin which satisfy the major requirement also satisfy the University's foreign language requirement.

#### *Electives* – 43 hours

### Classical Studies Minor (18 hours)

The courses in Greek or Latin which satisfy the minor requirement also satisfy the University's foreign language requirement.

At least three courses in Greek or Latin numbered 200 or above; at least two courses from Archaeology 105, 106, 305, 306, 307, 308, 309, 320, 395, 492; at least one course from History 311, 312, Interdisciplinary 250, 325, Philosophy 211, Religion 210, 330

### Classical Languages Minor (18 hours)

In the classical languages minor, students gain facility in both classical languages, Greek and Latin. Students choose an area of primary competence in one classical language (Greek or Latin) and an area of secondary competence in the other classical language (or the other classical language and Hebrew). Classical language minors develop a mastery of the classical languages, powers of critical analysis, an appreciation of literature, and an understanding of the documents and traditions which constitute the foundation of Western civilization.

Primary competence: four courses in Greek or Latin numbered 200 or above

Secondary competence: two courses numbered 200 or above in the other classical language or the course numbered 211 in the other classical language and Hebrew 112

## Cognitive Science

Core Faculty: Beavers, Becker, Hennon, Jones (Director), Lakey

Cognitive science is the general study of intelligence. It seeks to understand how thought processes function, how they might be instantiated in machinery, and how our cognitive initiatives relate to the brain. Researchers in cognitive science work in a variety of areas ranging from artificial intelligence and neurophysiology to cognitive psychology and the philosophy of mind. The cognitive science program at the University of Evansville was designed to prepare students for a range of possible vocations, many of which will require further study in graduate school. Indeed, most of our majors continue their studies by pursuing this path.

In keeping with the interdisciplinary spirit of cognitive science, majors are encouraged to add depth and breadth to their experience by the way they use the 43 to 47 elective credits permitted by the program. For instance, to supplement their degree, students often complete a second (or third) major, pick up additional minors, or design their own path through a variety of relevant courses. Additional majors that fit well with cognitive science include applied mathematics, biology, computer science, economics, neuroscience, philosophy, and psychology, depending on the particular methods requirement a student may select (see below).

All majors in cognitive science automatically meet the requirements for a minor in philosophy, though they must declare the philosophy minor along with the cognitive science major.

## Bachelor of Science with a Major in Cognitive Science

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Philosophy 221, 231; Neuroscience 125

For additional departmental general education requirements, please consult the department.

### *Major* – 32 to 36 hours

Mandatory participation in the cognitive science weekly proseminar by enrollment in Cognitive Science 100, 200, 300, or 400; Cognitive Science 111, 345, 498; Neuroscience 357; Philosophy 447, 451; Psychology 355, 366

Students must also complete a methods requirement in one of the following disciplines:

(1) Biology 107, 320; or (2) Computer Science 210, 215, 290, or 315; or (3) Economics 300, 400, Quantitative Methods 227; or (4) Mathematics 365, 370, 373, or 466; or (5) Psychology 245, 246

### *Electives* – 43 to 47 hours

Elective courses should be chosen carefully in consultation with an advisor to complement a student's education and career objectives.

A grade of C- or better is required in each course applied to the major. Graduate-school-bound majors are strongly encouraged to participate in a Research Experience for Undergraduates (REU) program or another summer internship appropriate for their interests in graduate school.

Students interested in working in computer modeling or other computational aspects of cognitive science are strongly encouraged to complete a minor in computer science by taking Computer Science 210, 215, 220, 290, 315, 430, and 478.

### Cognitive Science Minor (18 hours)

Cognitive Science 111, 498; Neuroscience 125; and any three of the following: Neuroscience 357; Philosophy 345, 447, 451; Psychology 355, 366. Substitutions for the three elective courses are permitted with pertinent courses from other areas with the approval of the director of cognitive science. These can include courses from anthropology, biology, cognitive science, computer science, economics, education, engineering, mathematics, or other courses from philosophy or psychology.

## Communication

Faculty: Shifflet (Chair), Atkinson, Smith, Wandel, Zhang

The Department of Communication offers Bachelor of Arts and Bachelor of Science degrees in communication.

## Bachelor of Arts or Bachelor of Science with a Major in Communication

This major prepares students for a variety of related professional careers involving communication. Students receive cross-training in various media and communication skills while also studying in greater depth one of three specialty areas: advertising and public relations, journalism, or multimedia. To acquire practical experience in the area of their choice, students are required to earn both practicum and internship credits. They are also required to earn either a minor or a specialization in an area outside communication. Communication courses are scheduled to allow students to attend Harlaxton College without disrupting their course sequences and graduation schedule.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

For additional departmental general education requirements, please consult the department.

*Core requirements* – 31 hours

Communication 130, 210, 220, 211, 221, 231, 251, 390 (2 hours; an additional 6 hours can be earned as electives), 391, 395 (1 hour minimum; an additional 2 hours can be earned as electives), 483, 485

*Specialty Areas* – 15 hours (select one)

Advertising and public relations: Communication 312, 314, 322, 333, 388

Journalism: Communication 322, 332, 333, 350, 352

Multimedia: Communication 240, 345, 351, 352, 450

*Minor or specialization* – 18 hours

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

9 hours for Bachelor of Arts

15 hours for Bachelor of Science

### Communication Minor (18 hours)

Communication 130, 485; two from Communication 210, 211, 220, 221, 231, 251; two from one of the four specialty areas – advertising and public relations, journalism, multimedia production, or organizational communication

## Bachelor of Arts or Bachelor of Science in Health Communication

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Required courses for Outcome 9*

*Lab course options (4 hours) – Select 1:*

Biology 100 or 107

Chemistry 100, 108 or 118

*Non-lab course options (3 hours) – Select 1:*

Environmental Studies 103

Neuroscience 125

*Core Requirements* – 31 hours

Communication 130, 210, 211, 220, 221, 231, 251, 390 (2 hours; an additional 6 hours can be earned as electives), 391, 395 (1 hour minimum; an additional 2 hours can be earned as electives), 483, 485

*Health Segment* - 18 hours

Public Health 190, 195, Health Services Administration 405, 414, 420, and Communication 410.

*Specialty Areas* – 15 hours (select one)

- Advertising and public relations: Communication 312, 314, 322, 333, 388
- Journalism: Communication 322, 332, 333,, 345 or 351352
- Multimedia: Communication 240, 345, 351, 352, 450
- Public Health 190, 195; Health Services Administration 405, 414, 420; Communication 410

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

A minimum of 9 hours of science or health courses above the introductory level

9 hours for Bachelor of Arts

15 hours for Bachelor of Science

## Bachelor of Arts or Bachelor of Science with a Major in Sports Communication

**Requirements (120 hours)**

*Enduring Foundations General Education* – 41 hours

For additional departmental general education requirements, please consult the department.

*Core requirements* – 31 hours

Communication 130, 210, 211, 220, 221, 231, 251, 390 (2 hours; an additional 6 hours can be earned as electives), 391, 395 (1 hour minimum; an additional 2 hours can be earned as electives), 483, 485

*Sports Segment* - 18 hours

Communication: 325, 335, 332 (if not in Journalism sequence), 345 or 351 (if not in Multimedia sequence); Management 377; Marketing 325, one approved Business course

*Specialty Areas* – 15 hours (select one)

- Advertising and public relations: Communication 312, 314, 322, 333, 388
- Journalism: Communication 322, 332, 333, 345 or 351, 352
- Multimedia: Communication 240, 345, 351, 352, 450

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

9 hours for Bachelor of Arts

15 hours for Bachelor of Science

## Creative Writing

Faculty: Bone (Chair), Griffith, Mullins, Nikolidakis

The Department of Creative Writing offers majors and minors in writing for students preparing for careers in such fields as writing, teaching, publishing, business, librarianship, law, medicine, ministry, and diplomacy. Courses are also available for non-majors seeking personal enrichment or wishing to expand their powers of written expression. The Bachelor of Arts and the Bachelor of Fine Arts degree may be earned in creative writing. Requirements for students in English preparing for secondary education are outlined in the College of Education and Health Sciences section.

**Harlaxton College in Grantham, England**

Study at Harlaxton College can be especially valuable for a writing student. Courses on Shakespeare and the English novel, along with several electives in literature, are offered most semesters at Harlaxton (see [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk)). Special programs are often arranged at the Royal Shakespeare Theatre in Stratford-upon-Avon, and visits to locales of significant authors and works

are readily arranged. With advanced planning it is possible to spend a semester at Harlaxton and still complete all degree requirements within four years.

## Bachelor of Arts with a Major in Writing

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 36 hours

English 241, 242, 350; one additional literature course; Writing 204; minimum of 21 hours from Writing 205, 206, 207, 306, 307, 308, 309, 330, 390, 490, 494, 495.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 37 hours

## Bachelor of Fine Arts with a Major in Creative Writing

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 60 hours

Any combination of available courses in writing, literature, and world literature.

*Electives* – 19 hours

### Writing Minor (21 hours)

Writing 204, 205, and five or more courses from 206, 207, 306, 307, 308, 309, 390, 490 or 495

## English

Faculty: Baines, Caldwell (Chair), Cirino, Hochwender

The Department of English offers majors and minors in literature for students preparing for careers in such fields as writing, teaching, publishing, business, librarianship, law, medicine, ministry, and diplomacy. Courses are also available for non-majors seeking personal enrichment or wishing to expand their powers of written expression. The Bachelor of Arts degree may be earned in literature. Requirements for students in English preparing for secondary education are outlined in the College of Education and Health Sciences section.

### Harlaxton College in Grantham, England

Study at Harlaxton College can be especially valuable for a literature or writing student. Courses on Shakespeare and the English novel, along with several electives in literature, are offered most semesters at Harlaxton (see [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk)). Special programs are often arranged at the Royal Shakespeare Theatre in Stratford-upon-Avon, and visits to locales of significant authors and works are readily arranged. With advanced planning it is possible to spend a semester at Harlaxton and still complete all degree requirements within four years.

## Bachelor of Arts with a Major in Literature

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 36 hours

English 120, 231, 232, 241, 242, and 350; three additional 300-level courses in English (English 300, 310, 351, 370, 375, 380, or

385); plus three additional 300- or 400-level English courses (English 223 may substitute for one of these additional four courses). English 330 and English 348 may each be taken up to 3 times so long as topics differ.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 37 hours

## Bachelor of Arts with a Major in English/Language Arts Education

Information on the Bachelor of Arts degree with a major in English/language arts education may be found in the College of Education and Health Sciences section.

### Literature Minor (21 hours)

English 223, 231, 232, 241, 242, 350; one English elective

## Environmental Studies

Director: Kaufman

The environmental studies program provides degree opportunities in three different environmental career areas. These include the Bachelor of Science degree with a major in environmental science, the Bachelor of Science degree with a major in environmental administration, and a baccalaureate degree selected from any traditional major combined with those courses constituting the environmental studies minor.

### Bachelor of Science with a Major in Environmental Science

Graduates with a major in environmental science are well prepared for a variety of career opportunities dealing with the complex environmental problems that confront our society. This major stresses a strong background in basic science combined with courses dealing specifically with environmental problems. It is intended for the person interested in laboratory and fieldwork or the general area of detection, measurement, and solution of environmental problems.

#### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Chemistry 118; Mathematics 221; Physics 121 or 210

For additional general education requirements, please consult the program director.

*Major* – 46 hours

Biology 118, 120, 320, 423; Chemistry 240, 280, 360; Civil Engineering 374; Environmental Studies 360, 440, 495 (3 hours); Geology 130; Physics 122 or 211

An additional 12 hours of upper-level courses (300 and above, not including senior seminar courses) chosen in consultation with the environmental studies program director

*Electives* – 20 hours

### Bachelor of Science with a Major in Environmental Administration

This program emphasizes, as a vocational objective, a management position for a person familiar with the scientific aspects of environmental matters and the general political, social, and economic framework of our society. In addition, a general background is provided in public administration that should aid in advancement possibilities within public agencies.

#### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Chemistry 118; Mathematics 221; Physics 121 or 210

For additional general education requirements, please consult the program director.

*Major* – 42 hours

Biology 118, 120, 320; Chemistry 240; Environmental Studies 440, 495 (3 hours); Geology 130; Law 201; Legal Studies 380; Management 300 or 377; Political Science 347, 349; a course in research methods or statistics



An additional 12 hours of upper-level courses (300 and above, not including senior seminar courses) chosen in consultation with the environmental studies program director

*Electives – 24 hours*

### **Environmental Studies Minor (28 hours)**

This program provides environmental perspectives to those entering conventional occupations where environmental awareness is important in decision-making and everyday life.

Biology 120, 320; Biology 423 or Chemistry 360; Chemistry 118, 240; Environmental Studies 360; Environmental Studies 103 or Biology 118; Geology 130

## **Co-op Program**

A cooperative education plan for environmental studies majors is available as an alternative to the traditional four-year plan. The co-op plan combines classroom education with full-time work experience in industry. Please refer to Special Educational Opportunities located in the Degrees, Curriculum, Academic Opportunities section of this catalog.

## **Ethics and Social Change**

Core Faculty: Beavers, Kretz (Director), Stein

The ethics and social change major combines academic study with field experience in order to equip students to address complex problems in local communities and the world. The program takes a multidisciplinary approach to allow students to complement an ethics core with concentrations in two other areas, thereby facilitating a possible double major with one of the two areas of concentration. Students may choose from a variety of concentration pairings to create a program tailored to individual values and interests. Fieldwork is built directly into the curriculum providing ample opportunities to get involved and make a real difference in the world.

### **Bachelor of Arts with a Major in Ethics and Social Change**

#### **Requirements (120 hours)**

*Enduring Foundations General Education – 41 hours, including Sociology 105*

For additional departmental general education requirements, please consult the department.

*Major – 51 hours*

Ethics and Social Change 121, 200, 375, 401, and 475, plus two concentrations (18 hours each) to be selected in consultation with the director of the ethics program. Possible concentration areas include Business Administration, Cognitive Science, Communication, Criminal Justice, Legal Studies, Gender and Women's Studies, Philosophy, Political Science, Psychology, Religion, and Sociology or Social Work.

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives – 22 hours*

#### **Ethics and Social Change Minor (18 hours)**

Ethics and Social Change 121, 200, 375, 401, and 475; Sociology 105

## **Foreign Languages and Cultures**

Faculty: Andueza, Baker, Bates, Crowe, Kaiser, Meredig, Pleasant (Chair), Rodríguez Quevedo, Thomas, Ware, Williams

In keeping with the global focus of the University of Evansville, the Department of Foreign Languages and Cultures offers an array of degree programs. Students may elect a full liberal arts major or minor in French, German, or Spanish as well as an education

major or minor in these three languages. A classical studies major and minor and a classical languages minor are also offered. Further options include a minor in Russian studies and classes in Greek and Latin. Students are encouraged to combine a language major with an additional major such as History, International Studies, Environmental Studies, Archaeology, Global Business, Public Health Administration, Creative Writing, etc... These complementary degrees provide graduates with an edge to compete in a global market.

## Bachelor of Arts with a Major in French, German, or Spanish

Why choose to major or minor in French, German, Spanish?

- cultivate global citizenship
- develop language skills
- gain intercultural competence
- expand/foster critical, analytical, and communicative skills
- attain cultural awareness, diverse perspectives, international experience, an appreciation of different cultures
- increase your knowledge of historical, political, cultural and literary trends
- study abroad through UE's nationally-recognized study abroad program
- increase your salary by ten to fifteen percent simply by knowing a foreign language

The department has established the following learning outcomes for its majors.

1. Students communicate themselves confidently in the target language.
2. Students read and comprehend texts in the target language.
3. Students write documents in the target language effectively.
4. Students read literary and cultural texts in the target language and analyze them critically.
5. Students demonstrate familiarity with the current events, popular culture, and social structures of countries and cultures in which the target languages are spoken.
6. Students are able to perform a linguistic analysis of language.

Majors complete a portfolio project based on these outcomes.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

For additional departmental general education requirements, please consult the department.

*Major* – 39 hours (36 hours in major language, 6 hours in additional foreign language, and completion of the senior capstone FL 401)

French/German/Spanish: 211, 212, 15 hours at the 300 level (German 312 may be repeated with content change for up to 9 of the 15 hours, Spanish 311 and 316 are required), 12 hours at the 400 level (French 415 and French/German/Spanish 438 may be repeated with content change), Foreign Languages 420 may apply to the 400-level requirement.

All French, German, and Spanish majors must pass a literature course in the target language at the University of Evansville before taking FL 401. Spanish majors must also take a linguistics class at UE before graduating. All French/German/Spanish majors must complete FL 401 including the senior portfolio. FL 401 does NOT count toward the required 12 hours of 400 level French, German, and Spanish courses, since it is taught in English.

*Electives* – 40 hours

**Please note:** At least six semester hours of course work must be taken in the target language in an approved study abroad program. It is highly recommended that the student complete more than the six-hour minimum.

All French, German, and Spanish majors must complete the ACE certificate offered by Career Services. Majors are encouraged to sign up for this certificate in their first semester as a major.

### French, German, or Spanish Minor (18 hours)

Foreign language and culture minors are required to take 18 hours at the 200-level and above in the target language. An approved study abroad program of at least six semester hours is highly recommended. French, German, and Spanish minors who take FL 401 as their capstone course must present their senior thesis in the target language as part of FL401.

### Russian Studies Minor (18 hours)

The minor in Russian studies combines Russian language courses with courses taught in English on Russian culture and literature. It requires 18 credit hours at the 200-level or above, including a minimum of 12 hours of Russian language courses (Russian 211-312); and the choice of two courses from Russian culture or literature (Russian 333, 334, and English 344) Nine semester hours of course work at a Russian university may be counted toward these requirements.

### Classical Languages Minor (18 hours)

In the classical languages minor, students gain facility in both classical languages, Greek, and Latin. Students choose an area of primary competence in one classical language (Greek or Latin) and an area of secondary competence in the other classical language (or the other classical language and Hebrew). Classical language minors develop a mastery of the classical languages, powers of critical analysis, an appreciation of literature, and an understanding of the documents and traditions which constitute the foundation of Western civilization. The requirements are primary competence in Greek or Latin – four courses numbered 200 or above; secondary competence – two courses numbered 200 or above in the other classical language or the course numbered 211 in the other classical language and Hebrew 112.

## Course Summaries

### Beginning and Intermediate Language Sequence

Beginning foreign language courses (111, 112) introduce the student to the four skills of speaking, listening, reading, and writing, with emphasis on cultural awareness. Students may be required to do additional work with audio-visual media, or computer-assisted practice.

Intermediate foreign language courses (211, 212) are designed for the student who already has a good grasp of the elements of the language and is somewhat advanced in the four skills of speaking, listening, reading, and writing. Students placed in these courses usually have had three or four years of high school foreign language or have made an appropriate score on the placement test. Intermediate foreign language courses continue development of speaking and listening skills and stress growth in the areas of reading, composition, and cultural awareness. Students may be required to do additional work with a foreign language teaching assistant, audio-visual media, or computer-assisted practice.

### Advanced Courses

Advanced courses are at the 300-level and 400-level courses. Courses are offered in rotation and address culture, literature, language analysis, linguistics, business, politics, society, and cinema. All courses emphasize conversation, composition, and reading skills within a cultural context. Lectures and assignments are in the target language.

Please refer to the back of the catalog for individual course descriptions and prerequisites.

### Secondary Education Teaching Majors

See complete requirements listed under College of Education and Health Sciences.

Grades 9-12. Secondary education teaching majors must complete the requirements of the College of Education and Health Sciences and show proficiency in a second foreign language through the 112 level. Required courses in the target language are 211, 212, Foreign Languages 401, and the following:

French: 15 hours, chosen from 311, 312, 313, 314, 315, 316, 317, 318, 333, 335\*, 435\*; 12 hours, chosen from 415\*, 434, 438\*, Foreign Languages 420

German: 15 hours, chosen from 311, 312, 314, 321, 322, 333 335\*, 435\*; 12 hours, chosen from 410, 414, 433, 438\*, Foreign Languages 420

Spanish: 15 hours, chosen from 311<sup>†</sup>, 314, 316, 320, 321<sup>†</sup>, 325, 333, 350; 12 hours, chosen from 335\*, 410, 411, 433, 435\*, 438\*, 450, 458, Foreign Languages 420

**Please note:** At least six semester hours of course work must be taken in the target language in an approved study abroad program.

It is highly recommended that the student complete more than the six-hour minimum. Those courses replace University of Evansville courses. Students may not count 111 or 112 of their target language toward the major.

## Secondary Education Teaching Minors

Grades 9-12. Students may not count 111 or 112 toward the minor.

In addition to the University's general education requirements, foreign language minors are required to take 24 hours at the 200-level and above. An approved study abroad program of at least six semester hours is highly recommended. Those courses replace University of Evansville courses.

French (24 hours): 211, 212, and 18 hours beyond

German (24 hours): 211, 212, and 18 hours beyond

Spanish (24 hours): 211, 212, and 18 hours beyond

## Gender and Women's Studies Minor

Coordinator: Parks

The Gender and Women's Studies minor has two major goals: offer an interdisciplinary program of study in GWS and to promote the understanding of gender and women's issues in an informed curriculum that reflects new scholarship and applications. The objective of the gender and women's studies minor is to encourage students to analyze the roles, perspectives, and contributions of women and to examine the influences of gender on historic and contemporary life. Through examining women's history, present conditions, and future possibilities, students will come to understand how gender is socially constructed. The curriculum consists of three categories of courses: (1) department courses that take women or gender as their primary focus, are based on recent scholarship, are interdisciplinary in nature, and are offered directly by the gender and women's studies program; (2) core courses offered by academic departments that take women or gender as their primary focus and are based on recent scholarship; and (3) affiliated courses which are not gender and women's studies courses but have significant gender and women's studies content.

### Harlaxton College in Grantham, England

The British studies course at Harlaxton College includes lectures and seminar discussions on roles of women and other gender-related issues in successive epochs of British and European history. The opportunity for travel and observation of gender and women's issues, conditions, and opportunities is rich at Harlaxton.

## Gender and Women's Studies Minor

(18 hours)

Gender and women's studies minors must pursue a major in a primary discipline.

Curriculum: Gender and Women's Studies 101 and five additional courses from department, core, and affiliated courses; at least two of the five additional courses must be from either department or core courses

### Department Courses

Gender and Women's Studies 101, 492, 493

New courses meeting the criteria of either core or affiliated may be added for inclusion in the program. Certain departmental special topics courses, approved for women's studies, may also be included within the course of study. The following are tentative offerings. Please consult the class schedule for current approved offerings.

### Core Courses

(See the appropriate department for course descriptions.)

Archaeology 415, Art History 492\*, History 320, 380\*, 428; Legal Studies 420, Political Science 326, Religion 340, 375, Sociology 335, 435, Spanish 438\*. \*These courses can be repeated with a change in topic.

### Affiliated Courses

(See the appropriate department for course descriptions.)

History 418, Interdisciplinary 255, Psychology 229, Theatre 395\*, English 348, History 380\*, Philosophy 450, Sociology 350, 460, Religion 305. \*These courses can be repeated with a change in topic.

# History

Faculty: Byrne, Bujak (Harlaxton), Gahan, Green (Harlaxton), MacLeod, Parks (Chair)

The main objective of study in history is to acquire an understanding and an appreciation of the historical world in which we live. History courses explore the past so that students will be better equipped to explain the complexities of the world in our time through exploring the characteristics and impact of each age in the past. The ultimate goal is to help students understand the problems they face, appreciate the richness of the human experience, and act with reason and judgment.

Students with a degree in history will be proficient in the areas of analysis, critical thinking, finding and using evidence, and both written and oral communication skills. Earning the degree is excellent preparation for graduate studies in history or related fields as well as for law school. Additionally, history majors will also be prepared for careers in diverse areas such as education, business, government, politics, or journalism.

These goals can also be advanced through a semester of study at Harlaxton College or a similar study abroad program. History courses are offered each semester at Harlaxton (see [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk)). This is a wonderful opportunity not just to study history in class, but also to visit the very sites where many important historical events took place. It is possible, with advanced planning, to spend a semester abroad and still complete all degree requirements within four years.

## Bachelor of Arts with a Major in History

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including History 490

*Major* – 36 hours

History 290; 11 other history courses – no more than two at the 100 level; no more than 3 hours of History 492; at least two 400 level courses other than 490 or 492; at least 3 courses from 311,312,313, 314,317, 318, 319, 320, 321, 322, 324, H378, H379, 381, 383, 385, 418, 438, or 450; at least 3 courses from 323, 340, 341, 343, 344, 345, 348, 349, 351, 354, 428, or 429.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 37 hours

## Bachelor of Arts in History Education

Information on the Bachelor of Arts degree with a major in History Education may be found in the College of Education and Health Sciences section.

## Bachelor of Science in History Education

Information on the Bachelor of Science degree with a major in history education may be found in the College of Education and Health Sciences section.

### History Minor (21 hours)

Seven courses in history (no more than two at the 100 level and at least one at the 400 level)

Students majoring in a variety of disciplines (e.g. business, communication, political science, or pre-law) will find history courses relevant to their studies and are encouraged to consider taking a history minor.

## Interdisciplinary Studies

The interdisciplinary studies major allows students more flexibility in designing their major than any other program. Within an interdisciplinary studies major, students select courses that either more precisely meet their professional or personal educational goals or anticipate future trends in employment markets.

# Bachelor of Arts or Bachelor of Science with a Major in Interdisciplinary Studies

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

An interdisciplinary studies major consists of an integrated series of courses selected from at least two established University academic disciplines. An advisor from each academic discipline will be assigned to the student, with one primary advisor chosen by the advisors in each discipline and the student. Students will devise, in consultation with their academic advisors, an academic program suited to an area of special interest. Because the student must be involved in planning this major, the student will need to think critically about personal and professional goals and articulate reasons for pursuing this major. Although in principle any area of academic investigation may constitute the subject of an interdisciplinary studies major, such a major would ordinarily be defined in one of three ways:

- An area of the world, geographically, politically, or culturally prescribed, such as American Studies, Latin American Studies, Asian Studies, European Studies, British Studies;
- A period of time in history of some part of the world such as the Enlightenment, the Renaissance, the Middle Ages; or
- A specific problem that is treated in several disciplines such as the concept of social justice, revolutionary movements, and the concept of energy.

The minimum credit requirement for a major in interdisciplinary studies is 39 hours selected from two established academic disciplines. It is desirable for the student to select approximately 20 hours from each discipline, but at least 15 hours must come from each discipline. More than two established academic disciplines may be chosen, but at least 15 hours must be earned from each discipline chosen. Of the total hours earned in each discipline, at least 9 hours must be in upper division courses (i.e., 300- or 400-level courses), and the total number of upper division hours must be at least 24. Courses from each discipline may be chosen in consultation with advisors to meet personal and professional goals of the student. Courses should fulfill the University of Evansville writing requirements, and the proposal should address the University's learning objectives. University General Education requirements must be satisfied with courses outside any of the chosen disciplines, with the exceptions of foreign language and the senior seminar. Each candidate for a bachelor's degree with a major in interdisciplinary studies must have a GPA of at least 2.0 in the 39 hours of interdisciplinary studies major courses as well as a 2.0 GPA overall.

Students taking the interdisciplinary studies major will prepare a list of courses to be completed and a letter to the Interdisciplinary Studies subcommittee. The letter will include the student's personal and professional goals and describe how the interdisciplinary studies major will enable the student to attain those goals. The letter also will identify the student's advisors. The subcommittee will review the letter and the course plan and either approve or disapprove the plan. The subcommittee recommends that the application for the interdisciplinary studies major be completed by the end of the sophomore year to ensure that sufficient time is left for successful completion of the major. The Interdisciplinary Studies Subcommittee has final say on the integrity of the proposed major and may choose not to consider proposals submitted after the end of the sophomore year. The student may appeal the decision of the subcommittee regarding approval of a plan and review of a plan to the Admissions and Standards Committee.

The list of courses developed by the student and the advisors may include a list of courses from which the student will complete the requirements for that discipline rather than an exhaustive list of courses. For example, the list of courses from a discipline may include courses that total 24 credits, and the student must complete at least 15 credits from that list. This allows for some flexibility in scheduling without requiring a formal modification to the plan. After the plan is approved by the subcommittee and filed with the Registrar, any deviations from the plan require approval by the subcommittee.

## International Studies

Director: Young Kim

International studies is an interdisciplinary major that rests on the understanding that twenty-first century problems and careers are not restricted to single disciplines. Each student has unique talents, desires, needs, and career goals that need not be forced into traditional academic boundaries. The curriculum offers a strong foundation in international affairs, political science, economics, and foreign languages.

## Bachelor of Arts with a Major in International Studies

### Requirements (120 hours)

#### *Enduring Foundations General Education – 41 hours*

Each international studies major must complete a senior capstone course. This may be satisfied by enrolling in and completing the senior seminar offered by departments whose courses compose the international studies curriculum. These include Archaeology 400, Foreign Language 401, History 490, Management 497, and Political Science 495. A capstone course must be selected with the approval of the director and course instructor. No course used to satisfy a general education requirement may be used to satisfy an international studies requirement.

#### *Foreign language requirement – 18 hours*

Three years of college-level competency in one foreign language, or two years of college-level competency in two foreign languages

#### *International studies core – 27 hours*

Political Science 100, 160; Economics 101, 102; one from Political Science 212, Quantitative Methods 227, or Sociology 235; two from Political Science 320, 360, 361, 362, 363, 380, H385, 390, 435, 440, 459, 461, 489, 490; Interdisciplinary H282 or H382 (Harlaxton) or two additional courses (from two different subjects) from anthropology, archaeology, economics, geography, history, modern foreign languages, or world literature

#### *Area concentration – 9 hours*

Each major must select an area of concentration in consultation with the director of the program upon completion of the core requirements. Students may select a regional specialization from among Europe, Asia, Latin America, and Africa. Any appropriate 300- and 400-level courses in anthropology, archaeology, communication, economics, geography, history, modern foreign languages, political science, sociology, religion, and world literature may be selected. Students may also incorporate course work from the Schroeder School of Business and teaching English as a new language (ENL) in the area concentration. No more than two courses may be selected from any one discipline and courses used to satisfy the core requirement may not be used to satisfy the area concentration.

#### *Electives – up to 19-25 hours*

#### **Study/Internship Abroad**

Each major must study abroad for one semester or complete at least a semester-long internship or work experience approved by the director. If the student chooses a semester of study, an academic load of 12 semester hours must be completed. Nine semester hours of this work should be upper-division courses approved in advance by the director. A semester at Harlaxton or the University of Evansville's summer programs in Asia, Latin America, or the Middle East can satisfy this requirement.

### International Studies Minor (18 hours)

One from Political Science 100 or 160; one from Political Science 361, 362, 363, 435, 461; one from Political Science 320, 360, 380, H385, 459, 461, 489

Three courses, in consultation with the director, from anthropology, archaeology, history, modern foreign languages, religion, and world literature; no more than two courses may be taken from any one subject; Interdisciplinary H282 or H382 (Harlaxton) may substitute for two courses toward this requirement

## Law, Politics, and Society

Faculty: Berry, Dion (Chair), Gray, Kim, Maass, Plikuhn, Shelby

The Department of Law, Politics, and Society offers Bachelor of Arts and Bachelor of Science degrees with majors in political science and in criminal justice, and Bachelor of Arts and Bachelor of Science degrees with a major in sociology with specializations in anthropology, general sociology, and gerontology. In addition, the department offers a minor in legal studies and a certificate in gerontology. The department also advises pre-law students.

### Bachelor of Arts or Bachelor of Science with a Major in Criminal Justice

The criminal justice degree is designed for students who intend to work in a justice-related field such as private security, law enforcement, the courts, institutional or community corrections, or the juvenile justice system. The degree also prepares students

for graduate work in the social sciences or for law school – especially in the area of criminal law. In addition to covering the major components of the system, course requirements for the degree also include criminological and sociological theory and the sociology research sequence.

Students are required to earn at least a C- in all courses required for the major and minor.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Sociology 105

For additional departmental general education requirements, please consult the department.

*Major* – 39 hours

Criminal Justice 205, 210, 342 or 380, 360, 370, 410; Sociology 230, 235, 327 (or PSYC 229), 344, 438; two from Criminal Justice 301, 342, 354, 380, 420, 496 or Psychology 320. Courses may not be used to meet more than one Criminal Justice major requirement.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* –

34 hours for the Bachelor of Arts

40 hours for the Bachelor of Science

### Criminal Justice Minor (18 hours)

Criminal Justice 205, 210, plus 12 additional credits of criminal justice courses

## Bachelor of Arts or Bachelor of Science with a Major in Political Science

The department offers a curriculum supporting the interests of the liberal arts student and the preprofessional student. It emphasizes an awareness of domestic and international politics and government as they occur in the global arena. Students choosing the Bachelor of Arts degree are required to show competency in a modern foreign language equal to four semesters of college-level proficiency.

Either degree option is excellent preparation for students planning a career in business, law, politics, governmental or nongovernmental service, or academia. While many UE political science graduates go directly to public or private sector careers, others choose to go immediately to law school or graduate school in public administration, international affairs, political science, economics, or environmental studies.

To earn a degree in political science the student must satisfy the University's general education requirements, including the appropriate language requirement and the following departmental requirements. One semester of study at Harlaxton College or another study abroad is strongly encouraged. Students are also encouraged to participate in local, state, national, or international internships with governmental, non-governmental, and corporate organizations.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 36 hours

Political Science 100, 143, 160, 212, 495; one from each of the following four areas:

American politics:\* Political Science 312, 313, 326, 343, 344, 345, 349

International relations:\* Political Science 361, 362, 363, 435, 440, 461

Comparative politics:\* Political Science 320, 360, 380, H385, 459, 489

Political thought and theory:\* Political Science 376

Three courses (9 hours) chosen with the help of the student's advisor from any of the department's offerings; concentration may be in international relations, comparative politics, American politics, or political thought and theory; the three courses do not have to lead to a concentration in one area. Students are also required to earn at least a C- in all courses required for the major.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212



*Electives –*

37 hours for the Bachelor of Arts

43 hours for the Bachelor of Science

### Political Science Minor (18 hours)

Two courses from Political Science 100, 143, 160; Political Science 212; one course from Political Science 320, 360, 361, 362, 363, 380, 435, 459, 461, 489; one course from Political Science 312, 313, 326, 343, 344, 345, 349; one course from Political Science 376

### Pre-law Advising

Students planning to enter the legal profession are advised to pursue baccalaureate degrees in academic areas best suited to their interests. Law schools are most interested in students who can communicate effectively, read comprehensively, and think critically. Because admission requirements of law schools vary, students need to become acquainted with the admission process of the schools they hope to attend.

Study in English, economics, foreign language, history, legal studies, logic and philosophy, mathematics, political science, and sociology is recommended. Most law schools do not require a specific pattern of courses, nor do they stipulate majors for concentrated study; however, students must select an undergraduate major and complete requirements for that major in order to graduate. A course of study should be carefully planned with the pre-law advisor and the Law School Admission Test should be taken in conjunction with application to law school. For more information, contact the pre-law advisor, Dr. Kevin Gray.

## Bachelor of Arts or Bachelor of Science with a Major in Sociology and Specializations in Anthropology, General Sociology, or Gerontology

The Department of Law, Politics, and Society offers Bachelor of Arts and Bachelor of Science degrees in sociology with specializations in anthropology, general sociology, or gerontology. The department also offers a certificate in gerontology.

Sociology and anthropology are behavioral sciences that describe and explain social behavior, while gerontology is an occupation in which knowledge from the behavioral sciences is applied to societal needs.

Sociologists study how behavior is influenced by our social environment, including the informal groups and larger social organizations to which we belong. Anthropologists study cultural diversity in societies around the world. Sociologists, anthropologists, and gerontologists study such diverse topics as deviant behavior and crime, environmental studies, family related issues, aging, and health care. The knowledge developed is widely used in social planning and business.

The study of sociology and anthropology prepares students for a wide range of occupations in industry and government. Sociology and anthropology are excellent majors for individuals fascinated by groups and the social behavior of people. Sociology and anthropology majors are well-prepared to pursue graduate work in sociology, social work and counseling, criminal justice, law, public health, community outreach, cultural resource management, non-profit and governmental agencies, human resources and public relations, and research and data analysis. Career advancement in social work requires a master's degree, and the program is designed to provide students with the knowledge base required by social work graduate programs.

### Degree and Major Requirements

All sociology majors complete the core sequence which provides a foundation in basic behavioral science. Additional electives, which vary by specialization, are required. For the Bachelor of Arts, no more than 40 hours in sociology may be counted toward the degree, and foreign language proficiency at the second-year level is required.

Each specialization has a senior thesis research requirement involving the design and implementation of an original research project. Normally, students begin working on this requirement during their junior year and complete the work in the senior seminar.

All majors are required to earn at least a C- in all courses required for the major or minor.

With advanced planning, it is possible to study abroad at Harlaxton for a semester and still complete all degree requirements necessary to graduate in four years. Students are encouraged to discuss study abroad opportunities with their advisor early in their academic career.

### Requirements (120 hours)

#### Anthropology Specialization

Designed for students with an interest in non-Western societies; particularly helpful to students planning to pursue graduate degrees in anthropology

*Enduring Foundations General Education – 41 hours, including Sociology 450*

*Major – 40 hours*

Anthropology 207; Sociology 105, 201, 210, 230, 235, 327 (or PSYC 229), 344, 390, 438; four additional 300- and 400-level anthropology courses

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives –*

33 hours for the Bachelor of Arts

39 hours for the Bachelor of Science

## Requirements (120 hours)

### **General Sociology Specialization**

Designed to prepare students for direct entry into the job market or graduate study in sociology, social work, and related disciplines; students who plan to enter the job market directly are advised to pursue a minor in criminal justice, preprofessional social work, foreign language, or business.

*Enduring Foundations General Education – 41 hours, including Sociology 450.*

*Major – 40 hours*

Anthropology 207; Sociology 105, 201, 210, 230, 235, 327 (or PSYC 229), 344, 390, 438; four additional 300- and 400-level sociology courses

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives –*

33 hours for the Bachelor of Arts

39 hours for the Bachelor of Science

## Requirements (120 hours)

### **Gerontology Specialization**

Designed for students who plan to work with the elder population in a wide variety of social settings; prepares students to enter the job market directly or pursue a graduate degree.

*Enduring Foundations General Education – 41 hours, including Sociology 450*

For additional departmental general education requirements, please consult the department.

*Major – 58 hours*

Anthropology 207; Gerontology 401, 402, 403, 404, 405, 406, 407, 408, 409, 410; Sociology 105, 201, 210, 230, 235, 327 (or PSYC 229), 330, 335, 337, 344, 390, 438, 460, 496

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives –*

15 hours for the Bachelor of Arts

21 hours for the Bachelor of Science

## **Internships**

Internships are available to majors of junior or senior standing who have completed the core courses. While internships are recommended for all sociology majors, certain GPA requirements must be met, and students must file an internship application with their advisor. For more details, please consult the Sociology Student Handbook.

## **Minors**

Students majoring in such disciplines as business, public health, communication, nursing, psychology, political science, pre-law, or history will find departmental courses relevant to their studies and are encouraged to pursue one of the minors of the department.

## **Anthropology Minor (18 hours)**

Anthropology 200, 207 and 12 additional credits of anthropology courses

### **Criminal Justice Minor (18 hours)**

Criminal Justice 205, 210 plus any four additional criminal justice courses

### **Legal Studies Minor (18 hours)**

Legal Studies 125 and 345, two courses from Criminal Justice 342 (or Legal Studies 343), Law 201, or Political Science 363, and six hours selected in consultation with the Legal Studies advisor.

### **Preprofessional Social Work Minor**

(21 hours)

Sociology 105, 230, 330, 335, 386 or 460, 438; Social Work 120, and Criminal Justice 410.

### **Social and Human Services Minor (18 hours)**

Sociology 230 and Social Work 120, either Public Health 190 or 195, and twelve hours of elective credits selected in consultation with the Sociology advisor.

### **Sociology Minor (18 hours)**

Sociology 105, 230 plus 12 additional credits of sociology courses; Anthropology 453 is also an option

### **Gerontology Certificate (15 hours)**

A Gerontology Certificate is awarded following completion of a prescribed course of study in gerontology. A certificate may be earned by professionals who are already involved in their careers or by current students as a part of their bachelor's degree. In past years, students in nursing, sociology, social work, music therapy, physical therapy, pre-medicine, and psychology have taken advantage of this opportunity to learn about aging. Completing a Gerontology Certificate requires 15 hours of interdisciplinary course work. As a rule, three course modules are offered each semester, including during the 10-week summer session.

*To find out more about the Gerontology Certificate program contact Dr. Jim Berry, director of the Sociology Programs, at [jb74@evansville.edu](mailto:jb74@evansville.edu).*

Gerontology 401, 402, 403, 404, 405, 406, 407, 408, 409, 410

## **Mathematics**

Faculty: Azarian, Davis, Dwyer (Chair), Gruenwald, Kimberling, Nguyen, Salminen, Weber, Xiao

Courses in mathematics and statistics are designed to develop quantitative reasoning skills, conceptual understanding, computational skills, and the ability to apply mathematical and statistical techniques to address real-world problems. Students may pursue four options in Mathematics—a Bachelor of Arts with a major in mathematics, a Bachelor of Science with a major in mathematics (appropriate for students seeking certification to teach mathematics at the senior high, junior high, and middle school levels), a Bachelor of Science with a major in applied mathematics, a Bachelor of Science with a major in predoctoral mathematics. In addition, the department offers a Bachelor of Science Degree in Statistics and Data Science. Alternatively, students may pursue a minor in mathematics or take mathematics and statistics courses to support work in other areas.

### **Bachelor of Arts with a Major in Mathematics**

This major is designed for students seeking an exposure to advanced mathematics as part of a broad-based liberal arts curriculum. It is particularly suitable for students interested in pursuing graduate study in mathematics or related disciplines.

#### **Requirements (120 hours)**

*Enduring Foundations General Education* – 42 hours, including Mathematics 221

For additional departmental general education requirements, please consult the department.

*Major – 32 hours*

Mathematics 222, 323, 341, 365, 420, 445; at least six additional semester hours from mathematics courses numbered 300 or above; at least six semester hours of computer courses specified by the Department of Mathematics

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives – 40 hours*

## Bachelor of Science with a Major in Mathematics

This program is well-suited for students who seek certification to teach mathematics at the senior high, junior high, and middle school levels and also for students who desire a Bachelor of Science degree with a major in mathematics and a minor (or second major) in an area unrelated to mathematics. The course work in mathematics is sufficiently rigorous to provide preparation for graduate work in mathematics. Those students wishing to pursue teaching certification should refer to the appropriate section under the College of Education and Health Sciences.

### Requirements (120 hours)

*Enduring Foundations General Education – 42 hours, including Mathematics 221*

For additional departmental general education requirements, please consult the department.

*Major – 35 hours*

Mathematics 222, 323, 341, 365, 420, 466, one of Mathematics 425 or 445; at least six additional semester hours of mathematics electives from mathematics courses numbered 300 or above; at least six semester hours of computer courses specified by the Department of Mathematics

*Electives – 43 hours*

(Mathematics 355 and 370 must be selected as the mathematics electives.)

## Bachelor of Science with a Major in Mathematics Education

Information on the Bachelor of Science degree with a major in mathematics education may be found in the College of Education and Health Sciences section

## Bachelor of Science with a Major in Applied Mathematics

This major offers a firm foundation in applied mathematics by combining a rigorous program of study in mathematics with a concentration in one or more fields of application – disciplines in which mathematical tools are used to solve real-world problems. Since this program provides for both a sound mathematical education and the development of highly marketable practical skills, graduates receiving this degree are prepared for either immediate employment or continued study at the graduate level.

### Requirements (120 hours)

*Enduring Foundations General Education – 42 hours, including Mathematics 221*

For additional departmental general education requirements, please consult the department.

*Major – 35 hours*

Mathematics 222, 323, 324, 341, 365, 373, 466; at least six additional hours chosen from mathematics courses numbered 300 or above; at least six semester hours of computer courses specified by the Department of Mathematics

*Field of Application –* Students must complete the requirements for one of the fields of application listed below.

*Actuarial Science Option – 24 hours*

Accounting 210; Economics 101, 102, 300, 400; Finance 361, 462, 478; Mathematics 330, 431 (fulfills the mathematics elective courses requirement)

This option provides course work to support the Society of Actuaries' validation by educational experience (VEE) in economics, applied statistics and corporate finance as well as Exams P and FM.

*Business Administration Option – 21 hours*

A minor in business administration; Mathematics 330 is recommended as one of the mathematics electives.

For specific requirements of the minor in business administration, see the Schroeder Family School of Business Administration

section.

**Cognitive Science Option – 18 hours**

A minor in cognitive science. Philosophy 449 is recommended.

**Computer Science Option – 21 hours**

A minor in computer science

For specific requirements of the minor in computer science, see the College of Engineering and Computer Science section.

**Economics Option – 18 hours**

Economics 101, 102, 300, 345, 346, and 400; Mathematics 330 is recommended as one of the mathematics elective courses

This option provides the necessary background for entry, without remedial course work, into most graduate programs in economics.

**Other Options – 18 hours minimum**

A minor in biology, chemistry, environmental studies, or physics, or a field of application of 18 hours minimum in an area of special interest (e.g., engineering) may be chosen with the approval of the Department of Mathematics.

*Electives* – 15-25 hours, depending on field of application

## Bachelor of Science with a Major in Predoctoral Mathematics

This major prepares mathematically gifted students for graduate study leading to a PhD in the mathematical sciences. The curriculum is highly advanced, with an emphasis on the development of independent learning skills. Students are expected to participate in undergraduate research and to complete the department's professional development program. Students in this program are assigned a faculty mentor who supervises all aspects of the student's academic development. Only the most highly qualified applicants are admitted to the predoctoral program.

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Mathematics 221

For additional departmental general education requirements, please consult the department.

*Major* – 41 hours

Mathematics 222, 323, 324, 341, 365, 420, 445; at least one of Mathematics 373 or 466; nine hours of independent study in mathematics selected in consultation with faculty mentor; at least six semester hours of computer courses, including Computer Science 210 or equivalent

*Electives* – 37 hours

## Bachelor of Science in Statistics and Data Science

This program is grounded in the mathematically rigorous tradition of classical, applied statistics while incorporating cutting-edge techniques and tools in the emerging field of data science. The program is designed to equip students with the quantitative, technical, and communication skills necessary to tease out forward-looking, predictive insight from data to help organizations make better decisions. Statistics courses in the curriculum are project-driven, with an emphasis on the analysis of real-world data using statistical methods implemented by powerful statistical software.

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Math 221

*Major:* 37 hours— Math 222, 341, 365, and 466; Stat 266, 267, 361, 362, 474, and 493; CS 205 or 210 and one additional computer-based class approved by the Chair of the Department of Mathematics

*Electives:* 41 hours

### Mathematics Minor (20 hours)

Mathematics 221, 222; at least four mathematics courses numbered 300 or above; Engineering 390 (Applied Engineering Mathematics) and Physics 305 (Mathematical Physics) may be applied towards this total.

## Calculus Sequence

The complete calculus sequence through multivariable calculus is Mathematics 221, 222, 323. A one-semester survey of calculus is provided by Mathematics 134. Be advised that Mathematics 134 does not satisfy the prerequisite for Mathematics 222, and credit will not be given for both Mathematics 134 and 221.

## Credit by Examination

The Department of Mathematics adheres to the University policy on credit by examination. Students may not earn credit by examination in any mathematics course listed as prerequisite for a course in which they already have credit.

# Music

Faculty: Bootz, Butturi, Dallinger, Fiedler, Jordan, Josenhans (Chair), Keenan, Malfatti, McCluskey, Murphy, Rike, St. John, Steinsultz, Teichmer, Ungar, Wylie, Zifer

Department of Music curricula are designed to prepare students for professional careers in music, to give all students opportunities to understand themselves and the world around them through participation and study of music, and to contribute to the artistic and cultural life of the University and broader community.

The department offers the following degrees: Bachelor of Music with majors in performance, music education, and music therapy; Bachelor of Science with a major in music; and Bachelor of Science with a major in music and an emphasis in music management. Auditions are required for entry into all degree programs.

The department has been a member of the National Association of Schools of Music since 1948. Entrance and graduation requirements are in accordance with published regulations of NASM.

## Requirements

Participation in the appropriate major ensemble is required each semester the student is enrolled (with the exception of students enrolled at Harlaxton or in student teaching). Students may be assigned to participate in additional ensembles depending on the needs of the department as determined by the faculty. Part-time fifth-year seniors who are no longer receiving a music scholarship are exempt from this requirement.

Students enrolled in applied music are expected to appear frequently in workshop recitals. The actual number of performances is determined through consultation with the student's applied teacher.

All students enrolled in music ensembles are responsible for obtaining appropriate formal attire for concerts, particularly University Choir, University Bands, and University Symphony Orchestra; see specific course syllabi. Check the Music Student Handbook or contact the instructor for more information.

The music faculty considers attendance at recitals to be of great importance in the development of musicianship and requires recital attendance. Students must enroll in Recital Attendance (Music 100, 101, 200 etc.) each semester in residence. Specific recital attendance requirements and guidelines are described in the Music Student Handbook.

All non-keyboard music majors must enroll in class piano (or, if placed, in applied piano) as the minor instrument requirement until the appropriate piano proficiency requirements are completed for each respective degree. Once piano proficiencies are successfully completed, remaining minor credit hour requirements may be fulfilled by study of any instrument or voice. Piano class enrollment should begin at the same time as Music 141 (Diatonic Harmony). Students placed in Music 140 (Fundamentals of Diatonic Harmony) should not enroll in piano class.

It is the responsibility of the student to be aware of departmental regulations and procedures as identified in this catalog and the Music Student Handbook.

## Bachelor of Music with a Major in Performance

This degree is designed for students who wish to pursue a career in performance or a related field. It is the most music-intensive degree offered. Students are admitted to the program conditionally pending completion of comprehensive juries at the end of the freshman and sophomore years. Acceptance is highly selective to promote student success.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Music 498

*Major* – 73 hours

Music 140 or 141, 142, 241, 242, 255, 256, 340, 343, 350, 355, 356, 451, 474

Applied major – 24 hours (Voice majors: two hours first two semesters combined with Music 102 and 103, then 3 hours per semester)

Minor instrument – 4 hours

Ensembles – 8 hours: Completion of major ensemble participation requirement each semester of residency

Piano Proficiency I (voice majors add Piano Proficiency II)

Junior recital (half) and senior recital (full)

*Electives* – 6 hours

At least one hour of general education or electives must be at the 300 or 400 level.

## Bachelor of Music in Music Therapy

This degree prepares musicians for careers in music therapy. The curriculum emphasizes the study of music and music therapy, as well as the behavioral sciences. This program is fully approved by the American Music Therapy Association, making students eligible to take the board certification exam after successful completion of course work and clinical internship.

### Requirements (123 hours)

*Enduring Foundations General Education* – 41 hours, including Music 498; Psychology 121; Sociology 105

*Major* – 81 hours

Music 140 or 141, 142, 184, 188, 236, 237, 241, 242, 286, 287, 288, 336, 350, 355, 356, 384, 386, 387, 388, 486, 487; Psychology 225, 259, 333

Applied major – 13 hours (Voice majors: one hour first two semesters combined with Music 102 and 103, then two hours per semester)

Minor instrument – 4 hours

Ensembles – 8 hours: Completion of major ensemble participation requirement each semester of residency

Piano Proficiency I and II and Guitar Proficiency

Senior recital (half)

Internship: A six-month clinical training period at a facility approved by the American Music Therapy Association is a degree requirement

*Electives* – 1 hour

## Music Therapy Equivalency Program

This program is for individuals who have already completed a degree in a field related to music therapy (music education, music performance, etc.). Although no degree is awarded, the completion of this program and a six-month internship qualifies the student to take the board certification exam.

## Two Degrees – Music Therapy and Music Education

This program is for students interested in combining their skills and talents as music therapists and music educators. A particular combination of courses ensures the requirements for both degrees are met. All course work and student teaching are completed in five years, followed by a music therapy internship. The degrees lead toward becoming a credentialed music therapist and earning an Indiana teacher certificate in vocal or instrumental music (K-12).

## Bachelor of Music in Music Education

Successful completion of this degree qualifies students for teacher certification in Indiana and most other states. The program includes vocal, instrumental, or all area emphases (vocal and instrumental) and prepares students for certification at the P-12 levels for each chosen discipline.

### Requirements (125 hours)

#### Vocal Music Education P-12

*Enduring Foundations General Education* – 41 hours, including Music 498; Psychology 121

*Major* – 84 hours

Education 150, 363, 435; Music 140 or 141, 142, 171, 236, 241, 242, 255, 264, 271, 346, 350, 351, 355, 356, 370, 372, 474; 9 hours from Music 478 and/or 479

Applied major – 14 hours (Voice majors: one hour first two semesters combined with Music 102 and 103, then two hours per semester)

Minor instrument – 4 hours

Ensembles – 7 hours: Completion of major ensemble participation requirement each semester of residency

Piano Proficiency I and II

Senior recital (half)

### Requirements (130 hours)

#### Instrumental Music Education P-12

*Enduring Foundations General Education* – 41 hours, including Music 498; Psychology 121

*Major* – 89 hours

Education 150, 363, 435; Music 140 or 141, 142, 171, 241, 242, 256, 262, 263, 264, 265, 271, 272, 273, 275, 346, 350, 351, 355, 356, 370, 373, 9 hours from 478 and/or 479; two hours selected from Music 260 or 476

Applied major – 14 hours

Minor instrument– 4 hours

Ensembles – 7 hours: Completion of major ensemble participation requirement each semester of residency

Piano Proficiency I and II

Senior recital (half)

### Requirements (145 hours)

#### Vocal and Instrumental Music Education P-12

This degree combines courses required for the vocal and instrumental degrees. The extra course load requires additional semester(s) to complete.

*Enduring Foundations General Education* – 41 hours, including Music 498; Psychology 121

*Major* – 104 hours

Education 150, 363, 435; Music 102, 103, 140 or 141, 142, 171, 236, 241, 242, 255, 256, 262, 263, 264, 265, 271, 272, 273, 275, 346, 350, 351, 355, 356, 370, 372, 373, 474, 9 hours from Music 478 and/or 479; two hours from Music 260 and 476

Applied major – 14 hours

Minor instrument – 6 hours: Four hours piano and two hours voice

Ensembles – 9 hours: Completion of major ensemble participation requirement each semester of residency



Piano Proficiency I and II

Senior recital (half)

## Bachelor of Science with a Major in Music and an Emphasis in Music Management

This major combines music and business studies for the student interested in working in the music industry (retail, arts management, music technology). The music and business courses are supplemented with electives in each area to allow for the development of individual interests.

### Requirements (123 hours)

*Enduring Foundations General Education* – 41 hours, including Music 498

*Major* – 82 hours

Economics 101, 102; Software Application 110; Law 201; Accounting 210, 211; Quantitative Methods 227; Management 300 or 377, 311; Marketing 325; Finance 361; three hours of 300- or 400-level elective music courses

Applied major – 14 hours (Voice majors: one hour first two semesters combined with Music 102 and 103, then two hours per semester)

Minor instrument– 2 hours

Ensembles – 8 hours: Completion of major ensemble participation requirement each semester of residency

Piano Proficiency I

Senior recital (half)

## Bachelor of Science with a Major in Music

This major integrates the study of music within a liberal arts curriculum. It provides an appropriate background for students wishing to pursue advanced degrees in music theory, musicology, composition, and music librarianship. The music content of the degree is flexible, making it ideal for combining with degrees in non-music fields.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Music 498

*Major* – 40-54 hours

Required Music Core – 30 hours

Music 140 or 141, 142, 255, 256; eight hours of applied major; two hours minor instrument; eight hours of music ensembles

Required Music Academic Choices: 7-8 hours chosen from: Theory – Music 241, 242, 340, 343; Pedagogy and Literature of Applied Music – Music 260, 261, 451, 474; Orchestration – Music 346; Conducting – Music 350, 351; Music History – Music 355, 356

Music Electives: 3-16 additional hours to maximum 54 hours in music: Any additional music academic courses above, Music 102 and 103 (required for vocalists); six additional hours maximum from applied major; two hours maximum from Music 204, 205, 262, 263, 264, 265, 266, or applied minor; Music 155, 156, 158, 171, 184, 243, 392, 476

*Non-Music Electives* – 25-39 hours

### Music Studies Minor (20 hours)

This curriculum allows the major in another area with a strong interest in music to obtain a minor in music studies.

Music 140 or 141, 142, 255, 256

Applied music – 4 hours: One hour per semester for four semesters

Major ensemble – 4 hours: One hour per semester for four semesters

### Suzuki Violin Pedagogy Certificate (12 hours)

The Suzuki pedagogy certificate can be earned through a 12-hour program that offers comprehensive teacher training in Suzuki Talent Education™ to violinists pursuing any degree in music. The program includes six semesters of classroom study, observation of experienced teachers, and practicum teaching in the University of Evansville Suzuki Violin Program. Upon completion, participants receive a certificate that may be registered with the Suzuki Association of the Americas.

Music 260, 261, 360, 361, 460, 461

### Jazz Studies Certificate (12 hours)

The jazz studies certificate is a 12-hour program that includes the performance of jazz as well as jazz music analysis, composition and arrangement of jazz music, and learning the art of improvisation. The jazz studies certificate is open to any UE student who has completed the prerequisite courses and has also received permission from the instructor(s).

Music 158, 243, 245, 341, six semesters of Music 113-413 Jazz Ensemble I (for a total of 3 hours)

## Performing Ensembles

The Department of Music sponsors performing ensembles open to music and non-music majors alike. These ensembles perform regularly in concert on and off campus. All UE students are encouraged to participate. Some ensembles require an audition at the beginning of the semester. Interested students should contact the Department of Music for additional information.

Vocal ensembles include University Choir, Men's Chorus, Women's Chorus, and Kantorei. Opera Main Stage provides theatrical performing opportunities for music and non-music majors.

Instrumental ensembles include Wind Ensemble, University Band, Aces Brass, and University Symphony Orchestra. Jazz ensembles include two full-size bands and small combos.

Chamber music opportunities include brass choir, a large string ensemble, woodwind quintet, string quartets, and piano trios. Like-instrument groups include percussion, guitar, flute, clarinet, trumpet, low brass, and other ensembles.

Additional information is included in the "Course Offerings and Descriptions" section of this catalog.

## Neuroscience

Core Faculty: Becker (Director), Gordon, Lakey, Miller

Students interested in how the brain regulates thoughts and behavior may earn a Bachelor of Science degree with a major in neuroscience. This interdisciplinary program combines courses from psychology, biology, chemistry, and other sciences to understand the structure and function of the nervous system. Completion of this program, through consultation with one's academic advisor, prepares students for graduate training in neuroscience, including the behavioral, cognitive, or molecular fields. This program also fulfills admission requirements for most medical schools and other health care professional schools. Eventual career options include teaching and research as a university professor, employment with a pharmaceutical or biotechnology company as a research scientist, and practice as a physician or other health care provider.

### Harlaxton College in Grantham, England

With advance planning, students, may spend a full semester at Harlaxton College, take general education courses, and complete all neuroscience requirements within four years. Course listings are available two years in advance and can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

## Bachelor of Science with a Major in Neuroscience

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Biology 119; Chemistry 118; Mathematics 221; Philosophy 121; Psychology 121

For additional departmental general education requirements, please consult the department.

*Major* – 58 hours

Biology 120, 331, 427; Chemistry 240, 341, 370, 371; Neuroscience 125, 355, 357, 358, and 457; Psychology 245, 246; additional 12 credits from either the behavioral neuroscience track or the molecular neuroscience track

Behavioral neuroscience track – 12 hours

Biology 333; Cognitive Science 498; Neuroscience 499; Psychology 259, 366, 450, 466; Physics 121/122 or 210/211

Molecular neuroscience track – 12 hours

Biology 340, 430, 422; Chemistry 360, 473, 474; Neuroscience 499; Physics 121/122 or 210/211

*Electives* – 20 hours

### Neuroscience Minor (22 hours)

Neuroscience 125, 357, 358, 457; Psychology 125, 357, 358, 457; and four of the following courses: Biology 333, 427; Cognitive Science 498; Neuroscience 355, 499; Psychology 366, 450, or 466

## Philosophy

Faculty: Beavers, Jones, Kretz

Philosophy fosters an appreciation for the role of critical thinking in all aspects of life. It is a humanities-based discipline that makes students aware of perennial issues confronting human beings, particularly respecting their place within society, their claim to knowledge, and their commitment to values. As such, the philosophy major provides students with the tools they need to succeed in a variety of graduate programs, including philosophy, religion, political science, law, and business. The philosophy minor supplements other majors by affording students the opportunity to build their own program.

### Bachelor of Arts with a Major in Philosophy

#### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

*Major* – 31 hours

Philosophy 121, 211, 221, 231, 412, 499, and five additional philosophy courses (15 hours) at the 300 or 400 level, which may include Cognitive Science 345 and/or 498; Philosophy 491 may apply only once toward the major; Philosophy 492 may not count as one of the additional courses.

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 42 hours

#### Philosophy Minor (18 hours)

Any six or more courses in philosophy, which may include Cognitive Science 498

## Physics

Faculty: Braun (Chair), Reisetter, Stamm

A major in physics provides a foundation in the most fundamental of the sciences. This can prepare one for graduate studies in physics or engineering; for a wide range of science-related careers in medicine, electronics, energy, or computer science; or for a career in teaching. Physics courses range from an introduction of basic principles to in-depth studies of the fundamental properties and behavior of energy and matter.

The Department of Physics offers the Bachelor of Science and Bachelor of Arts degrees. Students who plan a career in secondary education, or who wish to include physics as part of a broader liberal arts program, should consider the Bachelor of Arts degree. The Bachelor of Science degree is recommended for students considering a career as a physicist, engineer, or other professional scientist.

It is possible, with advanced planning, to spend a semester in England and still complete all degree requirements within four years by taking general education courses at Harlaxton College.

## Bachelor of Arts with a Major in Physics

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Chemistry 118 and Mathematics 221

*Major* – 32 hours

Physics 210, 211, 213, 214, 305, 312, 401, 416, 471; physics electives to total 32 hours (Physics 195, 350, 421, 427 recommended)

*Mathematics courses* – 8 hours

Mathematics 222, 323 (Mathematics 324 recommended)

*Additional Foreign Language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 32 hours

## Bachelor of Science with a Major in Physics

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Chemistry 118 and Mathematics 221

*Major* – 44 hours

Physics 210, 211, 213, 214, 305, 312, 340 or 350, 401, 414, 416, 471, 494, 499; physics electives to total 44 hours (Physics 190, 320, 322, 330, 331, 405, 421, 422, 423, 427 recommended)

*Mathematics courses* – 8 hours

Mathematics 222, 323 (Mathematics 324, 341 recommended)

*Electives* – 26 hours

## Bachelor of Arts or Bachelor of Science with a Major in Physics Education

Information on the Bachelor of Arts or Bachelor of Science degree with a major in physics education may be found in the College of Education and Health Sciences section.

### Physics Minor (21 hours)

Physics 210, 211, 213, 214, 305; one from Electrical Engineering 320, Physics 312, 401; one from Physics 416, 471; additional hours must be chosen from 300- or 400-level physics courses (not including Physics 499)

(Physics 350 will not be allowed as an elective for electrical engineering majors who are minoring in physics.)

A co-op program leading to a Bachelor of Science degree with a major in physics is available. Under this program, a student usually works in industry or at a government laboratory during the summers and one semester. Call or write the chair of the Department of Physics for more information and an application.

## Undergraduate Research

Undergraduate research is required for the BS degree in physics. The research may be completed on campus, under the direction of one of the University physics faculty members, or it may be completed off campus (typically, through the National Science Foundation's summer Research Experiences for Undergraduates program).

## Preprofessional Programs

Because of the fundamental nature and breadth of many of the disciplines offered by the University of Evansville, there are a number of programs available for the student intending to pursue a professional career. Most of these preprofessional preparatory programs are designed for the student to meet baccalaureate requirements although admission to some professional programs is available prior to completion of an undergraduate degree.

## Pre-dentistry

A four-year baccalaureate program in liberal arts with significant work in the natural sciences at the University of Evansville is recommended as a prerequisite to seeking admission into dental school. Successful completion of the four-year curriculum satisfies admission requirements of most dental schools.

## Pre-dental Recommendations

Certain dental schools require at least one semester of human anatomy and physiology. A student who elects to complete four years at the University of Evansville must fulfill a major in a specific subject area. Further information is available from the pre-dental advisor, Dr. Joyce Stamm.

Suggested curriculum (62/63 hours): Biology 107 or 117, 108; Chemistry 118, 240, 280 or 370/371, 341; Communication 130; Physics 121, 122; Psychology 121

Additional recommended courses: Art 350; Biology 331, 430; Economics 101; Exercise and Sport Science 112, 113; Management 300 or 377

## Pre-law

Students planning to enter the legal profession are advised to pursue baccalaureate degree work in academic areas best suited to their interests. Law schools are most interested in students who can communicate effectively, read comprehensively, and think critically. Because admission requirements of law schools vary, students need to become acquainted with the admission process of the schools they hope to attend. Study in English, economics, foreign languages, history, legal studies, logic and philosophy, political science, and sociology is recommended. Most law schools do not require a specific pattern of courses, nor do they stipulate majors for concentrated study. A course of study should be carefully planned with the pre-law advisor and the Law School Admission Test should be taken in conjunction with application to law school. For more information, call or write the pre-law advisor, Dr. Kevin Gray.

## Pre-medicine

A student may be admitted to certain medical schools after three years of undergraduate work. However, pursuit of a four-year baccalaureate program in liberal arts with significant work in the natural sciences at the University of Evansville is recommended as a prerequisite to seeking admission into medical school. Successful completion of the four-year curriculum satisfies admission requirements of most medical schools. A course of study should be carefully planned with the pre-medicine advisor, and the Medical College Admission Test should be taken at the appropriate time.

## Pre-medicine Recommendations

Students may earn a baccalaureate degree in any academic area at the University. Most students major in biology, chemistry, or neuroscience.

Biology 107 or 117, 108, 331, 425, 427, 430, 440; Chemistry 118, 240, 370/371, 341; Mathematics 221, 222; Physics 210, 211

## Pre-optometry

While most optometry schools will consider an applicant with three years of undergraduate work, the student who has completed a baccalaureate degree is in a more competitive position for admission. The curriculum presented at the University of Evansville meets the requirements of the Indiana University School of Optometry and most other schools in the Midwest, though students considering optometry should become familiar with expectations of optometry schools to which they may apply.

## Pre-optometry Recommendations

A minimum of 90 semester hours is required for admission to most optometry schools, although most students admitted have earned a baccalaureate degree. Further information is available from the pre-optometry advisor, Dr. Dale Edwards.

Biology 107 or 117, 108, 430; Chemistry 118, 240, 280 or 360 or 370/371, 341; Mathematics 221; Physics 121, 122; Psychology 121, 245, 355; humanities and fine arts, at least two courses; foreign language, one year required by some optometry schools

## Pre-pharmacy

Admission to a college of pharmacy generally requires satisfactory completion of two years of academic work in basic sciences and liberal arts. Because admission requirements vary, pre-pharmacy students should become acquainted with the specific admission requirements of the pharmacy college to which application will be made. The following suggested first-year curriculum meets the requirements of most pharmacy colleges in the Midwest.

The first pre-pharmacy year will normally include Chemistry 118, 240; Mathematics 134, 221, or 222, depending upon the pharmacy college to which application will be made; Biology 107 or 117, 108, and approved electives in American politics and political institutions, communication, economics, modern languages, psychology, and sociology.

## Pre-ministry

Students intending to attend theological school or seminary for ministerial preparation are required by those schools to complete a baccalaureate degree, with a strong liberal arts education highly recommended. The pre-ministry track provides students planning to pursue theological study and a vocation in ministry a broad liberal arts education, a wide range of choice fields of study, and practical experience in ministry, which conforms to the recommendations of the Association of Theological Schools. Students work in close consultation with their pre-ministry advisor to plan a course of study which meets their individual needs and vocational goals.

The recommended course of study includes at least three courses in religion (9 hours); one course in philosophy (3 hours); one course in English or world literature (3 hours); one religion internship (3 hours); and a major in one of the following fields of study: archaeology, anthropology, art history, classical studies, economics, English, foreign language, history, international studies, music, philosophy, political science, psychology, religion, sociology, or writing. A major outside this list may be chosen in consultation with the pre-ministry advisor. If religion, philosophy, or English are chosen as a major, the hours in these fields suggested above are replaced by the major.

A knowledge of ancient Greek, the original language of the New Testament, is an especially valuable form of preparation for seminary or theological study. Students in the pre-ministry track are therefore encouraged to fulfill their general education foreign language requirement by taking ancient Greek, and to pursue either a classical studies or classical languages minor with concentration in Greek.

## Preprofessional Clinical Psychology

Offered through the Department of Psychology, this program prepares students for graduate study in clinical psychology. Clinical psychology involves the study of abnormal behavior, psychological assessment, and the psychotherapeutic treatment of children, adolescents, and adults. Students major in psychology with a clinical psychology specialization as outlined in the "Psychology" section of this catalog.

## Preprofessional Clinical Social Work

Offered through the Department of Psychology, this program prepares students for graduate study in clinical social work, a specialization within the social work profession. Clinical social work involves the psychotherapeutic treatment of children, adolescents, and adults. Students major in psychology with a clinical social work specialization as outlined in the "Psychology" section of this catalog.

## Preprofessional Social Work

This minor helps to prepare students for graduate study in social work. Admission requirements of graduate social work programs vary, but the courses included in the sociology major and preprofessional social work minor provide a solid foundation in the behavioral sciences and other areas related to the practice of social work. Course requirements are outlined in the "Law, Politics, and Society" section of this catalog.

## Pre-veterinary Medicine

The admission requirements of veterinary medicine schools vary, but the University of Evansville's recommendations meet the requirements of the Purdue University School of Veterinary Medicine as well as many other schools throughout the United States.

## Pre-veterinary Medicine Recommendations

These are the minimum requirements for admittance to most schools of veterinary medicine, but the majority of students admitted to a veterinary medicine school have completed a baccalaureate degree. Further information is available from the pre-veterinary advisor, Dr. Noah Gordon.

Biology 107 or 117, 108, 331; Chemistry 118, 240, 280, 341; Mathematics 221, 222; Statistics course; Physics 210, 211; humanities electives (six hours)

# Psychology

Faculty: Becker, Felton, Hennon (Chair), Kopta, Lakey, Stevenson

Psychology is the study of behavior as well as the mental, biological, and social processes related to behavior. As a science, psychology researches the causes of behavior; as a profession, it applies these findings to improve human health and well-being.

Students who major in psychology have preparation for a career in social services, criminal justice, business, industry, or public relations. They are also prepared for graduate studies in psychology or related fields such as law, business, social work, or counseling.

The Bachelor of Arts and Bachelor of Science degrees are offered with a major in psychology. Students pursuing the Bachelor of Arts degree may not earn more than 45 hours of psychology credit toward graduation and must meet foreign language proficiency requirements at the second-year level. For the Bachelor of Science degree, students must meet foreign language proficiency requirements at the first-year level. A minor in psychology is offered for students who want to gain helpful knowledge of behavior relevant to a wide range of fields including business, communication, public relations, criminal justice, education, health sciences, the humanities, law, and other social sciences.

## Harlaxton College in Grantham, England

It is possible, with advance planning, to spend a semester in England and still complete all degree requirements within four years by taking general education courses at Harlaxton College. In most semesters, professors from the University of Evansville or our partner universities offer psychology courses at Harlaxton. Course listings are available two years in advance and can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

## Bachelor of Arts or Bachelor of Science with a Major in Psychology

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

For additional departmental general education requirements, please consult the department.

*Major* – 39 hours

Psychology 121, 125, 201, 225 or 226, 229, 245, 246, 259, 490; 15 hours of psychology courses numbered 300 or above (Cognitive Science 498 can substitute for any of these 15 hours)

*Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 34 hours for the Bachelor of Arts and additional course work to reach 120 total hours (no more than 45 hours in any area); 40 hours for the Bachelor of Science and additional course work to reach 120 total hours.

Psychology majors must achieve a C- grade or higher in all psychology courses that apply to the major.

### *Specialty Areas*

*In choosing electives to fulfill the requirement of a minimum of 39 hours in psychology, students may consider the following specializations:*

Behavioral Neuroscience/Pre-medical Specialization: Biology 107, 108, 331; Chemistry 118, 240, 341; Mathematics 221; Physics 121, 122; Psychology 357, 358, 457; two classes from Psychology 355, 366, 450, 466

Clinical Psychology Specialization: Psychology 333, 367, 370, 379, 445, 489

Clinical Social Work Specialization: Psychology 333, 367, 370, 379, 431, 489; Social Work 120; Sociology 105, 230 or 438, 335, 386 or 460

Industrial Business Psychology Specialization: Accounting 210; Economics 101, 102; Finance 361; Management 377; Marketing 325, 330; Psychology 356, 431

Forensic Psychology/Pre-law Specialization: Criminal Justice 205, 210; two from Criminal Justice 342, 360, 370, 410; Legal Studies 125, 300; Philosophy 231, 446, Psychology 320, 420, 431; two from Psychology 333, 366, 367

### Psychology Minor (18 hours)

Psychology 121 and a minimum of 15 hours in psychology electives, at least 6 of which are at the 300- or 400-level, selected in consultation with major advisor and psychology minor advisor

# Religion

Faculty: Beavers, Stein (Chair), Ware

## Bachelor of Arts with a Major in Religion

The Department of Philosophy and Religion offers a major in religion that allows students the opportunity to work closely with an advisor to select courses that meet their individual goals and interests. By doing so, the religion major provides outstanding preparation for seminary or graduate study in religion, an excellent foundation for pre-law or pre-medicine, a comprehensive education for work in nonprofit areas or various aspects of ministry, and a well-rounded liberal arts curriculum for those who find religious questions and issues compelling.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours

For additional departmental general education requirements, please consult the department.

*Major* – 30 hours

The religion major requires thirty hours in religion; courses are to be selected in close consultation with an advisor. Eighteen of these hours must be at the 300 level or higher. Students may take ETH 200 (Social Justice Movements), ANTH 453 (Anthropology of Religion), and/or GRK 371 (New Testament Greek Exegesis) toward their religion major requirements. *Additional foreign language* – 6 hours: Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives* – 43 hour

Other courses than those listed above may be substituted upon approval.

### Religion Minor (18 hours)

The religion minor consists of any eighteen hours in religion. Students may take ETH 200 (Social Justice Movements), ANTH 453 (Anthropology of Religion), and/or GRK 371 (New Testament Greek Exegesis) toward their religion minor requirements.

### New Testament Greek Minor (19 hours)

The department offers a minor in the language of the New Testament to develop skills in using ancient Greek to study and interpret biblical texts.

Greek 211, 212; one from Greek 351, 371, 411, or 421; Religion 320, 330; Religion 435, normally taken in conjunction with the upper level biblical studies course above.

# Theatre

Faculty: Boulmetis, Brewer, Cowden, Lank, Lutz, , Meacham, Nelson, Renschler (chair), Ward

The department offers degree programs leading to a Bachelor of Fine Arts with majors in theatre performance and theatre design and technology, a Bachelor of Science with majors in theatre performance, theatre design and technology, stage management, theatre management, and theatre education.

The courses of study in theatre are offered for students who plan careers in professional theatre or intend to continue their study at the graduate level and for those seeking an intellectual and aesthetic appreciation of theatre as a complement to a broad liberal arts and sciences education.

### Harlaxton College in Grantham, England

The department encourages students to spend one semester of their sophomore year at Harlaxton College in England to expand their scope of study, experience, and personal growth. Students may also attend other study abroad programs.

## Theatre Admission Requirements

To seek admission into the Department of Theatre, new students must make formal application to the University as well as



audition for or interview with the Department of Theatre faculty. This requirement applies also to transfer students and students currently enrolled at the University of Evansville who are seeking entry or re-entry into the department. Acceptance based on University admission requirements and the audition or interview will classify the new theatre student as provisional. Admission to full candidacy status for one of the several theatre degree programs will be granted after students have satisfactorily completed the specific number of lower-division courses. Students also are expected to demonstrate potential appropriate to the goals established for the degree and major they are pursuing. Although full candidacy will usually be granted at the end of the first year, circumstances may require earlier or later acceptance. All students and their degree programs will be reviewed annually by the theatre faculty. Retention is contingent upon the student having met the guidelines outlined in the Theatre Handbook and satisfactory completion of the review process.

## Core Curriculum

All students with a concentration in theatre must fulfill the following requirements:

*Enduring Foundations General Education* – 41 hours, including Theatre 435 or 465 or 472

*Core curriculum in theatre and practicum* – 24 hours

Theatre 111 or 171, 125, 130, 160, 361, 362; six hours of Theatre Practicum – 190 (2 hours), 290 (2 hours), 390 (2 hours) – these six courses usually are taken during the student's first three years

*Additional requirements*

A specific core of classes in theatre to fulfill requirements for each degree program

A fine arts elective of 3 hours in an area other than theatre such as art history or art studio, literature or writing, music history, or music appreciation

An audition or interview with the theatre faculty each semester of each academic year

Students majoring in theatre may not participate in off-campus theatre activities during the academic year

An individual program developed from offerings in theatre and other disciplines to complete graduation requirements of 120 total hours

## Bachelor of Fine Arts

The Bachelor of Fine Arts degree with a concentration in theatre is designed for students seeking professional training and desiring an intensive program in theatre curriculum. Students following this degree program pursue a course of study with a high degree of specialization in either theatre performance (acting and directing) or theatre design and technology (scene, lighting, costume, sound design, and technical direction). The philosophy of the BFA degree program is to encourage students to explore the total theatre experience by developing an overall view of theatre as an art form while perfecting specific career specializations within the liberal arts and sciences environment.

### Requirements (120 hours)

#### **Theatre Performance Major**

The primary emphasis of this curriculum is actor training with its attendant disciplines. Students may also develop a secondary emphasis in directing.

*Enduring Foundations General Education* – 41 hours, including Theatre 465 or 472

*Major* – 60 hours

Theatre core and practicum; performance core (English 350; Theatre 225, 363 or 364, 375, 481; dance elective; voice elective; an elective in an area other than performance such as Theatre 120, 135, 335, 336, 337, 365); minimum of 27 hours in acting, dance, voice, and directing (including courses in the core curriculum); theatre electives to total 60 hours in theatre

*Electives* – 16 hours, including a fine arts elective of 3 hours in an area other than theatre.

### Requirements (120 hours)

#### **Theatre Design and Technology Major**

Students are directed toward the development of design skills (scenic, lighting, sound, and costume) as well as technical theatre.

*Enduring Foundations General Education* – 41 hours, including Theatre 435 or 465

*Major* – 63 hours

Theatre core and practicum; design and technology core (English 350; Theatre 120, 135, 220 or 221 or 225 or 226; 335 or 336 or

337; 363 or 364; an elective in an area other than design and technical theatre such as Theatre 481); minimum of 27 hours in design, technical production, and costume construction (including courses in the core curriculum); theatre electives as needed to total 63 hours in theatre

*Electives* – 13 hours, including a fine arts elective of 3 hours in an area other than theatre.

## Bachelor of Science

The Bachelor of Science degree with a concentration in theatre is designed for students who wish to concentrate in theatre as well as explore other disciplines. The curriculum allows the student to develop, with advisor approval, a broad-based educational program that meets individual desires and abilities. This degree is particularly suitable for students who wish to study theatre without confining themselves to a particular area of specialization, but it can also allow students to enhance areas of specialization with a closely related program of study (e.g., a theatre design student with an associated study in art or a theatre performance student with an associated study in literature). Students pursuing the BS degree choose one of four majors: theatre performance, theatre design and technology, stage management, or theatre studies.

### Requirements (120 hours)

#### **Theatre Performance Major**

*Enduring Foundations General Education* – 41 hours, including Theatre 465 or 472

*Major* – 45 hours

Theatre core and practicum – 24 hours

Performance – 21 hours: Theatre 112 or 172, 481; dance elective; voice elective; 12 hours of theatre performance electives

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 13 hours, including a fine arts elective of 3 hours in an area other than theatre

#### **Theatre Design and Technology Major**

*Enduring Foundations General Education* – 41 hours, including Theatre 435 or 465

*Major* – 45 hours

Theatre core and practicum – 24 hours

Design and technology – 21 hours: Theatre 120, 135, 220 or 221 or 225 or 226; 335 or 336 or 337; 9 hours of theatre electives

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 13 hours, including a fine arts elective of 3 hours in an area other than theatre

#### **Stage Management Major**

*Enduring Foundations General Education* – 41 hours, including Theatre 435 or 465

*Major* – 51 hours

Theatre core and practicum – 24 hours (Theatre 291 and 391 replace 290 and 390 for the practicum)

Stage management – 27 hours: Accounting 210 or Communication 388; Management 300 or 377; Theatre 120, 135, 220 or 221 or 225 or 226; 335 or 336 or 337; 350, 400, 481, 499 (internship with professional theatre)

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 4 hours, including a fine arts elective of 3 hours in an area other than theatre

#### **Theatre Studies Major**

**The Bachelor of Science with a Major in Theatre Studies allows students with broad interests in the theatre to explore an in depth education in multiple areas of the theatre. The free electives allow for individual customization of this degree with additional courses in theatre or other areas of interest, including associated studies or minors.**

*Enduring Foundations General Education* – 41 hours, including Theatre 435, or 465, or 472

*Major* – 54 hours

Theatre core and practicum – 24 hours

Theatre studies – 30 hours: Theatre 111/112 or 171/172, 120, 135, 335 or 336 or 337;, 363 or 364 or ARTH 209 or 209, THTR 350

or 400, THTR 440, 481, ENGL 350. three hours of theatre electives

*Electives* – 22 hours, including a fine arts elective of 3 hours in an area other than theatre

## Bachelor of Science with a Major in Theatre Management

The Bachelor of Science with a major in theatre management combines theatre and business studies for the student interested in a career in arts management and administration. Because of its dual emphasis, this program has different departmental requirements for general education, core curriculum, and theatre practicum.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Economics 102, Mathematics 105, Philosophy 121, Theatre 435 or 465

*Major* – 79 hours

Accounting 210; Art 213; Communication 251; Communication 485 or Theatre 499; Finance 361; Law 201; Management 300 or 377; Management 306 or Theatre 499; Marketing 325; Writing 204; Quantitative Methods 160; Theatre 110 or 111 or 171, 120, 125, 130, 160, 361, 362, 400, 450; four hours from Theatre 190, 290, 390; nine hours of theatre electives; six hours of business electives (300- and 400-level)

## Bachelor of Science with a Major in Theatre Education

The Bachelor of Science with a major in theatre education combines theatre and education courses for the student interested in a career as a secondary education teacher. Admission into the program follows the same guidelines for admission to the Department of Theatre. Because of its dual emphasis (as with theatre management), this program has different departmental requirements for general education, core curriculum, and Theatre Practicum courses.

Due to its dual emphasis this program requires a minimum of 124 hours for graduation rather than 120 hours for all other theatre degrees.

Students majoring in theatre education may elect to pursue a teaching minor in English language arts. This approach requires a minimum of 24 hours of specific course work in writing and literature and a total of 138 hours for graduation.

### Requirements (124 hours)

*Enduring Foundations General Education* – 41 hours, including Psychology 121; Theatre 465 or Education 490

*Major* – 46 hours

Psychology 226; Theatre 110 or 160, 111 or 171, 112 or 172, 120, 125, 130, 135, 220 or 221, 335 or 336 or 337, 481, 9 hours of theatre electives; four hours from Theatre 190, 290, 390

*Professional Education Requirements* – 36 hours

Education 150, 320, 322, 363, 385, 428, 435, 436, 443, 459

*Electives* – 1 hour

# Schroeder Family

## School of Business Administration

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*Greg Rawski, Schroeder Family Dean*

Business administration is an interdisciplinary field of study that leads to dynamic and rewarding careers in global commerce or public service. At the University of Evansville, the business major is based on four important principles. First, the curriculum embraces the spirit of traditional liberal arts and sciences education. Second, the content of the program is global in nature, recognizing the fact that world developments in trade and commerce have come to transcend the boundaries of nations and cultures. Third, degree requirements allow students to reach beyond the traditional limits of business courses to include other areas of study. Finally, students are required to complete internships and are encouraged to take advantage of work opportunities that connect their formal academic training with meaningful experiences in a variety of professional settings.

There is no practical limit to the range of career opportunities for students who prepare themselves carefully for the challenges of global business. In addition, the University of Evansville program offers excellent preparation for graduate study in business, law, and a variety of other fields.

### Mission Statement

The mission of the Schroeder Family School of Business Administration is to provide a life-transforming, high quality, innovative business education within a liberal arts and sciences framework. The school's faculty engages in the creation of knowledge through scholarship and provides its students with experiential learning and a global perspective that enables them to engage the world as informed and ethical business professionals.

### Statement of Principles

Consistent with the values and mission of the University, it is the objective of the Schroeder Family School of Business Administration to produce business alumni who have an integrated understanding of business principles and perspectives necessary for effective leadership. Consequently, students will:

- Master communication, organizational, and critical thinking skills
- Acquire a broad foundation in the liberal arts and sciences through general education together with a depth of knowledge in one or more disciplines of their choice
- Understand the ethical significance of their personal and professional decisions
- Understand the global nature of our world, learn about other cultures, and appreciate diversity and tolerance
- Have the opportunity to participate in international studies programs
- Understand the necessity of being actively involved through involvement in study, internships, and extracurricular activities

### Harlaxton College in Grantham, England

Our emphasis on international business and global economies leads us to encourage our students to study overseas at such locations as Harlaxton College. During most semesters, professors from the University of Evansville or our partner universities offer business courses at Harlaxton. Course listings are available two years in advance and can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

# Accounting and Business Administration

Faculty: Alhenawi, Bayar, Dwyer, Fenton, Johnson, Kerr, Khan, Montgomery, Mousa, Obaze, Rawski, Stilwell, Yazdanparast

## Objectives of the Degree Programs

The Schroeder Family School of Business Administration offers degree programs in accounting, economics, and business administration.

The principal objective of our programs is to develop potential leaders who have a broad background in the liberal arts, possess an awareness of the social responsibilities of corporate leadership, and have thorough knowledge of fundamental tools of decision-making in a global context. The Bachelor of Science in Accounting degree is offered for students desiring careers in corporate or public accounting. The Bachelor of Science in Business Administration degree is offered with majors in finance, global business, management, and marketing.

Economics combines the best in liberal arts education to prepare students for careers in industry, commerce, or public service. Students can major in economics by completing a Bachelor of Science or a Bachelor of Arts degree. A minor in economics is also available.

## Requirements for Degree Programs

Students taking business or economics courses must successfully complete all prerequisite courses prior to beginning more advanced courses.

- It is recommended that no more than 50 percent of a business student's total credit hours (excluding Economics 101, 102, Quantitative Methods 160, 227) be taken in the Schroeder Family School of Business Administration.
- Students studying outside the Schroeder Family School of Business Administration and planning to earn more than 25 percent of their work in business and economics (excluding Economics 101, 102, and Quantitative Methods 160, 227) must earn a Bachelor of Science in Accounting or a Bachelor of Science in Business Administration.
- For transfer students, at least 50 percent of the business credit hours required for a degree from the Schroeder Family School of Business Administration must be earned at the University of Evansville.

## Course Level Policy

Normally, students will not enroll in 200-level business courses before the third semester. After completion of the third semester, students may enroll in Finance 361, Management 310, Management 311, Management 377, or Marketing 325 if prerequisites are satisfied. After completion of the fourth semester, students may enroll in other 300-level and 400-level business courses for which the prerequisites have been satisfied. This policy will be enacted with provisions for flexibility on an individual case basis. Exceptions that permit earlier enrollments include but are not limited to the following: (1) students with formal plans for study at Harlaxton College or in some other program of study abroad; (2) students who wish to avail themselves of opportunities to take 300- and 400-level courses that are offered only on an alternate year basis and for which the alternate year scheduling cycle is stated with the catalog course description; (3) students with exceptional preparation through advanced placement or credit by exam that warrants early enrollment; and (4) students who require preparation specific to the requirements of planned internships.

## Bachelor of Science in Business Administration

This degree requires completion of 124 semester hours allocated as follows: (1) The University's Enduring Foundations General Education requirements – 41 hours, (2) the Schroeder Family School of Business Administration common core – 45 hours, (3) at least one major area (18 hours or more), and (4) free electives for the balance of the 124 hour total.

*Enduring Foundations General Education* – 41 hours, including Quantitative Methods 227 and Management 497

For additional departmental general education requirements, please consult the department.

*Common Core* – 45 hours

The purpose of the common core is to provide students with careful preparation in the fundamental tools of decision-making and leadership. All students complete the following courses: Accounting 210, 211; Business 398, 400; Economics 101, 102; Experiential Education 90; Finance 361; Interdisciplinary 150; Law 201; Management 310, 311, 331, 377; Marketing 325; Mathematics 134 or 221; Quantitative Methods 160.

Cooperative Education 91 can be used to satisfy the requirement for Business 398, but no credit hours will be awarded. All academic requirements for the Business 398 internship must be fulfilled when substituting Cooperative Education 91 for Business 398. After completion of the cooperative education experience, students must file a Petition for Substitution and/or Waiver with the Academic Standards Committee of the Schroeder Family School of Business Administration. If approved, the registrar's office

will be notified of this substitution for graduation requirements.

#### *Majors – 18 hours minimum*

Finance: Finance 362; five or more courses selected from Finance 380\*, 395\*, 426, 427, 462, 470, 478, 482; may apply 3 hours maximum from FIN 383, 384, 385, 386; may substitute two 300/400 level courses (6 hours) that have a prefix of ACCT, BUS, ECON, LAW, MGT, or MKT.

Global Business: Six or more courses selected from Accounting 347, Economics 425, 435, Finance 426, Management 455, Marketing 473, 477; may substitute two 300/400 level courses (6 hours) that have a prefix of ACCT, BUS, ECON, FIN, LAW, MGT, or MKT; demonstrated proficiency at second-year level of chosen foreign language.

Management: Six or more courses selected from Management 306, 380\*, 395\*, 392, 402, 412, 430, 455, 475; may substitute two 300/400 level courses (6 hours) that have a prefix of ACCT, BUS, ECON, FIN, LAW, or MKT.

Marketing: Marketing 330, 492; four or more courses selected from Marketing 373, 374, 380\*, 385, 395\*, 473, 477, 490; may substitute two 300/400 level courses (6 hours) that have a prefix of ACCT, BUS, ECON, FIN, LAW, or MGT.

#### *Electives – up to 23 hours*

No hours of internship are counted as part of the major. \*Only one independent study or special topics course will be counted in the major. Additional independent study or special topics course hours will count as free electives.

University policies mandate that all students complete at least 39 hours in courses at the 300 and 400 levels. Students should be mindful of these rules when planning their major and electives.

Double-counting of courses in the business core or majors is not permitted.

### **Business Administration Minor (21 hours)**

Accounting 210; Economics 102; Finance 361; Management 377; Marketing 325; six hours of 300- or 400-level courses in the Schroeder Family School of Business Administration for which the student has satisfied the appropriate prerequisites. This excludes internship, independent study, and special topics courses.

In addition to the 21 hours for the minor, the student may take other business courses for which he or she has the appropriate prerequisites; however, no more than nine additional hours in business courses (excluding Economics 101, 102; Quantitative Methods 160, 227) will apply toward graduation requirements.

## **Bachelor of Science in Accounting**

The accounting degree prepares students for careers in the corporate, public, governmental, or nonprofit sectors. This degree requires completion of 124 semester hours, allocated as follows: (1) The University's Enduring Foundations General Education requirements – 41 hours, (2) the Schroeder Family School of Business Administration common core – 45 hours, (3) the accounting major area – 21 hours or more, and (4) free electives for the balance of the 124 hour total.

*Enduring Foundations General Education* – 41 hours, including Quantitative Methods 227 and Management 497.

For additional departmental general education requirements, please consult the department.

#### *Common Core – 45 hours*

The purpose of the common core is to provide students with careful preparation in the fundamental tools of decision making and leadership. Accounting majors have one exception to the business administration core; instead of Management 311, accounting majors complete Accounting 321. All accounting majors complete the following courses: Accounting 210, 211, 321, 398; Business 400; Economics 101, 102; Experiential Education 90; Finance 361; Interdisciplinary 150; Law 201; Management 310, 331, 377; Marketing 325; Mathematics 134 or 221; Quantitative Methods 160.

Accounting 499 Professional Internship may be used to satisfy the requirement for Accounting 398. This course is intended for full-time professional assignments and allows students to gain practical experience in an accounting position relating to an area of career interest. The student must work at least 540 hours at an approved internship during the semester of enrollment and will receive 12 hours of credit upon completion.

As an additional option, Cooperative Education 91 may be used to satisfy the requirement for Accounting 398, but no credit hours will be awarded. All academic requirements for the Accounting 398 internship must be fulfilled when substituting Cooperative Education 91 for Accounting 398. After completion of the cooperative education experience, students must file a Petition for Substitution and/or Waiver with the Academic Standards Committee of the Schroeder Family School of Business Administration. If approved, the registrar's office will be notified of this substitution for graduation requirements.

#### *Major – 21 hours*

Accounting 310, 311, 317, 329, 414; six hours of upper-division accounting or business electives selected with the approval of the student's academic advisor. No hours of internship are counted as part of the accounting major.

*Electives – 20 hours*

Double-counting of courses in the business core and majors is not permitted.

## Economics

Faculty: Bayar, Kerr

Two degree programs are offered with majors in economics. Both programs require completion of 124 hours credit. The Bachelor of Arts degree requires a core of economics courses and permits a generous choice of free electives. The Bachelor of Science degree requires a supporting area of study in addition to the economics core. Both degrees provide a bridge between the liberal arts and sciences and a variety of attractive professional careers. A major in economics combines the best in liberal arts and sciences education with the expertise and training necessary for successful careers in all fields of industry, commerce, or public service. Economists occupy positions of leadership in every sector of American industry. An economics major provides preparation for careers in state, local, or federal government. In addition, a degree in economics is an excellent background for graduate school in business administration, health care administration, law, or public administration.

With advanced planning it is possible to spend a semester at Harlaxton College in England and still complete all degree requirements within four years. During most semesters professors from the University of Evansville or our partner universities offer economics or business administration courses at Harlaxton. Course listings are available two years in advance and can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

### Bachelor of Arts with a Major in Economics

The appeal of the Bachelor of Arts degree is its exceptional flexibility in permitting the student to enjoy the broadening experience of a liberal arts education together with preparation for professional careers. Students consult with their advisors in selecting from the many disciplines that are complemented by economics. With proper planning, it is possible to complete a Bachelor of Arts degree with a double major in economics and one of a selected number of other fields.

#### Requirements (124 hours)

*Enduring Foundations General Education – 41 hours, including Quantitative Methods 227*

For additional departmental general education requirements, please consult the department.

*Major – 36 hours*

Economics 101, 102, 345, 346, 372, 398, 425; BUS 400; Experiential Education 090; Mathematics 134 or 221; 12 hours of economics electives (may substitute 300/400 level finance courses for elective hours)

*Additional foreign language – 6 hours:* Bachelor of Arts requires proficiency in or completion of a foreign language through the course numbered 212

*Electives – 41 hours*

Accreditation rules for the Schroeder Family School of Business Administration stipulate for this degree that a maximum of ten courses with the prefix of ACCT, BUS, FIN, MGT, or MKT can apply towards graduation requirements.

### Bachelor of Science with a Major in Economics

The Bachelor of Science degree with a major in economics is a combination of Enduring Foundations General Education, major requirements, a supporting area of study, and free electives.

#### Requirements (124 hours)

*Enduring Foundations General Education – 41 hours, including Quantitative Methods 227*

For additional departmental general education requirements, please consult the department.

*Major – 33 hours*

Economics 101, 102, 300, 345, 346, 372, 398, 425; BUS 400; Experiential Education 090; Mathematics 134 or 221; six hours of economics electives (may substitute 300/400 level finance courses for elective hours)

*Supporting area – 18 hours (select one)*

Business Administration: Accounting 210; Finance 361; Management 331, 377; Marketing 325; Quantitative Methods 160

Accreditation rules for the Schroeder Family School of Business Administration stipulate for this degree that a maximum of ten courses with the prefix of ACCT, BUS, FIN, MGT, or MKT can apply towards graduation requirements.

Mathematics: Mathematics 221, 222, 365, 466; six or more hours of elective courses in mathematics above the Mathematics 222 level

Students who select this area should not take Mathematics 134. Students who anticipate pursuing graduate studies in economics are advised to include Mathematics 341 among their mathematics electives.

Other Areas: Economics majors are invited to consult with their faculty advisors in designing other supporting areas. Examples might include political science, foreign languages, or international studies. A student must obtain approval for the self-designed area prior to the beginning of the senior year.

*Electives – 35 hours*

The Bachelor of Science degree program permits students to choose a variety of electives for the purpose of broadening their education or furthering their professional aspirations. Students consult with their advisor in selecting from among the many disciplines that are well complemented by economics.

**Economics Minor (18 hours)**

Economics 101, 102, 345, 346; two 300- or 400-level economics electives

## Co-op Program in Business Administration

A cooperative education plan for accounting and business students is available as an alternative to the traditional four-year plan. The co-op plan combines classroom education with full-time work experience in the industry. Please refer to Special Educational Opportunities located in the Degrees, Curriculum, Academic Opportunities section of this catalog.



# College of Education and Health Sciences

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*Mary P. Kessler, Dean*

The College of Education and Health Sciences is composed of the School of Education, the Department of Physical Therapy, the Department of Physician Assistant Science, the School of Health Sciences, and the Dunigan Family School of Nursing. Through the School of Education, in cooperation with appropriate departments in the arts and sciences, students can earn a baccalaureate degree that prepares them for teacher licensure in a wide variety of areas including music, art, theatre, foreign language, history, biology, chemistry, physics, mathematics, English/language arts, teaching English as a second language, special education, and elementary education.

The college offers an array of programs in the health sciences, some of which can be combined to provide multiple credentials. Baccalaureate degrees are offered in the professional areas of athletic training, clinical laboratory science, exercise science, health services administration, nursing, and public health. Physical therapy majors earn an entry-level doctoral degree in physical therapy. An associate's degree is offered in physical therapist assistance. Master's degrees are available in athletic training, health services administration, physician assistant science and public health.

All degree programs in teacher education are fully accredited by the Indiana Department of Education and the Council for Accreditation of Educator Preparation. The nursing program is accredited by the Accreditation Commission for Education In Nursing Inc. and the Indiana State Board of Nursing. Physical therapy programs are accredited by the Commission on Accreditation in Physical Therapy Education. The public health program is an applicant for accreditation by the Council on Education for Public Health. The athletic training program is accredited by the Commission on Accreditation of Athletic Training Education. The physician assistant program has been granted Accreditation-Provisional status by The Accreditation Review Commission on Education for the Physician Assistant.

## **iBACE: Integrating Business and Career Education**

The iBACE program is designed to provide students in the William L. Ridgway College of Arts and Sciences and the College of Education and Health Sciences with educational and hands-on business experiences that will improve their marketability and career success. The program exposes students to business skills that they can apply in the workplace and builds upon foundational knowledge in their educational disciplines by adding those marketing, management, and finance skills essential for careers in a variety of fields. This program is designed to prepare students for current and future business trends in the professional workplace.

### **Course Work**

The iBACE program contains three areas: coursework, a practical work experience, and a seminar for students seeking an internship. The program requires nine credit hours of coursework providing three building blocks of business training: Accounting 210, Marketing 325, and Management 377. Students must be at least sophomores to take the accounting course and juniors to enroll in the marketing and management courses. iBACE students are also strongly encouraged to add at least one course from those offered in Health Services Administration.

### **Professional Preparation**

Students must enroll in EXED 090, Building a Professional Image, prior to completion of their internship. This is a 6 week noncredit course offered through Career Services for students seeking an internship or co-op program. This seminar course covers job interviewing skills, résumé preparation, currently available internships and details of program administration.

### **Internship**

In addition to any internship, practicum, or clinical experiences iBACE students have within their health sciences major, iBACE students will complete an additional internship that focuses on business aspects of health care or health sciences. The business courses should be completed prior to the internship so that business principles can be applied to the professional experience. An internship in the student's major discipline is preferred.

### **Application**

Interested health sciences students should complete an iBACE application form to enroll in the program. The enrollment form is available online through the College of Education and Health Sciences web page. Completed forms are to be submitted to the student's academic advisor and the Dean of the College of Education and Health Sciences.

# Education

Faculty: Bellamy, Iber, Lombardo-Graves, McBride, Nayden, Gieselman (Chair)

The future of our nation and our culture rests with children. Teaching, therefore, is a moral act. It is moral because, in a macro sense, student achievement and successful school experiences are related economically and ethnically to the improvement of social and cultural conditions. Well-taught students grow to become adults who are able to participate fully in our democratic, pluralistic society. In a micro sense, teaching is moral because students' individual lives are improved as they grow and learn. Teachers must, therefore, value and be committed to educating and working with all children, regardless of background or ethnicity – a difficult and challenging task, especially as the American culture becomes increasingly diverse.

Teaching is also a complex act. Teachers must be highly skilled at working with students who have individual needs and abilities; they must be skilled at collaborating and working with others in the educational community; they must know their respective disciplines and content areas well (to teach something well, teachers must understand it well); they must be able to analyze and reflect on nearly every action taken in a classroom; and they must work toward continual improvement and learning. Teachers must also be resilient; the work of teaching can be challenging and difficult, so being flexible and knowledgeable is important.

The University of Evansville's teacher education programs are firmly based on these ideas as the conceptual framework around which its programs, courses, and activities are designed.

The Interstate Teacher Assessment and Support Consortium (InTASC) principles, standards, and competencies are embedded in the conceptual framework and have been established and adopted by both the University and the state of Indiana. These comprehensive standards and competencies are also embedded in the course work and field placements that our students complete while in teacher education programs. Teacher candidates are required to successfully demonstrate not only wide-ranging teaching skills but also certain attitudes and dispositions. In addition, the State of Indiana revised new licensure requirements in 2015. Standards for teacher preparation have been developed to align to the Revision to Educator Preparation and Accountability (REPA 3) requirements. These principles and standards provide the basic framework for the requirements that all teacher education students must meet prior to graduation.

The University of Evansville, School of Education is accredited by the Council for the Accreditation of Educator Preparation. Each program is recognized by the Indiana Department of Education and the State Board of Education. Special Professional Association recognition has also been granted by the Association for Childhood Education International, Council for Exceptional Children, and the National Council for Teachers of English.

## Harlaxton College in Grantham, England

A semester at Harlaxton College in England abroad can help teacher education students advance their capacities to meet these principles in a remarkable way. The personal growth and independence gained through study abroad, the study and observation of schools in a culture different from one's own, and the breadth of knowledge gained through travel and through Harlaxton's interdisciplinary British studies program can, quite simply, create better persons and better teachers.

Harlaxton has developed a program that will help future teachers, with advanced planning, to spend a semester in England and still complete all degree requirements within normal time-frames. Course listings are available from the Office of Study Abroad.

## Teacher Education

The School of Education offers undergraduate education programs leading to a Bachelor of Science or a Bachelor of Arts degree in many teaching areas and teacher licensure with majors in elementary education, secondary education, special education-elementary, special education-secondary, multi-grade (P-12) education in theatre, visual arts, and music. All elementary majors must also complete a minor in a licensure area; the most common minors for elementary majors are Teaching English as a Second Language, Reading, and any one of several middle grades content minors. Other minors are also available and may be selected with advisor and School of Education approval. Students seeking licensing in secondary education (5th grade through 12th grade) complete a core pedagogy sequence within the School of Education.

## General Requirements

### Advising

All education students have a School of Education faculty advisor. Students pursuing a teaching license in senior high, junior high, middle school, or multi-grade education are also assigned an advisor from the area of the content teaching major. Students must obtain approval their advisor prior to registration each semester. Certain education courses may not be repeated without approval from the faculty of the School of Education.

## Admission to Teacher Education

All students seeking teaching licenses typically apply for admission to teacher education during the semester in which they are enrolled in Education 320, usually during their sophomore year. **Candidates cannot enroll in internships until they are admitted.** Application forms are available on Acelink. Application forms are submitted through the LiveText Data Management System and review for admission will be facilitated through enrollment in Education 300: Admission to Teacher Education (0 credit hours). Admission to teacher education is granted when the following requirements are met.

- Grade of C or better in Education 100, 200, or 150 and 320
- Overall GPA of 2.80 or better
- Passing scores on the reading, writing, and mathematics sections of the Basic Skills Assessment test (Indiana uses the CASA Basic Skills Assessment but will accept specified ACT or SAT benchmark scores.) This test must be completed during the freshman year or prior to completion of Education 100 or Education 150.
- Submission and approval of the Professional Education Portfolio on LiveText
- Satisfactory interview with Admission to Teacher Education Committee
- Approval by the School of Education faculty

**Note:** ACT score of 24 or above, GRE scores of 1100 will qualify students for waiver of Basic Skills Assessment. See School of Education Office for SAT benchmark.

## Performance Expectations and Standards

Our teacher education program is extensively clinical-based. Success in many of the courses is directly related to the degree to which a student's performance meets the expectations established by the School of Education and the local school district partners. The significance of successful performance during these field experiences is vital because the students' success is tied directly to children's learning and academic achievement. Some clinical courses may not be repeated without prior approval of the School of Education faculty.

## Student Teaching

Students should consult with their advisors concerning the submission of an application for student teaching. Application forms are available on AceLink in the Education area, and on the School of Education website. The completed form should be submitted **one year prior to the student teaching year**, typically during the fall semester of the junior year. Eligibility requirements are:

- Admitted to teacher education
- Grade of C or better in all education courses (All courses required for any licensure program area)
- GPA of at least 3.00 in all education courses
- GPA of at least 3.00 overall
- GPA of at least 3.00 in the courses for the teaching major for secondary and multi-grade education students
- GPA of at least 2.75 in the courses for teaching minors
- Portfolio evaluated at "meets expectations" level

Students cannot begin their school placements until they have been officially admitted to student teaching.

- **NOTE:** Admission to Student Teaching applications are evaluated through Education 400: Admission to Student Teaching (0 credit hours). Enrollment in this course requires submission of the application form.

## Elementary Education

**Note:** To ensure consistency with Indiana teacher licensure regulations, some of the following license areas, curricula, and courses may be revised or reorganized prior to the beginning of each academic year. Students will be assisted by faculty advisors to blend current and new requirements to obtain teacher licensure.

The Elementary Education program leads to an Indiana initial practitioner license to teach all subjects in grades K-6. An Indiana teaching license qualifies a graduate to teach in most of the 50 states, but students should obtain the Indiana licensure before applying for a license in another state.

This program provides students early and continuous clinical experiences in local school system classrooms. Education courses with practicum and internship components include opportunities for classroom observation and apprentice teaching. During the senior year a student teaching placement with a master teacher is the final clinical experience.

Elementary education students must complete a minor with additional courses in an approved content area to extend the teaching coverage of the basic elementary education license. Completing the minor in Teaching English as a Second Language (TESL) will provide licensure for teaching English Learners with appropriate state licensing tests. Other available minors include world languages, English language arts, mathematics, reading, science, and social studies, TESL, music, reading, visual arts.

Completing any one of these minors, proficient performance in EDUC 443: Curriculum and Learning in Junior High/Middle School, and passing the appropriate Indiana licensing content test will qualify a student for an additional 5-9 license in the content area.

The curriculum of the elementary education program requires the completion of at least 124 semester hours, including course work in general education, professional education, teaching minors/endorsements, and electives.

Requirements (124 hours)

*Enduring Foundations General Education – 41 hours*

Required classes for this degree include the following:

Outcome 3: History 141 or 142

Outcome 4: (3 hours) Religion 130, 140, 150, 212; Philosophy 111, 121, 221, 241

Outcome 5: (3 hours) Art History 208, 209; Art 105, 200; Theatre 110; Writing 205; Music 154, 155, 156, 158

Outcome 7: Mathematics 101

Outcome 8: (7 hours including at least one lab course; courses must be from two different disciplines) Biology 100, 107;

Chemistry 100, 108, 118; Physics 100, 121

Outcome 9: Communication 380 and Psychology 121

Outcome 10: Health Education 100

Outcome 11: Education 490

*Additional General Requirements – 12-15 hours*

Environmental Studies 103 or Geography 120, 230

Mathematics 202; Psychology 226;

Health Education 160 or current certification in First Aid/CPR/AED

(With the advice and consent of a student's advisor and the chair of the School of Education other courses may be included to meet licensure standards.)

*Professional Education Requirements - 61 hours*

Education 100, 200, 235, 320, 321, 322, 323, 324, 330, 345, 385, 403, 418, 419, 421 or 427, 422, 432, 435

*Electives*

Students should consult with their academic advisors to select elective courses that expand general education content and skills or that add a teaching endorsement area.

## Supplemental Junior High/Middle School (JH/MS) Minor Licensure Programs for Elementary Education Major

When combined with the elementary education major, successful completion of this additional teaching minor will qualify the student for the Indiana initial teaching license in junior high/middle school education. Students adding the junior high/middle school licensure are licensed to teach the minor in grades 5-9 as well as K-6. Elementary education major students completing the JH/MS licensure must also complete the state-mandated middle school content examinations associated with the respective content areas.

The curriculum for the middle school licensure requires the completion of additional professional education hours and a teaching minor.

*Professional Education – 10 hours*

Education 434\*, 435, 443

\*Education 434 (6 hours) is optional. Students may choose to substitute EDUC 432 (12), the elementary school student teaching course, for EDUC 434 (6 hours).

*English Language Arts Minor – 19 hours*

Education 422, 428; English 122 or 223; one 300-level Writing course; one from English 231, 232, 241, 242; one from Writing 202, 204, 205, 206, 207

*Mathematics Minor – 20 hours*

Mathematics 101, 105, 202, 221, 222, 355

*Science Minor – 19 hours*

Biology 107; Chemistry 108; Geography 230; Physics 121; one from Astronomy 101, Biology 214, 215, Environmental Studies 103, or other science course approved by science advisor

*Social Studies Minor – 15 hours*

Geography 120 or 240; two from History 111, 112, 141, 142; Political Science 143 or 160; one three-hour course in economics, psychology, or sociology

*Foreign Language Minor – 24 hours*

Students may not count 111 or 112 toward the minor. An approved study abroad program of at least six semester hours is highly recommended. Study abroad courses replace University of Evansville courses.

French, German, or Spanish: 211, 212, 18 hours at the 300 or 400 level

*Music Minor – 24 hours*

Music 140 or 141, 142, 255, 256; choose six hours from applied piano and voice (four hours in major area and two hours in minor area); Music 270; three hours from applied music, music ensembles, Music 241, 242, 355, 356

*Reading Minor – 19 hours*

Education 322, 330, 421, 427, 428, TESL 325

*Teaching English as a Second Language (TESL) Minor - 25 hours*

The minor in Teaching English as a Second Language (TESL) prepares students to teach English to non-native speakers. Students will work with non-native speakers first as interns and finally as student teachers under the supervision of an experienced TESL teacher. This minor is open to students in all schools and colleges within the University. It leads to licensure for education majors. Elementary education students who complete the Teaching English as a Second Language minor are eligible for licensure to teach English Learners.

Education majors: Communication 380; TESL 200, 301, 302, 325, 326, 328, 417 or 491, 433\*.

\*Education 433 (6 hours) is optional. Education majors may substitute EDUC 432 (12) for EDUC 433 (6 hours).

Non-education majors: see TESL requirements at end of education section

*Visual Arts Minor – 17 hours*

Art 210, 213, 220 or 221, 325; Art History 208 or 209; one from Art 330, 340, 345

## Senior High, Junior High, and Middle School Education (SH/JH/MS)

Students wishing to become secondary teachers (grades 5-12) must have at least the equivalent of a major in their teaching field; in addition, the standards for teachers are quite high and therefore require a significant commitment of time and course work, including a number of practica and internships. Completion of the secondary program results in what is considered a “double major” of a content-specific discipline and professional education. Students are also assigned two advisors, one from teacher education and one from his or her discipline area.

Note: To ensure consistency with Indiana teacher licensure regulations, some of the following license areas, curricula, and courses may be revised or reorganized prior to the beginning of each academic year. Students will be assisted by faculty advisors to blend current and new requirements to obtain teacher licensure.

The SH/JH/MS education program leads to an Indiana initial practitioner license to teach in the subject areas completed. Most subject area licenses are for grades 5-12 and require students to complete at least a content teaching major. Students are also encouraged to complete one or more supplemental or minor licensure programs.

This program provides students early and continuous laboratory experiences in local school system classrooms. Education courses with practicum and internship components include opportunities for classroom observation and apprentice teaching. During the senior year, a student teaching placement with a master teacher is the final clinical experience.

The curriculum of the SH/JH/MS education program requires the completion of at least 120 semester hours, including course work in general education, professional education, teaching majors, teaching minors, and electives.

Requirements (at least 120 hours)

*Enduring Foundations General Education* - 41 hours, including Education 490 unless otherwise specified in the major teaching area requirements

*Additional General Requirements* – 3 hours Psychology 226 (Psychology 121 is a pre-requisite)

*Professional Education Requirements – 36-37 hours*

Education 150, 320, 322, 363, 385, 428, 435, 436, 443; select one from Art 497 or Education 451, 453, 454, 456, 457, 459, 460, 461 (co-requisite with Education 363)

*Electives – hours depend on major teaching area*

Students should consult with their academic advisors to select elective courses that expand general education content and skills or that add a teaching minor for an additional licensure area.

*SH/JH/MS Teaching Major Requirements*

**English Language Arts Major – 42 hours**

Communication 210; English 120, 231, 232, 241, 242, 340, 350, 351, 353; Writing 204, 205, 308 or 312; English 122, or 223

**World Languages Major (Foreign Language) – 33 hours**

Students may not count 111 or 112 of their target language toward the teaching major. Proficiency must be demonstrated in a second foreign language through the 112 level. At least six semester hours of course work must be taken in the target language in an approved study abroad program. It is highly recommended that a student complete more than the six-hour minimum. Study abroad courses replace University of Evansville courses.

*General education – Foreign Languages 401 required for senior seminar*

**French:** 211, 212; choose 15 hours from French 311, 312, 314, 315, 316, 317, 318, 333; 335\*, 435\*; choose 12 hours from French 415\*, 434, 438\*, Foreign Languages 420

**German:** 211, 212; choose 15 hours from German 311, 312, 314, 321, 322, 333, 335\*, 435\*; choose 12 hours from German 410, 414, 433, 438\*, Foreign Languages 420

**Spanish:** 211, 212; choose 15 hours from Spanish 311, 314, 316, 320, 321, 333, 335\*, 350, 435\*; Choose 12 hours from Spanish 410, 411, 433, 438\*, 450, 458, Foreign Languages 420

\*Course may be repeated with content change

**History Education - Bachelor of Science: 45 hours, Bachelor of Arts: 51 hours (additional 6 hours of foreign language required)**

History 36 hours:

HIST 290, 141 or 142, 111 or 112

At least 3 courses (9 hours) from HIST 313, 314, 317, 318, 319, 320, 321, 322, 324, H378, H379, 381, 383, 418, 438, 450, or 482;

At least 3 courses (9 hours) from: HIST 323, 329, 341, 343, 345, 348, 349, 352, 353, or 448.

At least two 400 level courses other than 490 or 492 (no more than 3 hours of HIST 492)

Any History class (3 hours)

*Students also choose one concentration (9 hours). Students choose from economics, government and citizenship, psychology, sociology, or general social studies.*

Economics – 9 hours

Economics 101, 102, 300/400 elective

Government and Citizenship – 9 hours: Political Science 100 or 160; 143, and one political science elective 300 or 400 level

Psychology – 9 hours: Psychology 121 or 226, 229, 259

Sociology – 9 hours: Sociology 105, 230; one additional sociology course at the 300 or 400 level

General Social Studies – 9 hours (Students will select one course from three of the four disciplines listed below).

- Economics (101, 102, 300/400 elective)
- Political Science (100, 143, 160, 300/400 level course)
- Psychology (121, 226, 229, 259)
- Sociology (105, 327, 300/400 level course)

Students completing a major in history education are eligible for an Indiana practitioner license in Secondary Historical Perspectives. Students who desire additional licensing areas are encouraged to complete the Indiana Core Content Assessments in a concentration area listed above.

**Mathematics Major – 35 hours**

*General education – including Mathematics 221 and 495*

Mathematics 222, 323, 341, 355, 365, 370, 420, 466; one from Mathematics 425 or 445; at least six semester hours of computer courses specified by the Department of Mathematics

**Science Major** - 51-55 hours, depending on licensure area

Science licensing is available in the areas of life science, chemistry, and physics. All candidates must complete the science core requirements.

Science Education Core – 11-12 hours

Select three from outside the major; Astronomy 101, Biology 107, Chemistry 118, Geography 230, Physics 121

#### *Licensure Areas*

**Chemistry** (BA or BS in basic chemistry) – 41-47 hours

Complete requirements for the Bachelor of Arts or Bachelor of Science in basic chemistry including general education requirements that increase general education hours from 41 to 42, and 6 hours of additional foreign language if pursuing a Bachelor of Arts degree. See the “Chemistry” section of the catalog under “College of Arts and Sciences.”

**Life Science** (BA or BS in applied biology) – 33-40 hours

Complete requirements for a Bachelor of Arts or Bachelor of Science in applied biology including general education requirements that increase general education hours from 41 to 42, and 6 hours of additional foreign language if pursuing a Bachelor of Arts degree. See the “Biology” section of the catalog under the “College of Arts and Sciences.”

**Physics** (BA in physics) – 44 hours

Complete requirements for a Bachelor of Arts in physics, including general education requirements that increase general education hours from 41 to 42, and 6 hours of additional foreign language. See the “Physics” section of the catalog under the “College of Arts and Sciences.”

**Theatre Education Major** – 43 hours

Students are required to audition or interview with the Department of Theatre faculty for admission into the theatre education program

*General education* – 41 hours, including Education 490 or Theatre 465

*Major* – 43 hours, Theatre 110 or 160, 111 or 171, 112 or 172, 120, 125, 130, 135, 220 or 221, 335 or 336 or 337, 481; 9 hours or theatre electives; four hours from theatre 190, 290, 390

## SH/JH/MS Teaching Minors

While teaching minors are not required, senior high, junior high and middle school education students are strongly encouraged to choose teaching minors which complement their teaching majors. A teaching minor with a SH/JH/MS education degree qualifies the holder to teach the subject in the teaching minor in grades 5-12. Students who choose a teaching minor with a multi-grade license would be limited to teaching that subject in grades 5-12.

*Teaching English as a Second Language (TESL) Minor* – 21-27 hours

Education students who complete the Teaching English as a Second Language (TESL) minor in addition to another teacher education major are eligible for licensure to teach English Learners. The minor is also open to students not majoring in education; however, they would not be licensed for classroom teaching. TESL 491 may be taken to replace TESL 417.

**Education majors** – 25 hours

Communication 380; TESL 200, 301, 302, 325, 326, 328, 417 or 491, 433\*.

\*Education 433 (6 hours) is optional. Students may choose to substitute EDUC 436 (12) for EDUC 433 (6 hours).

**Non-education majors** – 22 hours

Communication 380; TESL 200, 301, 302, 325, 326, 328, 417 or 491; one 300- or 400-level communication elective

*English Language Arts Minor* – 24 hours

English 120, 231, 232, 241, 242; English 223; Writing 205, one 300-level writing course

*Foreign Language Minor* – 24 hours

Students may not count 111 or 112 toward the minor. An approved study abroad program of at least six semester hours is highly recommended. Study abroad courses replace University of Evansville courses.

French, German, or Spanish: 211, 212, 18 hours at the 300 or 400 level

Elementary education students may add a foreign language endorsement by completing this minor. They are licensed to teach the target language completed in grades K-6. Elementary education students adding the junior high/middle school endorsement and this minor are licensed to teach the target language completed in grades 6-9 as well as K-6.

*Mathematics Minor – 24 hours*

Mathematics 221, 222, 323, 341, 355, 365; QM 160 or equivalent course approved by Department of Mathematics.

*Science Minor*

For the science minor, at least one of the following is required. Licensure is obtained only for the one area chosen.

**Chemistry – 28 hours**

Chemistry 118, 240, 280, 351, 360; Mathematics 222; Physics 121 or 210

**Life Science – 31 hours**

Biology 107, 108, 109, 320, 331; Chemistry 108 or 118; Exercise and Sport Science 112, 113

**Physics – 32 hours**

Mathematics 221, 222, 323; Physics 210\*, 211\*, 213, 214, 312, 305

\*In special cases approved by the chair of the Department of Physics, Physics 121 and 122 may be substituted for Physics 210 and 211.

*Visual Arts Minor – 20 hours*

Art 210, 213, 220 or 221, 325; Art 330 or 345; one from Art 350, 360, 370; Art History 208 or 209

## Multi-Grade Education Programs

Note: To ensure consistency with anticipated changes in Indiana teacher licensure regulations, some of the following license areas, curricula, and courses may be revised or reorganized prior to the beginning of each academic year. Students will be assisted by faculty advisors to blend current and new requirements to obtain the teacher licensure they wish to achieve.

### **Music Education P-12**

Students completing the music education major will meet the requirements for an Indiana K-12 teaching license in either general and vocal music or general and instrumental music. Students should see the “Department of Music” section for specific courses.

### **Special Education**

Special education requirements vary according to the selected teacher certification program – elementary (levels K-6) or secondary (5-12) teacher certifications. Continued progress in the special education program is dependent upon successful completion of prerequisite courses and acceptance into the School of Education. Successful completion leads to licensure in serving individuals with mild and/or intense disabilities. In addition to teaching positions, graduates may find employment in clinics, agencies, and centers devoted to the care and education of persons with disabilities.

*Enduring Foundations General Education - 41 hours, including Education 490*

*Major Requirements –27 hours*

Education 201, 204, 205, 264, 306, 307, 308\*, 309\*, 385

\*Required if seeking licensure for intense interventions. If not, it may be substituted for two 300/400 level Education courses.

*Additional general education requirements (Elementary Special Education only)*

Art 102 or Music 270, Math 202, Psychology 226

*Professional education requirements*

Elementary – 41 hours

Education 100, 200, 320, 321, 323, 324, 418 or 419, 422, 435, 437, 439 (additional 3 hours from TESL 325, Education 345 or 421)

*Professional education requirements –*

Secondary – 33 hours

Psychology 226; Education 150, 320, 363, 427, 428, 435, 437, 439; Selection of one course from 451, 453, 456, or 461 depending on student’s area of concentration.

*Subject Matter Area Concentration – 18-20 hours (Secondary Special Education only)*

Select one from:

**Language Arts – 18 hours**

Education 330; English 241 or 242; English 122; one 300-level English course; Writing 205, one 300-level writing course

**Mathematics – 20 hours**



Mathematics 101, 105, 202, 221, 222,r 355

**Science** – 17-20 hours

Biology 100 or 107; Chemistry 100 or 108; Education 323; Environmental Studies 103 or Geography 230; Physics 100 or 121

**Social Studies** – 18 hours

Education 321; Geography 120 or 240; History 141, 142; Political Science 100, 143

**Visual Arts Education Major** – 33 hours

*Enduring Foundations General Education* – 41 hours, including Art 401

*Professional Education Requirements* – 37 hours

Education 150, 320, 322, 363, 385, 428, 435, 436, 443, Art 497

*Major* – 32 hours

Art 210, 213, 220, 221, 325, 340, 360, 370, 401; Art History 208 or 209; four hours from 300-level studio art courses or art history courses.

*Additional general education requirements* – 3 hours

Psychology 226 (Psychology 121 is a pre-requisite)

## Teaching English as a Second Language (TESL) Minor

The minor in Teaching English as a Second Language (TESL) prepares students to teach English to non-native speakers. Students will work with non-native speakers first as interns and finally as student teachers under the supervision of an experienced TESL teacher. This minor is open to students in all schools and colleges within the University.

**Non-education majors** (22 hours): Communication 380; TESL 200, 301, 302, 325, 326, 328, 417 or 491; one 300 or 400 level communication elective.

**Education majors:** see requirements at end of elementary education section.

## Transition to Teaching

The Transition to Teaching program allows individuals who have completed a college degree to participate in an accelerated program that allows them to earn a secondary education teaching license. The program is available for math, life science/biology, chemistry, physics, history, English, foreign languages, visual art and music. Much of the instruction in the transition to teaching program occurs in the schools through a series of internships and student teaching experiences. Beyond university coursework, students must also pass state licensing exams and meet the basic skills competencies required by the Indiana Department of Education.

Courses in the Transition to Teaching program are typically completed in a calendar year. The required student teaching course allows students to spend a full semester in a classroom working with a mentor teacher and university supervisor.

*Professional Education Requirements* - 17-18 hours

Psychology 226 Child and Adolescent Psychology (3)

Education 320 Teaching Strategies in K-12 Schools (3)

Education 363 Principles and Strategies of Teaching in Secondary Schools (3)

One teaching methods course: EDUC 451, 453, 454, 456, 461, Music 372, Music 373, (2) hours or Art 497 (3) hours: Methods of Teaching (content area) in Senior High, Junior High, Middle Schools

Education 497 Supervised Teaching and Observation in Elementary, Middle School, Junior High, and Senior High (5)

Education 435 Supervised Teaching Seminar (1)

## School of Health Sciences

Collins, Coppus, Jeong, Kelley, Liu, Patel-Dovlatbadi, Reynolds, Rodd, Stroube (Chair), Tilly, Wilson

The School of Health Sciences is dedicated to helping students find ways to improve the quality of life through a variety of innovative undergraduate programs. To achieve this goal, the school offers distinct academic majors in athletic training, applied and pre-professional exercise science, clinical laboratory science, health services administration, public health, and sport management. Courses offered through these programs are designed to prepare students for successful entry into their chosen career path or for

admission to graduate school or professional programs.

## Bachelor of Science with a Major in Athletic Training

Program Director: Jeff Tilly

The certified athletic trainer (ATC) is a highly educated and skilled allied health professional. In cooperation with physicians and other allied health personnel, the ATC functions as an integral member of the health care team for the physically active. Traditionally, secondary schools, colleges and universities, sports medicine clinics, orthopedic surgeon offices, industrial settings, and professional sports teams have employed certified athletic trainers.

The athletic training major is designed for those individuals who seek certification as an athletic trainer for the Board of Certification ((BOC). The Commission on Accreditation of Athletic Training Education (CAATE) is the accrediting body for athletic training education programs. The University of Evansville's athletic training program is accredited by CAATE. The University of Evansville's athletic training program is competitive, and a set number of students are allowed entry per year.

The bachelor's degree program prepares the athletic training student for challenges that will be encountered as an allied health professional. This includes the integration of a strong liberal arts and science foundation with problem solving and clinical skill development. The concurrent clinical education model allows the student to work under the supervision of an approved clinical instructor. The majority of clinical education occurs while working with the University's NCAA Division I athletic teams. Convenient off-campus assignments with clinic- and high school-based athletic trainers as well as physicians exist to ensure a well-rounded practical experience.

Many athletic training students find it advantageous to pursue additional degrees in related health care areas offered at the University of Evansville. These include the Doctor of Physical Therapy, the Associate of Science in Physical Therapist Assistance, the Master in Physicians Assistance Science degree, and the Master of Science in Athletic Training. All three programs are accredited by their respective accrediting organizations. The University of Evansville is currently one of only three institutions that offer these three programs in a seven state area in the Midwest. This makes the athletic training program at the University of Evansville a unique experience which enables students to individually structure their learning to meet the needs of the current job market.

### Admission

Entry into the program is competitive. Admission criteria include: Completion or current enrollment in each of the following prerequisite courses: Athletic Training 280; Exercise and Sport Science 112, 113, 150, 244 (2 hours); Health Education 100, ; Physical Therapy 100

(Basic skill acquisition and 100 hours of clinical observation are components of Exercise and Sport Science 244. The 100 hours must be accumulated prior to application to the program. Athletic training students have 20 weeks to achieve these totals with an average of five hours per week; each week should be documented by their approved clinical instructor. Weekly submission of the signed hours and a journal is needed to apply to the program.) (Note application deadline below.)

- A grade of C or better in the prerequisite courses
- Minimum cumulative grade point average of 2.75
- Completion of the ATP technical standards
- Completion of a written application
- Personal interview
- Completion of AT-FYE Clinical Skills Checklist
- Completion of all required work for Exercise and Sport Science 244 (2 semesters)

After submitting all application material, the prospective student may be granted an interview with the admission committee. An interview is required for admission into the program.

Applications are due the last Friday in January. The selection process will be completed in time for fall semester registration, and all applicants will be notified of their status at this time. Acceptance into the program is conditional based on successful completion of the student's current semester course work.

Direct entry into the program is available for a small number of qualified incoming freshmen who have been accepted into the direct entry physical therapy program. These students must meet certain ACT and SAT score standards and have a formal interview with the physical therapy department as well as the faculty of the athletic training education program.

Admission criteria are subject to change. Applications and additional information are available from the program director.

Transfer students may be considered for admission into the program. University policy regarding transfer credit will be utilized. In most cases it will take approximately three years to successfully complete all program requirements.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Health Education 100

For additional departmental general education requirements, please consult the department.

*Major* – 71 hours

Athletic Training 280, 282, 287, 291, 292, 350, 388, 389, 390, 391, 392, 490, 491, 492; Exercise and Sport Science 112, 113, 150, 321L, 244 (2 hours), 320, 352, 356, 388, 427, 451; Health Services Administration 406 or 405; Physical Therapy 100

*Electives* – 7 hours

## Bachelor of Science with a Major in Clinical Laboratory Science

A clinical laboratory scientist (medical laboratory scientist) is capable of performing, under the supervision of a pathologist or other qualified physician or laboratory director, the various chemical, microscopic, bacteriologic, and other medical laboratory procedures used in the diagnosis, study, and treatment of disease.

Students pursuing the clinical laboratory science major complete approximately 100 semester hours at UE (six semesters of course work) and then complete 12 months of study at a hospital endorsed by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and the American Society of Clinical Pathology (ASCP) of the American Medical Association. The first three years of study provide a solid foundation based on the natural sciences with an emphasis on biology and chemistry. The fourth year consists of combined classroom and laboratory studies that provide experience in clinical chemistry, hematology, immunohematology (blood banking), microbiology, serology/immunology/ virology, parasitology and mycology, urinalysis, and instrumentation. Completion of prerequisite courses at UE does not guarantee admission to a hospital program. Acceptance is based on academic performance, letters of recommendation, motivation, aptitude, work experience, and interviews.

Some students complete a four-year BS degree before entering the clinical year of training. An option for those students interested in a career in clinical laboratory science is to complete the four-year combined exercise science and clinical laboratory science degree, prior to the clinical experience during the fifth year.

## Requirements (135 hours)

*Enduring Foundations General Education* – 42 hours, including Chemistry 118; Health Education 100; Physics 121

*Major* – 94 hours (includes 32 clinical hours)

Biology 119, 120, 331, 340, 430, 434, 442; Chemistry 240, 341, 360, 370; Exercise and Sport Science 112, 113, 150, 478; Physical Therapy 100; Physics 122; Quantitative Methods 227 (or other statistics course)

## Bachelor of Science with a Major in Exercise Science

The exercise science major embraces a strong science foundation and focuses on the scientific aspects of exercise related to healthy, injured, and high-risk populations to understand the consequences of physical activity. Exercise science is an applied discipline; therefore, the curriculum includes laboratory or laboratory-type activities in exercise physiology, biomechanics, and exercise testing and leadership. In addition, University- and community-based projects are incorporated into the academic curriculum to give exercise science students exposure to various populations similar to those they may encounter in their chosen professions. Exercise science courses are regularly taught at Harlaxton College in the summer.

All exercise science majors participate in an intensive internship program that is required for graduation. Internship opportunities exist in cardiac rehabilitation, corporate fitness, wellness and fitness centers, strength and conditioning programs, and sport-specific conditioning programs, as well as in other areas of interest to the student. In addition, opportunities exist for students to engage in undergraduate research activities with faculty and other students.

A major in exercise science prepares students for graduate study in areas such as exercise physiology, biomechanics, wellness, health promotion, nutrition, and exercise and sport psychology. It also prepares students to enter such professional schools as physical therapy, physician assistant, or medical schools. Students are prepared for careers in preventative exercise, wellness programs, and to work with healthy populations in maintaining healthy lifestyles.

The exercise science major has two tracks – the applied track and the pre-professional track – to meet the academic and professional goals of students.

### Applied Exercise Science Track

The applied track prepares students for leadership roles in a growing number of career opportunities dealing with human health and wellness such as exercise instruction, cardiac rehabilitation, personal training, strength and conditioning specialist, or as a health and wellness professional. In addition, this degree prepares students for graduate study in such areas as exercise physiology, biomechanics, or exercise and sport psychology.

## Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Chemistry 100, 108 or 118; Health Education 100; Exercise and Sport Science 493; Physics 100 or 121

For additional departmental general education requirements, please consult the department.

*Major* – 71 hours

Athletic Training 280; Biology 100 or 107; Exercise and Sport Science 112, 113, 150, 201, 300, 310, 320, 352, 356, 388, 415, 417, 427, 428, 451, 453, 488 (8-12 hours); Public Health 190; Physical Therapy 100; Quantitative Methods 227; Select one of the following: Public Health 195 or 301

*Electives* – 8 hours

## Pre-professional Exercise Science Track

The pre-professional track may be used as preparation for graduate study in areas such as exercise physiology, biomechanics, wellness, health promotion, and public health. The primary emphasis of this track is, however, as a preparation for entry into such professional schools as physical therapy, physician assistant, medical, and podiatry schools. Students can earn both the undergraduate and Doctor of Physical Therapy degrees in six or seven years, depending on the selected pathway.

## Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Biology 107; Chemistry 118; Health Education 100

For additional departmental general education requirements, please consult the department.

*Major* – 65½/68 hours

Chemistry 240; Exercise and Sport Science 112, 113, 150, 320, 352, 356, 388, 415, 417, 427, 428, 488 (8-12 hours); Physical Therapy 100; Physics 121, 122; Quantitative Methods 227

Four from the following: Athletic Training 280; Biology 110; Exercise and Sport Science 201, 300, 310, 451, 453; Gerontology 401; Health Services Administration 405, 406, 414; Public Health 190, 195, 301; Psychology 125, 357

(For students planning to attend medical school, it is recommended to take the following courses: Biology 331, 340, 425, 430; Chemistry 370, 341)

*Electives* – 10-12½ hours

## Bachelor of Science with a Major in Exercise Science and Physical Therapist Assistant

The physical therapist assistant (PTA) is a skilled technical health care worker who, under the supervision of a physical therapist, carries our patient treatment programs. The PTA Program is designed for individuals who want to be involved in providing direct patient care in the physical therapy program. This unique collaborative program between the School of Public Health and the Department of Physical Therapy offers students the opportunity to combine a BS in exercise science (either the pre-professional or the applied track) with PTA certification, allowing students to work in a wide variety of health care settings. Refer to the physical therapy section of this catalog for PTA degree requirements.

## Bachelor of Science with a Major in Health Services Administration

The University of Evansville offers both bachelor's and master's degrees in health services administration. The program is structured so that a combined bachelor's and master's degree can be earned in five years. Under this option the student receives both the bachelor's and master's degree at the same time. Students who do not choose the combined program may earn the bachelor's degree in four years. The time required for the combined degree can be shortened by taking course work during the summer. Additionally, students who already hold a bachelor's degree may enroll in the master's program and attend on a part-time or full-time basis.

The many changes in health care over recent years have created a need for managers who can deal with the multitude of challenges specific to the health care industry. Health care administrators are employed in a wide variety of organizations and work environments. These may include hospitals, managed care companies, outpatient care facilities, mental health facilities, pharmaceutical companies, government agencies, health insurance companies, public health agencies, voluntary health agencies, health maintenance organizations, and clinics. This undergraduate major prepares students for employment in the field of health care, or as preparation for graduate or professional programs such as the master's degree in HSA program, or post-graduate programs in public health, physician assistant, or physical therapy.

Internships and field placements are an important part of each student's exposure to various areas of future employment. All students complete six credits of internship during their junior and senior year. The student, the advisor, and the program director mutually agree upon the internship location and content. Internships may be completed during the fall, spring, or summer sessions. Additionally, all master's students participate in up to six credits of field experience. These opportunities provide students with a variety of organizational experiences.

### **Harlaxton College in Grantham, England**

The health services administration program offers a summer program at Harlaxton College which attracts students from programs across the U.S. as well as from the University of Evansville. In addition, it is possible with careful advanced planning to spend a semester in England and still complete all degree requirements within the normal time frames. Course listings are available two years in advance and can be seen in the Office of Study Abroad or at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk).

### **Requirements (125 hours)**

*Enduring Foundations General Education* – 41 hours, including Economics 101; Mathematics 105, 221

For additional departmental general education requirements, please consult the department.

*Major* – 60 hours

Accounting 210, 211; Economics 102; Finance 361; Gerontology (3 hours); Health Services Administration 405, 406, 414, 420, 467 (or Quantitative Methods 227), 490, 498 (6 hours); Law 201; Management 377, 311; Marketing 325; Physical Therapy 100; Quantitative Methods 160; 8 hours selected from Biology 107\* or Chemistry 118\*, Health Education 160, Health Services Administration 499, Nursing 490 or Health Sciences 290, Nutrition 304, Public Health 190, 301, Philosophy 416, Sociology 337

*Electives* – 24 hours

## **Combined Bachelor's and Master's Degree in Health Services Administration**

In addition to the course work required for the bachelor's degree program, students must declare their intention to pursue the five-year combined degree no later than the beginning of their fourth year of study. Exceptions for later admission to the five-year program will be reviewed on an individual basis. For students pursuing the combined BS and MS program, a grade of C- or above is required in all graduate classes and all undergraduate required classes. Variations in course sequencing will occur during the final two years of the five-year program.

### **Requirements (27 additional hours)**

Health Services Administration 507, 512, 516, 524, 528, 529 (6 hours), 532, 567 (Health Services Administration 467 not required in the combined degree program)

## **Bachelor of Science with a Major in Public Health**

This degree program trains students in multidisciplinary approaches to public health practice and research. The degree plans to explore both quantitative and qualitative aspects of public health at all levels of analysis. Graduates will advance, through selective employment or further education, to become the new generation of public health professionals prepared to face the emerging challenges to human health from a population perspective.

A major in public health prepares students for graduate study in areas such as health care management, wellness and health promotion, and nutrition. It also prepares students to enter professional programs such as business, physical therapy, and medical school along with several other programs. For graduates with the bachelor's degree who wish to enter the job market directly, there is a plethora of opportunities. Careers in public health can be found in a number of areas in private and public organizations such as statewide and regional health care agencies, community clinics, biomedical companies, health-education institutions, and non-governmental organizations. This undergraduate major prepares students for employment in the field of health, or as preparation for graduate or professional programs such as the master's degree in Health Service Administration program, or post-graduate programs in public health, physician assistant, or physical therapy. Students may also earn both the PH and DPT degrees in six or seven years, depending on the selected pathway.

The public health major has two emphases areas – health policy and nutrition – to meet the academic and professional goals of students.

### **Health Policy Emphasis**

The Health Policy emphasis prepares graduates to be decision makers, critical thinkers, and future leaders in both the public and private sectors of the health system. The health care industry offer students a vast array of opportunities. Such opportunities are with the state

and local health departments, hospital systems, government agencies, health insurance companies, research institutions, and consulting firms, to name a few.

### Requirements (120 hours)

*Enduring Foundations General Education* – 41 hours, including Health Education 100, Sociology 105; Psychology 121

For additional departmental general education requirements, please consult the department.

*Major* – 50 hours Health Education 260; Health Services Administration 405, 406, 414, 420; Nutrition 304; Public Health 190, 195, 401, 409, 415, 425, 480, 488, and 490. Six hours from the following: Gerontology 401 or 402; Philosophy 121 or 316; Psychology 229; Sociology 230 or 460; Education 385; or Physical Therapy 100.

*Electives* – 35 hours

### Nutrition Emphasis

The Nutrition emphasis prepares graduates to promote healthy eating and lifestyle choices among individuals and groups as well as those with special nutritional needs. Due to the multidisciplinary nature of Public Health, graduates can pursue diverse career paths. The Nutrition emphasis prepares graduates for rewarding careers as nutritionists, wellness experts, food service managers, lifestyle counselors, weight-loss coaches as well as a number of other careers.

### Requirements (120 hours)

*Enduring Foundations General Education* – 42 hours, including Health Education 100, Sociology 105; Psychology 121; Biology 107; and Chemistry 118.

For additional departmental general education requirements, please consult the department.

*Major* – 54 hours

Biology 110; Chemistry 240; Exercise Science 320; Health Education 260; Nutrition 304; Public Health 190, 195, 340, 400, 401, 409, 415, 425, 480, 488, and 490. Six hours from the following: Gerontology 401 or 402; Philosophy 121 or 316; Psychology 229; Sociology 230 or 460; Education 385; or Physical Therapy 100.

*Electives* – 30 hours

### Combined Bachelor's and Master's Degree in Public Health

In addition to the course work required for the bachelor's degree program, students must declare their intention to pursue the five-year combined degree no later than the beginning of their third year of study. Exceptions for later admission to the five-year program will be reviewed on an individual basis. For students pursuing the combined BS and MS program, a grade of C- or above is required in all graduate classes and all undergraduate required classes. Variations in course sequencing will occur during the final two years of the five-year program.

### Requirements (27 additional hours)

Health Services Administration 532, Public Health 501, 509, 515, 525, 580 (taken at the graduate level Instead of undergraduate level), 530, 535, 540, 542, 543, 547, 590, 598,

### Clinical Exercise Science Minor (24 hours)

The clinical exercise science minor prepares students for careers related to exercise in a clinical setting. The curriculum of the minor prepares students for the application of exercise and physical activity in those clinical and pathological situations where it has been shown to provide therapeutic or functional benefit.

Biology 436; Exercise and Sport Science 244, 415, 417, 428; Health Sciences 205; Health Services Administration 406; Psychology 357; Religion 350

### Exercise Science Minor (21 hours)

The minor in exercise science prepares students for careers working with relatively healthy populations. The curriculum of this minor prepares students for careers with personal fitness training, corporate wellness programs, or fitness centers.

Exercise and Sport Science 352, 356, 388, 415, 427, 451, 453; Public Health 195

## Exercise and Sport Psychology Minor

(20 hours)

Exercise and sport psychology is a rapidly growing subdiscipline of exercise science that studies a wide array of cognitive issues related to physical activity. Exercise psychology examines relationships such as the mental health benefits associated with regular participation in exercise programs and factors related to exercise adherence. Sport psychology is the study of cognitive factors that influence sport performance such as motivation, overtraining and staleness, anxiety, and coach-athlete relationships. The curriculum of this minor provides students with a broad understanding of these and other issues and prepares students for graduate study in exercise and sport psychology, motor learning, or psychology. The core curriculum of this minor combines classes from the School of Public Health and the Department of Psychology.

Exercise and Sport Science 218, 352, 451, 453; Psychology 226, 229, 357 or 370

## Public Health Minor (23 hours)

The minor in public health prepares students for careers that are focused on disease prevention and health promotion. The curriculum of this minor prepares students for careers with community health centers, health agencies, and wellness programs.

Health Education 260; Health Services Administration 405 Public Health 190, 195, 401, 409, 425; Sociology 337

## Sport Management Minor (24 hours)

This minor provides students with a broad background in business-related aspects of sport. The minor is designed for students interested in working in ticket sales and promotions, advertising, athletics administration, or in sporting retail sales.

Accounting 210; Law 201; Management 377; Economics 102; Exercise and Sport Science 201, 310, 350; one from Accounting 211, Finance 361, 362, Management 392, 412, 430, Marketing 325, 330.

## Coaching Minor (20 hours)

This minor prepares students with the basic knowledge in exercise science to coach a variety of sports (for those wishing to coach swimming, a water safety instructor's license or its equivalent must also be obtained). The curriculum provides fundamental knowledge of principles associated with the coaching of sports.

Athletic Training 280; Exercise and Sport Science 250, 350, 352, 356, 451, 491; Health Education 160

# Dunigan Family School of Nursing

Faculty: Bailey, Cobb, Fedor-Bassemier, LaMar (Chair), Lever, Marshall, Price, Rea, Schaefer

The Dunigan Family School of Nursing prepares health care professionals in nursing. All health care practitioners share the goals of restoring, maintaining, and promoting optimal health for their patients and families.

Nutrition and other health sciences courses are offered for students in the health care fields and other areas of study.

## Bachelor of Science in Nursing

The nursing faculty is committed to education that involves the acquisition of knowledge, skills, and professional experience. The study of the art and science of nursing is coordinated with the study of natural, behavioral, and social sciences, emphasizing learning through practice in various clinical settings. Upon program completion, graduates are eligible to take the National Council Licensure Examination for Registered Nurses. Graduates are prepared for beginning professional practice positions in varied settings as well as for entry into graduate study.

The Bachelor of Science in Nursing degree program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, www.acenursing, 404-975-5000. It is also accredited by the Indiana State Board of Nursing. The Dunigan Family School of Nursing is a member of the American Association of Colleges of Nursing and the National League for Nursing.

To graduate with a BSN degree the student must complete all the courses in the nursing curriculum plan and maintain an overall cumulative GPA of at least 2.5 and a nursing cumulative GPA of at least 2.5. Additionally, students must have a grade of C- or above in all nursing courses as well as in Biology 110, Chemistry 108 or 118, Exercise and Sport Science 112, 113, Health Sciences 205, Nutrition 304, Psychology 121, and Sociology 105. Specific information regarding curriculum progression policies is found in the University of Evansville Baccalaureate Program in Nursing Student Handbook.

Students in the nursing major may participate in a campus-based student nurse organization and are considered for induction

into the Eta Lambda Chapter of Sigma Theta Tau International Nursing Honor Society.

## Fees and Assistance

In addition to regular University costs, additional expenses incurred by nursing students include, but are not limited to, immunization, testing and lab fees, criminal background checks, drug screen, uniforms, and travel to clinical sites. All students are required to have a laptop or netbook that meets University of Evansville recommended computer system requirements. Starting in the sophomore year, students must have an iPod Touch or iPad mini with required nursing references installed. Students should consult the Office of Financial Aid for information about additional financial aid available to students in the nursing major. Additional resources are also often available through health care agencies in the student's local community as well as service and professional organizations.

## Clinical Facilities

Several types of clinical facilities are used in the educational programs of the department. These include inpatient, outpatient, and various community health care settings. Students may have an opportunity to study nursing at Harlaxton College in England or in other countries through study abroad courses.

## Admission

Entering freshmen may qualify for direct entry into UE's Bachelor of Science in Nursing program. University of Evansville accepted applicants must meet the following requirements in order to be accepted directly into the BSN program: rank in upper third of the student's high school graduating class, a minimum of four years of English and three years of mathematics, a minimum of three years of science (including grades of C or above in two semesters of chemistry), and SAT-R score of 1100 or above or ACT score of 22 or above. Students meeting academic requirements also must be in good health, eligible for licensure, certification, or registration and capable of meeting clinical practice requirements. Students who do not meet admission criteria are considered on an individual basis by the program's Admission, Standards, and Progression Committee. Applicants to the program may be requested to arrange a personal interview with a faculty member. The program accepts students who change their majors, transfer students, and international students. Students interested in transferring to the nursing program and international students must contact the Dunigan Family School of Nursing for specific admission and transfer policies.

### **Nursing at Harlaxton College in Grantham, England**

Nursing course work is offered in the fall semester at the Harlaxton near Grantham, England. Students at the senior level in the nursing program may have an opportunity to participate. For details, contact the Dunigan Family School of Nursing

## RN to BSN Option

The University of Evansville offers registered nurses (RNs) an opportunity for advanced placement in the baccalaureate nursing program. The program focuses on meeting the needs of the adult learner and working nurse. Graduates of the program demonstrate enhance critical thinking skills, advanced knowledge of health care issues, research, quality improvement, and leadership. The educational plan for the RN to BSN student shares the same program outcomes as the undergraduate nursing program while providing an accelerated pathway to earn a BSN.

Completion of the option requires a total of 120 credit hours. While at UE, RN to BSN students complete a total of 9 nursing courses, which total 32 credit hours. Students in the RN to BSN Program may petition to earn up to 7 hours of nursing credit for work experience or specialty certifications.

Upon successful completion of Nursing 351 (Transition to Professional Nursing), RNs who are graduates of an accredited diploma or associate degree in nursing program receive credit for 34 hours in nursing, 3 hours for nutrition, and 3 hours for pharmacology. The remaining 48 hours of general education and BSN required credit hours for the BSN degree may be transferred in from another college or university or taken at UE.

## Admission Requirements for the RN to BSN Option

- Admission to the University of Evansville
- Unencumbered current United States registered nurse license
- Completion of diploma or associate degree in nursing from an accredited nursing program
- Minimum cumulative college GPA of 2.5 on a 4.0 scale



## BSN Requirements (120 - 124<sup>1/2</sup> hours)

*Enduring Foundations General Education* – 43 hours, including Chemistry 108 or 118; Nursing 484; Nutrition 304; Psychology 121, Sociology 105, Health Sciences 205

For additional departmental general education requirements, please consult the department.

*Major* – 63 hours

Nursing 160, 165, 261, 262, 264, 271, 272, 361, 362, 363, 364, 371, 373, 374, 385, 463, 467, 468, 469, 477, 478

*Other required courses* – 14 - 18<sup>1/2</sup> hours

Biology 110; Exercise and Sport Science 112, 113; Statistics: one from Psychology 245, Quantitative Methods 227, Sociology 344, or Health Service Administration 467; Nursing 474 for students who study fall senior year at Harlaxton College; First-Year Seminar 111 for students who do not meet the University's minimum writing requirement.

## Physical Therapy

Faculty: Chen, Cunningham, Huebner, Kalb, Kessler, Kiesel (chair), Liang, Martin, McFelea, McGraw, Plisky, Szczepanski, Yoshida

The Department of Physical Therapy offers two degrees: the Associate of Science in Physical Therapist Assistance and the Doctor of Physical Therapy, a professional entry-level degree. Both degree programs educate students to become health care professionals who help individuals maintain, restore, and improve movement, activity, and functioning, enabling optimal performance and enhancing health, well-being, and quality of life. Both programs are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Students may participate in the following professionally related activities: Ace CARE, Physical Therapy Club, and Physical Therapist Assistant Club, (student organizations of the University of Evansville) and the American Physical Therapy Association.

## Associate of Science in Physical Therapist Assistance

The University of Evansville's program for physical therapist assistants is designed for individuals who want to provide direct patient care. The physical therapist assistant (PTA) is not responsible for initial patient examinations or for developing or revising the patient's plan of care. The PTA is a skilled technical health care worker who, under the supervision of a licensed physical therapist, performs select patient interventions. Duties of the assistant include educating patients in exercises and activities of daily living, providing interventions utilizing special therapeutic equipment, assisting in performing tests, measures and complex interventions, and observing and reporting patient responses to treatment. Assistants can work in various settings, including hospitals, outpatient clinics, extended care facilities, and schools.

The University of Evansville's PTA Program is a two-year program which leads to an Associate of Science in Physical Therapist Assistance degree. The two-year curriculum is composed of basic studies courses and professional technical courses with a laboratory component. Clinical education in a variety of health care settings is also part of the program. Completion of the program on a part-time basis is an option. Many students complete the program in conjunction with an undergraduate degree. Undergraduate degree programs which complement the program include exercise science, athletic training, health services administration, and psychology.

### Requirements (71 hours)

Chemistry 100 (or 108 or 118); Exercise and Sport Science 112, 113; Interdisciplinary 356; Mathematics 105; Physical Therapy 100, 101, 102, 103, 106, 110, 111, 200, 210, 249, 250, 251, 252; Physics 100; Psychology 121; Sociology 105; First-Year Seminar 111 or 112

## Clinical Internships

The Department of Physical Therapy affiliates with local, regional, and national health care facilities to provide a diverse range of quality clinical education experiences. While the Evansville community provides a number of clinical opportunities, including initial observational and more advanced direct patient care experience, students should anticipate the personal and financial impact associated with transportation and accommodation outside the Evansville area for the majority of their full-time clinical course work.

## Applying to the PTA Program

Application calendar, application materials, and admission criteria are available on the web at [pt.evansville.edu](http://pt.evansville.edu). Admission criteria are subject to change. The Department of Physical Therapy reserves the right to make final decisions concerning all admission criteria.

## Doctor of Physical Therapy Program

The University of Evansville offers an entry-level Doctor of Physical Therapy (DPT) degree. Students can earn both the undergraduate and DPT degrees in either six or seven years depending on the selected undergraduate track. This six- or seven-year curriculum involves three or four years of prerequisite and undergraduate course work followed by three years (nine semesters including summers) of professional study. The physical therapy faculty has designed a curriculum that reflects contemporary professional education and clinical practice modeling professional excellence. A strong liberal arts and sciences background, a diverse undergraduate experience, and innovative professional classroom and clinical course work define the DPT program at UE. Through classroom and clinical experiences, students acquire the requisite critical thinking and problem-solving skills necessary to deliver quality patient care. Students interested in the Doctor of Physical Therapy program follow normal University admission procedures. Enrollment in the University does not guarantee enrollment in the Doctor of Physical Therapy program. Prerequisite course work must be completed prior to beginning the professional program. Students interested in the Doctor of Physical Therapy program have two options for application to the professional program.

Students may be selected for the Doctor of Physical Therapy program through direct entry. A limited number of direct entry positions are available to high school students who apply to the University by November 1, who have received either a 27 on the ACT, a combined score of 1800 on the three-part SAT or 1200 on the math and critical reading portions of the SAT. A minimum score of 500 must be achieved on each portion of the SAT.

A student who meets these requirements may be invited for an on-campus interview. Criteria for retaining direct entry status are available on the web at [pt.evansville.edu](http://pt.evansville.edu). Standard forms for reporting observation hours, campus activities, and the student's plan for completing a bachelor's degree by the end of the first year of the DPT program are available on the web at [pt.evansville.edu](http://pt.evansville.edu).

Students who are not direct entry and students who do not retain their direct entry status are asked to apply to the DPT program in the fall of their junior year (3+3 track) or senior year (4+3 track).

## Application Calendar, Application Materials, Admission Criteria

Application calendar, application materials, and admission criteria are available on the web at [pt.evansville.edu](http://pt.evansville.edu).

## Course Work and Clinical Internships

All of the physical therapy didactic courses, as well as the prerequisite and undergraduate courses, are taught on the University of Evansville campus. Throughout the physical therapy professional curriculum, students are exposed to integrated clinical activities at off-campus health care facilities. Students complete full-time clinical courses during the summer sessions of the professional program. Two clinical courses are completed during the spring semester of the final year. Clinical courses take place in various physical therapy clinics located throughout the United States. International clinical course placements for final-level DPT students may be available.

## Prerequisite Courses

Prerequisite courses must be successfully completed prior to beginning the professional program. All science courses must be designed for science majors. Other designs will not be accepted.

### Prerequisite Courses

Taken by University of Evansville Students

Biology 107\*†; Chemistry 118\*†, 240\*; Exercise and Sport Science 112\*, 113\*; Mathematics 105\*†‡ (or demonstrated proficiency); Physical Therapy 100; Physics 121\*†, 122\*; Psychology 121†

Admission criteria are subject to change. The Department of Physical Therapy reserves the right to make final decisions concerning all admission criteria.

## General Education Requirements

The University requires that a student complete a 41-hour general education requirement to graduate. Several of the requirements are met by the prerequisite courses. Completion of all general education requirements prior to entry into the professional program is required.

## Undergraduate Degree

Freshman students entering the University of Evansville declare an undergraduate major as well as their intent to pursue physical therapy. During the first three or four years, students complete courses required for their majors.

Students admitted to the DPT program begin the professional course work the summer after their third or fourth year.

Students on the 3+3 track complete all remaining undergraduate degree requirements during the fourth year and graduate

with a bachelor's degree in May of their senior year. The students' fifth and sixth years are devoted to DPT courses. Students on the 4+3 track will enroll in the professional DPT courses in years five, six, and seven. A bachelor's degree must be completed by the end of the first year of the DPT program, prior to Physical Therapy 561 (Clinical I).

## Doctor of Physical Therapy (DPT) Professional Program Curriculum

Once accepted into the DPT program, students will be responsible for following programmatic guidelines and progression policies as outlined in the DPT student handbook, which is available at [pt.evansville.edu](http://pt.evansville.edu).

### Requirements (114 hours) (Subject to Change)

Biology 436/536; Physical Therapy 410/510, 412/512, 414/514, 417/517, 421/521, 422/522, 423/523, 431/531, 432/532, 434/534, 435/535, 441/541, 442/542, 451/551, 452/552, 622, 623, 624, 626, 631, 633, 641, 642, 643, 644, 651, 652, 661, 726, 727, 728, 731, 732, 742, 751, 761, 762, 763

# College of Engineering and Computer Science

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*Brian Swenty, PhD, PE, Interim Dean*

The College of Engineering and Computer Science is composed of the Department of Electrical Engineering and Computer Science and the Department of Mechanical and Civil Engineering. Baccalaureate degrees are offered in the professional areas of civil engineering, computer engineering, electrical engineering, mechanical engineering, software engineering, and computer science. A minor in engineering management is offered in conjunction with the Schroeder Family School of Business Administration. A Biomedical Option is available in Electrical Engineering and in Mechanical Engineering. The College also offers an Energy Engineering Certificate. The Department of Electrical Engineering and Computer Science offers a minor in computer science.

The mission of the College of Engineering and Computer Science is to provide high quality, personalized educational experiences in engineering or computer science to talented and motivated students who seek a baccalaureate degree.

All programs in the College of Engineering and Computer Science share certain goals:

- Graduates will know the fundamentals of mathematics, basic science, and engineering and/or computer science appropriate to their major discipline. Their level of knowledge will be sufficient to permit them to enter professional practice or to pursue advanced study and will serve as the basis for continued learning, both formally and informally.
- Graduates will possess certain skills, including, but not limited to, teamwork, communication skills, critical thinking, computer skills, problem solving, information management skills, and decision-making, as appropriate to their discipline. Their skill level will be sufficient to permit them to enter professional practice or to pursue advanced study.
- Programs will assist students in developing personal values. Emphasis is placed on ethical behavior, global-mindedness, active citizenship, and intellectual growth.

The curricula of the various programs provide an appropriate balance between humanities, fine arts and social sciences, the physical sciences and mathematics, the engineering sciences, and design and creative activities. Our programs are rich in project-based learning, team experiences, and close faculty-student interaction.

The civil engineering program, computer engineering program, electrical engineering program, and mechanical engineering program are accredited by the Engineering Accreditation Commission (EAC) of ABET Inc., [www.abet.org](http://www.abet.org). The computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET Inc., [www.abet.org](http://www.abet.org).

The University has chapters of the engineering honor societies: Chi Epsilon for civil engineers, Eta Kappa Nu for electrical and computer engineers, Pi Tau Sigma for mechanical engineers, and Tau Delta Kappa for all branches of engineering and computer science. Membership is available in student chapters of the following national professional societies: American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), Association for Computing Machinery (ACM), Institute of Electrical and Electronics Engineers (IEEE), Society of Automotive Engineers (SAE), and Society of Women Engineers (SWE).

## Admission Requirements

Students who have explicitly demonstrated the ability and preparation needed to successfully complete a degree program of their choice will be considered for admission. The number of students admitted to each degree program is limited by available space and resources to ensure a high quality, personalized, educational experience. Admission to a specific degree program is a three-part process: (1) admission to the University, (2) admission to the lower division of the College of Engineering and Computer Science, and (3) admission to the upper division of one of the departments as a candidate for a specific degree.

Admission to the College of Engineering and Computer Science lower division for civil engineering, computer engineering, electrical engineering, software engineering and computer science is based on standardized test scores (SAT or ACT) and specific high school course work grades. Minimum acceptable test scores are 560 on the math portion of the SAT or 25 on the math portion of the ACT. Minimum high school preparation must include the following:

- Three-and-one-half years of mathematics comprising two years of algebra, one year of plane geometry, and one-half year of trigonometry with an average grade of B or better
- Two years of science including at least one year of chemistry with a laboratory and an average grade of B or better
- Four years of English
- Applicants whose native language is not English must achieve a minimum TOEFL score of 70 or IELTS score of 6.0.
- Highly recommended additional high school course work includes:
  - One or more years of physics
  - Additional chemistry
  - Additional mathematics such as analytic geometry, college algebra, calculus
  - Two or more years of a foreign language

Admission to mechanical engineering lower division is described in the Mechanical Engineering Program section.

Students who do not meet these standards may be admitted with pre-engineering status. Pre-engineering students will concentrate on specific mathematics courses and other courses intended to prepare them for full admission to the lower division of engineering. Full admission will typically be granted upon petition after achieving grades of C or better in Mathematics 221 and Chemistry 118, and, for students whose native language is not English, demonstrating proficiency in English.

In some cases, an interview between an applicant and a faculty member or alumnus will be considered in the admission and financial aid process. Other evidence of exceptional motivation will be considered in marginal cases such as related (high school) elective course work, hobbies, extracurricular activities, or a pre-engineering exploration program.

## Transfer Students and Transfer of Credit

### Admission of Transfer Students

Application materials from transfer students are reviewed at two levels. At the university level, a minimum grade point average of 2.0 is required for acceptance. The Office of the Registrar reviews the overall record and determines the transfer status of general education and other non-technical courses. Materials are then sent to the College of Engineering and Computer Science, either to the dean or to the chair of the appropriate department. The dean or chair determines the acceptability of any engineering (and sometimes mathematics or science) courses presented for transfer and also makes the decision to grant or deny admission to the program.

### Students Currently Pursuing a Degree at the University of Evansville

Students currently pursuing a degree in engineering or computer science at UE may take courses elsewhere for transfer to UE. (See the "Academic Policies and Procedures" section of this catalog for the University policies regarding transfer work.) Normally, such courses will be taken during the summer or while the student is on a co-op assignment. For engineering courses at the 200 level or above, only those taken from EAC-ABET or CAC-ABET accredited programs may be transferred. Courses in mathematics, science, or general education may be transferred from any regionally accredited university or junior college. Any engineering courses must have the prior approval of the dean or the appropriate department chair. Generally, approval to take a required engineering course elsewhere will be granted only in exceptional circumstances.

### Credit for Courses Taken Elsewhere

Course work presented by an applicant for transfer of credit is carefully reviewed by the Office of the Registrar together with either the dean of engineering and computer science or the appropriate department chair. Only courses with a grade of C (2.0 on a 4 point scale) or better may be transferred. Engineering courses taken from an EAC-ABET or CAC-ABET accredited program will be transferred when there is a clear correspondence with a UE course. Other courses (science, mathematics, and general education) may be transferred with a grade of C or better if taken at a regionally accredited institution. An exception to this policy will be granted if a formal articulation agreement is in place. In all other cases of technical/engineering courses taken from non-EAC/CAC-ABET accredited programs, suitability for transfer is evaluated by review of the course syllabi and/or student's work. When a clear one-to-one correspondence exists with one or more of our engineering courses and the student has at least a grade of C, credit may be granted up to a maximum of 12 hours (or four courses), at the discretion of the dean or department chair. High quality course work (with grade of C or better) of obvious merit for an engineer but not corresponding to one of our courses may be accepted as technical electives or free electives up to a maximum of seven hours (two courses).

In the case of courses from non-U.S. schools, syllabi and student work are reviewed and, where apparent equivalence is found, credit may be granted on a conditional basis. The condition is generally in the form of requiring a C or better performance in one or more courses whose prerequisites include the work to be transferred.

Students requesting an exception to these policies may petition the College of Engineering and Computer Science Executive Committee or the University's Admissions and Standards Committee, as appropriate.

## Harlaxton College

Harlaxton College study for one semester is highly recommended for engineering and computer science students. Normally, students are encouraged to plan for Harlaxton study during the fall semester of the second year. Some students may have additional options for scheduling Harlaxton study, including in the summer. Degree plans for engineering or computer science students that include study at Harlaxton are available from College of Engineering and Computer Science academic advisors. Students who wish to study at Harlaxton should begin planning with their academic advisor as early as possible.

## Personal Computers

All students in the College of Engineering and Computer Science are required to have a personal computer. Students who do not own a personal computer are strongly encouraged to acquire one during their first semester of full-time studies. Several specially

equipped PCs are provided by the college to augment students' PCs; some of these and other PCs provided in the University's academic computing labs can be used on a time-available basis until students acquire their own PC. Incoming students should consult their academic advisor or the dean's office for information on required minimum PC specifications.

## Degree Requirements

In addition to meeting all degree requirements of the University, students in the College of Engineering and Computer Science must meet specific departmental requirements described in the following sections. These include: University Enduring Foundations General Education requirements, courses required for each degree, and area electives chosen from approved course work for each degree.

Exceptions to requirements for degrees and policies of the College of Engineering and Computer Science may be approved when unusual and mitigating circumstances are present. Students may request approval for such exceptions by submitting an academic petition with the academic advisor's approval to the appropriate department chair for consideration by the dean and department chair.

The degree programs in engineering and computer science can normally be completed in eight semesters of full-time study (potentially including one semester at Harlaxton College) by the entering student with adequate high school preparation or its equivalent.

## Co-op Program

A cooperative education plan for all of the college's programs is available as an alternative to the traditional four-year plan. The co-op plan combines classroom education with full-time work experience in industry. Please refer to Special Educational Opportunities located in the "Degrees, Curriculum, Academic Opportunities" section of this catalog.

## Other Opportunities for Work Experience

Students desiring a smaller scale work experience may participate in an internship or concurrent co-op. In the College of Engineering and Computer Science, an internship is a full-time, paid work experience lasting at least 8 weeks. Most internship opportunities occur in the summer.

Concurrent co-op is a plan wherein full-time students work part time in a professional environment. Students carry a full-time course load and work eight to 15 hours per week. Concurrent co-op is most often used as a pre-co-op experience or as a post-co-op experience when employers wish to have former co-op students carry a work project to completion.

# Engineering Management and the Energy Engineering Certificate

Engineering Management Program Director: Swenty

Energy Engineering Certificate Program Director: Stamps

A minor in engineering management is offered by the College of Engineering and Computer Science in cooperation with the Schroeder Family School of Business Administration.

The minor in engineering management has two sets of course requirements. One set complements a major in engineering or computer science; the other set complements a major in business administration or accounting. In order to earn the engineering management minor, the student must also earn the appropriate accounting, business, computer science, or engineering degree. The minor is especially appropriate for students seeking careers in operations, production management, construction management, or technical sales and marketing. It is also a means by which undergraduate engineering students can prepare for future graduate studies in either an MBA or graduate program in engineering management.

## Engineering Management Minor (18 hours)

The following courses are required for students whose major is civil engineering, computer engineering, electrical engineering, mechanical engineering, software engineering or computer science.

Economics 101\* or 102\*; Engineering 390, 409; Interdisciplinary 150 or Communication 380; Management 331 or 377; Management 310<sup>†</sup> or Civil Engineering 324

The following courses are required for students whose major is accounting or business administration.

Chemistry 118\*; Civil Engineering 324 or 374; Engineering 101 or Electrical Engineering 210; Mathematics 134 or 221\*; Mechanical Engineering 197; Physics 121\* or 210\*

## Energy Engineering Certificate

(12 hours)

A certificate in energy engineering is available to students in the engineering programs. This certificate prepares engineers for careers in the energy industry. Students may earn the certificate by completing the following requirements:

Electrical Engineering 430; plus any three of the following: Civil Engineering 374; Electrical Engineering 330; Mechanical Engineering 463, 470, 472, 476; Civil Engineering 497 or Electrical Engineering 497 or Mechanical Engineering 497 (with an approved energy-focused project) or Cooperative Education 91 - 95 or Experiential Education 71 - 73 (with an approved energy-focused employer).

With careful curriculum planning including an approved energy-focused project or co-op, engineering students can earn an energy engineering certificate by taking no more than one additional course.

The Energy Engineering Certificate may also be earned by persons who already hold a degree in engineering. In this case the 497, Cooperative Education, and Experiential Education courses will not be counted towards the Certificate.

## Electrical Engineering and Computer Science

Faculty: Blandford (Chair), Chandler, Howe, Hwang (Computer Science Program Director), Lotfalian, Mitchell, Morse, Randall, Richardson (Electrical Engineering Program Director), Roberts

The Department of Electrical Engineering and Computer Science offers four baccalaureate degrees: Bachelor of Science in Electrical Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Software Engineering, and a Bachelor of Science in Computer Science. Both the electrical engineering and computer engineering programs are accredited by the Engineering Accreditation Commission (EAC) of ABET Inc., [www.abet.org](http://www.abet.org). The computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET, [www.abet.org](http://www.abet.org). Students in any of the baccalaureate degree programs may participate in cooperative education. The degree requirements for co-op students are the same as those shown below. The sequencing for the co-op program is described in the College of Engineering and Computer Science program description. Students who wish to enroll at Harlaxton College will follow a modified course schedule and should consult their academic advisor.

### Objectives

The electrical engineering, computer engineering, software engineering, and computer science programs share the following objectives that apply to graduates three to five years after graduation:

- Graduates will be engaged in a professional career and/or continued or advanced study in their chosen field. This implies that graduates will recognize the value and necessity of lifelong learning.
- Graduates will be engaged in applications of problem solving and communication skills for a wide variety of problems in engineering and/or computer science, either as individuals or in teams.
- Graduates will be active ethical participants in a local, national, or global engineering or computer science community.

### Electrical Engineering

Electrical engineering is a very broad field and the undergraduate electrical engineering program matches this breadth by introducing the student to almost every aspect of electrical engineering. Modern life is permeated with electric devices, ranging from the ubiquitous small electric motor and the computer controlled appliance to the fiber optic communications link. Electrical engineering has transformed the way we live and the way we think about the natural world. This transformation is ongoing and to be successful in the profession, electrical engineers must be open to the continuous learning of new concepts and ideas. At the same time, the electrical engineer must be a responsible and ethical member of society.

Electrical engineering is a challenging field. Career opportunities are available in manufacturing, research, and development. The bachelor degree can also provide access to graduate school where students can continue their professional studies.

The curriculum in electrical engineering is purposefully broad and places a high value on creativity, invention, the continual learning of new concepts, and the ethical practice of the profession. The first two years of the program provide a firm foundation in mathematics, natural science, basic engineering analysis and design, and an appreciation for the humanities and social sciences. The technical part of the first two years provides instruction in the C++ programming language, electric circuit analysis, computer aided design and simulation, and the logical design of digital circuits. Laboratories emphasize the use of computers and provide instruction in the use of basic instrumentation common to the profession.

The last two years of the program are project oriented. Students take project labs in which they are assigned open-ended projects requiring invention and design to meet specifications. Many students work one-on-one with professors. Class sizes for upper-level electives range from as small as four students to as large as 25. Some specialization is possible in the last three semesters when a student can choose two technical electives in areas such as computers, electronics, electro-optics, power systems, or linear systems and controls. In addition to the design labs that are required, most courses at the junior and senior level have semester-long projects as part of the

course homework. Many projects require teamwork. For example, in the microcontroller course (Electrical Engineering 454) students typically design and construct a system requiring a real time microcontroller. In the communication electronics course (Electrical Engineering 440), students design complete communication systems for a semester-long project. During the senior year, every electrical engineering student is required to complete a year-long senior design project that is often sponsored by industry. During the first semester, the student writes a proposal and does a preliminary design. This design is subject to a design review process and a formal presentation of the ideas and concepts is required. During the second semester, the student completes the design and constructs a final product.

Student chapters of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery are sponsored by the department to support and encourage the professional development of the students. A national honorary society for electrical engineering students, Eta Kappa Nu, is also represented. Students may also participate in college-wide chapters of the Society of Women Engineers and the National Society of Black Engineers.

## Bachelor of Science in Electrical Engineering

### Requirements (125 hours minimum)

To earn a Bachelor of Science in Electrical Engineering, students must complete a minimum of 125 hours of course work distributed as shown below. In addition, the University proficiency requirements in a foreign language and written English must be met. See the University degree requirements listed in this catalog for details. To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* – 43 hours, including Chemistry 118; Electrical Engineering 495; Mathematics 221; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours

*Basic level required courses* – 34 hours

Electrical Engineering 210, 215, 254; Engineering 101, 123, 212; Mathematics 222, 323, 324; Physics 211

*Upper level required courses* – 42 hours

Electrical Engineering 310, 311, 320, 342, 343, 354, 360, 380, 421, 430, 454, 470, 471, 494, 497

*Technical electives* – 12 hours minimum

At least four courses from: Computer Science 215, 320, 355, 375, 380, 415, 430, 475, 480; Electrical Engineering 330, 356, 410, 422, 425, 432, 437, 438, 440, 445, 458, 465, 499; Engineering 366; Mechanical Engineering 342, 344, 362, 368; Physics 312, 330, 331, 416, 421, 427, 471; one only of Physics 213, 305, Mathematics 341, 370, 425; one of Engineering 390, Mathematics 365

**Note:** Technical electives must be chosen in a coherent fashion to provide depth of understanding. Technical elective choices are subject to approval of an electrical engineering advisor.

### Biomedical Option

Electrical engineering majors may earn a bachelor's degree in electrical engineering with a biomedical option by substituting Biology 107, 112, 113, and a three-credit biology elective in place of Electrical Engineering 430, 471, and Physics 213/214. Two of the electrical engineering technical electives may be chosen in the electrical engineering area or in the biology area with guidance from and permission of the academic advisor. In addition, the senior project must be related to bioengineering. Electrical engineering majors who choose the biomedical option must take Engineering 390.

### Computer Engineering

Computer engineering bridges the areas of electrical engineering and computer science. Computer engineering graduates are sought by industries involved with industrial automation and embedded computer systems. The program in computer engineering provides an in-depth understanding of those topics in electrical engineering that are related to the design and use of computers as well as those topics in computer science that deal with software design and implementation, particularly those applications that involve real-time operation. Computer engineers typically design systems that have dedicated computers of which the user is largely unaware. Some typical computer engineering applications are engine controllers and body computers in automobiles, numerous computer controlled appliances such as the VCR, microwave oven, washing machine, and industrial automation including industrial robots. The computer engineering curriculum provides a broad-based understanding of both hardware and software and their interaction, as well as an opportunity to study particular aspects in more depth. Computer engineering is a rapidly changing area and to be effective in the profession, computer engineers must be open to the continuous learning of new concepts and ideas. At the same time, the computer engineer must be a responsible and ethical member of society.

Computer engineering is a challenging field. Career opportunities are available in manufacturing, research, and development. The



bachelor's degree can also provide access to graduate school where students can continue their professional studies. The curriculum in computer engineering is purposefully broad and places a high value on creativity, invention, the continual learning of new concepts, and the ethical practice of the profession.

The first two years of the program provide a firm foundation in mathematics, natural science, basic engineering analysis, and design, and an appreciation for the humanities and social sciences. The technical part of the first two years provides instruction in the C++ programming language, data structures, electric circuit analysis, computer aided design and simulation, and the logical design of digital circuits. Laboratories emphasize the use of computers and provide instruction in current methods of software design and in the use of basic instrumentation common to the profession.

The last two years of the program are project oriented. Students take project labs in which they design and invent hardware and software to meet specifications. Many students work one-on-one with professors. Class sizes for upper level electives range from as small as four students to as large as 25. Through area elective choices, students majoring in computer engineering may concentrate their studies in the areas of digital systems and controls, computer hardware and architecture, artificial intelligence, graphics, or systems programming. In addition to the design labs that are required, most courses at the junior and senior level have semester-long projects as part of the homework for the class. Many projects require teamwork. During the senior year, every computer engineering student is required to complete a year-long senior design project that is often industrially sponsored. During the first semester, the student writes a proposal and does a preliminary design. This design is subject to a design review process and a formal presentation of the ideas and concepts is required. During the second semester, the student completes the design and constructs the final product.

Student chapters of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery are sponsored by the department to support and encourage the professional development of the students. A national honorary society for electrical engineering students, Eta Kappa Nu, is also represented. Students may participate in college-wide chapters of the Society of Women Engineers and the National Society of Black Engineers.

## Bachelor of Science in Computer Engineering

### Requirements (128 hours minimum)

To earn a Bachelor of Science in Computer Engineering students must complete a minimum of 128 hours of course work distributed as shown below. In addition, the University proficiency requirements in a foreign language and written English must be met. To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* –43 hours, including Chemistry 118; Computer Science 495 or Electrical Engineering 495; Mathematics 221; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours

*Basic level required courses* – 40 hours

Computer Science 210, 215; Electrical Engineering 210, 215, 254; Engineering 101; Mathematics 222, 323, 324, 370; Physics 211; Engineering 390

*Upper level required courses* – 42 hours

Computer Science 315, 320, 380, 470, 475; Electrical Engineering 310, 342, 354, 356, 360, 380, 454, 458, 494, 497

*Technical electives* – 9 hours minimum

At least 3 courses from Computer Science 290, 350, 355, 375, 381, 390, 415, 430, 455, 473, 499; Electrical Engineering 311, 343, 410, 456, 465, 499

**Note:** Technical electives must be chosen coherently so as to provide depth of understanding. Technical elective choices are subject to the approval of a computer engineering advisor.

## Software Engineering

The software engineering curriculum focuses on all aspects of the craft of software development. Software Engineering students are prepared to enter the software industry as developers and designers of software systems of all sizes. Students complete a set of core requirements in the first two years of the program, providing a firm foundation in mathematics, natural science, basic programming analysis and design, and an appreciation for the humanities and social sciences. The technical part of the first two years provides instruction in programming using languages such as C, C++, and Java, basic data structures and algorithms, and object-oriented design.

The last two years of the program emphasize the design and implementation of computer software systems with a particular emphasis on the design and management of large projects requiring multiple developers to complete. Students will work on group software projects for real clients from the community. Class sizes for upper-level electives range from as small as four

students to as large as 25. Through elective choices, students majoring in software engineering may concentrate their studies in the areas of graphics, artificial intelligence, large software systems and parallel programming. Many courses at the junior and senior level have significant projects as part of the homework for the class. During the senior year, every software engineering student is required to complete a year-long senior design project that is often industrially-sponsored. During the first semester, the student writes a proposal and does a preliminary design. This design is subject to a design review process, and a formal presentation of the ideas and concepts is required. During the second semester, the student completes the design and constructs the final product.

The software engineering program allows sufficient free electives for students to minor easily in a field of application such as business or in a complementary field such as a foreign language.

Student chapters of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery are sponsored by the department to support and encourage the professional development of the students. Students may also participate in college-wide chapters of the Society of Women Engineers and the National Society of Black Engineers.

## Bachelor of Science in Software Engineering

### **Requirements** (124 hours minimum)

To earn a Bachelor of Science in Software Engineering, students must complete a minimum of 124 hours of course work in general education, basic level required courses, upper-level required courses, and the electives as shown below. In addition, the University proficiency requirements in a foreign language and writing in English must be met (see University degree requirements). To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* – 43 hours, including Biology 107 or Chemistry 118; Computer Science 495; Mathematics 221; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours

*Basic level required courses* – 30 hours

Computer Science 101, 210, 215, 290; one of Engineering 390, Mathematics 341, or Mathematics 365; Mathematics 222, 323, 370; one from Biology 119, 120, Chemistry 240, 280, or Physics 211 to complete a two-semester sequence in one of biology, chemistry, or physics

*Upper level required courses* – 27 hours

Computer Science 315, 380, 390, 391, 395, 413, 470, 491, 494, 497

*Technical electives* – 12 hours

Choose from the following courses with the approval of an advisor: Computer Science 320, 350, 355, 375, 376, 381, 415, 430, 440, 445, 455, 472, 473, 475, 478, 499; Electrical Engineering 310, 311, 354, 454, 456

*Free electives* – 12 hours minimum

Take free electives to complete 124 hours. At least nine hours must be at the 300-level or higher. It is recommended that software engineering majors use these free electives to minor in a field of application. Courses numbered Mathematics 222 or lower, Chemistry 10x, Computer Science 210 or lower, Physics 1xx, and English language courses may not be used as free electives.

### **Computer Science**

The computer science curriculum prepares students for all areas of the computer industry, for industrial positions where computers are applied, and for further study in graduate programs. Computer science students complete a set of core requirements in the first two years of the program, providing a firm foundation in mathematics, natural science, basic programming analysis and design, and an appreciation for the humanities and social sciences. The technical part of the first two years provides instruction in programming using languages such as C, C++, and Java, basic data structures and algorithms, object-oriented design, and basic machine organization.

The last two years of the program emphasize the design and implementation of computer software systems, and the scientific and industrial applications of computer science. Many students work one-on-one with professors. Class sizes for upper-level electives range from as small as four students to as large as 25. Through elective choices, students majoring in computer science may concentrate their studies in the areas of graphics, artificial intelligence, systems programming, or Internet applications. Many courses at the junior and senior level have significant projects as part of the homework for the class. During the senior year, every computer science student is required to complete a year-long senior design project that is often industrially sponsored. During the first semester, the student writes a proposal and does a preliminary design. This design is subject to a design review process, and a formal presentation of the ideas and concepts is required. During the second semester, the student completes the design and constructs the final product.

In addition, the computer science program allows sufficient free electives for students to minor easily in a field of application such as business or in a complementary field such as a foreign language.

Student chapters of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery are sponsored by the department to support and encourage the professional development of the students. Students may also participate in college-wide chapters of the Society of Women Engineers and the National Society of Black Engineers.

## Bachelor of Science in Computer Science

### Requirements (124 hours minimum)

To earn a Bachelor of Science in Computer Science, students must complete a minimum of 124 hours of course work in general education, basic level required courses, upper-level required courses, and the electives as shown below. In addition, the University proficiency requirements in a foreign language and writing in English must be met (see University degree requirements). To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* – 43 hours, including Biology 107 or Chemistry 118; Computer Science 495; Mathematics 221; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours.

#### *Basic level required courses* – 33 hours

Computer Science 101, 210, 215, 220, 290; one of Engineering 390, Mathematics 341, or Mathematics 365; Mathematics 222, 323, 370; one from Biology 119, 120, Chemistry 240, 280, or Physics 211 to complete a two-semester sequence in one of biology, chemistry, or physics

#### *Upper level required courses* – 21 hours

Computer Science 315, 320, 380, 381, 390, 470, 494, 497

#### *Technical electives* – 12 hours

Choose from the following courses with the approval of an advisor: Computer Science 350, 355, 375, 376, 391, 395, 413, 415, 430, 440, 445, 455, 472, 473, 475, 478, 491, 499; Electrical Engineering 310, 311, 354, 454, 456

#### *Professional development elective* – 3 hours

May not be used to fulfill general education requirements; choose one course from the following: Economics 101; Communication 210, 382, 485; Philosophy 111, 121, 231, 241, 316, 317; Writing 330 when the topic is technical writing

#### *Free electives* – 12 hours minimum

Take free electives to complete 124 hours. At least nine hours must be at the 300-level or higher. It is recommended that computer science majors use these free electives to minor in a field of application. Courses numbered Mathematics 222 or lower, Chemistry 10x, Computer Science 210 or lower, Physics 1xx, and English language courses may not be used as free electives.

### Computer Science Minor (21 hours)

Students with no prior background in programming are encouraged to take Computer Science 101 or 105 before taking Computer Science 210. Although there are no mathematics courses required for a minor in computer science, students should be aware that mathematical principles from calculus and discrete mathematics are regularly used throughout the computer science program.

Computer Science 210, 215, 220, 290; 9 hours of 300- or 400-level computer science courses

## Mechanical and Civil Engineering

Faculty: Allen, Layer, Fulcher (Mechanical Engineering Program Director), Lofton, Schmidt, Selvaraj, Stamps, Swenty (Chair), Unger, Valenzuela

The Department of Mechanical and Civil Engineering offers programs leading to the degrees of Bachelor of Science in Civil Engineering and Bachelor of Science in Mechanical Engineering. Both programs are accredited by the Engineering Accreditation Commission (EAC) of ABET Inc., [www.abet.org](http://www.abet.org). The department also offers courses in support of the engineering management minor and a certificate in energy engineering. A biomedical option is available to mechanical engineering majors. The recommended co-op option has course requirements identical to those listed in this section; however, students follow a modified course schedule. Please refer to Special Educational Opportunities located in the “Degrees, Curriculum, Academic Opportunities” section of this catalog.

Students desiring to study at Harlaxton College follow a modified course schedule and should consult their academic advisor.

## Civil Engineering

Civil engineering is a profession focused on designing, building, and maintaining infrastructure that improves the quality of living while protecting public safety. Community, societal, and environmental needs are met through the planning, design, construction, and maintenance of public and private facilities. Civil engineers apply their technical knowledge and skills to diverse projects including buildings, foundations, dams, highways, tunnels, bridges, airports, harbors, flood protection facilities, water and wastewater treatment plants, and off-shore structures. Civil engineering career opportunities exist in industry, government, and the private sector. Practice areas include design, construction, project management, consulting, research, and teaching.

The civil engineering undergraduate program is designed to provide students with a personalized educational experience. Program educational objectives are:

- Graduates will be actively engaged in a professional career as a civil engineer or pursuing advanced study
- Graduates will understand professional practice issues and demonstrate a commitment to professional licensure and continuing education
- Graduates, guided by the principles of sustainable development and global interconnectedness, will understand how civil engineering projects affect society and the environment

The civil engineering curriculum prepares students to meet present and future challenges in the profession and to develop insight into economical, physical, social, and political constraints affecting the engineering decision-making process. Today's engineers must be adept at working in a global marketplace. To assist engineers in meeting that challenge, the University of Evansville provides students with an opportunity for an international experience at Harlaxton College. A student chapter of the American Society of Civil Engineers (ASCE) is sponsored by the department to support and encourage professional development. UE's award-winning ASCE chapter has been recognized as one of the best in the nation. Students may also participate in Chi Epsilon (the national civil engineering honor society) and the college-wide chapter of the Society of Women Engineers.

To be prepared to meet present and future challenges in the profession, students follow a curriculum that provides them with a broad body of knowledge and a comprehensive understanding of civil engineering fundamentals. This is achieved through a set of required core courses in the areas of materials, structural engineering, water resources engineering, geotechnical engineering, transportation engineering, construction engineering, surveying, and environmental engineering. In addition, the curriculum provides options for students to take upper-division elective courses in structural analysis, advanced structural design, engineering economics, engineering hydrology, environmental engineering, advanced pavement design and management, and special topics such as earth dams, open channel hydraulics, and advanced computer visualization and modeling.

Students are introduced to engineering design in the fall of their freshman year in Engineering 101. The freshmen in this course closely interact with a faculty member who is also the student's advisor. Past freshman projects include the design of balsa wood bridges and retaining walls. Upperclassmen interact with freshmen as course assistants.

After students gain an understanding of fundamental concepts, design education is continued during the junior year through a variety of design projects such as a steel frame walkway in Civil Engineering 341 and a concrete baseball bat in Civil Engineering 331. Design is heavily emphasized in senior-level civil engineering required and elective courses and is developed through the use of both individual projects and design teams. Students utilize computer software in several design exercises: slope stability software in Civil Engineering 438; structural analysis software to design reinforced concrete structures in Civil Engineering 342; hydraulic engineering software to design spillways and bridges in Civil Engineering 469, and rainfall-runoff modeling software to design sustainable, environmentally compliant storm water management facilities in Civil Engineering 468. The design projects become progressively more complex leading up to the year-long senior capstone design project in Civil Engineering 495/497. Students work on multifaceted projects, such as dams, bridges, buildings, roadways, trails, storm water management facilities, athletic complexes, and green infrastructure. In order to obtain a broad design experience and exposure to practical design criteria, students interact with design professionals, base their designs on national and international building codes and standards, prepare engineering reports and design drawings, make presentations at conferences, and prepare applications for local, state, and federal permits at the completion of the senior project.

After completing the civil engineering curriculum, students have 34 credit hours in basic mathematics and science and approximately 72 credit hours in engineering topics, depending on electives chosen in the senior year. The engineering topics are divided into approximately two-thirds engineering science and one-third engineering design. The allocation between engineering science and design prepares civil engineering graduates to enter the practice of engineering or to further their education in graduate school.

## Bachelor of Science in Civil Engineering

### Requirements (126 hours minimum)

The Bachelor of Science in Civil Engineering requires at least 126 hours, distributed as shown below. In addition, the University proficiency requirements in a foreign language and written English must be met. See the "General Requirements for Baccalaureate Degrees" section of this catalog for details.

To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* – 43 hours, including Chemistry 118; Civil Engineering 495; Mathematics 221; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours

For additional departmental general education requirements, please consult the department.

*Lower division required courses* – 39 hours

Civil Engineering 183; Electrical Engineering 210; Engineering 101, 212, 213, 230, 232; Mathematics 222, 323, 324; Physics 211; one from Biology 100, 107, 110, 112, 201, Environmental Studies 103, 360, Geology 130

**Note:** Chemistry 240 or 280 may be substituted for Physics 211 with advisor's approval.

*Upper level required courses* – 41 hours

Civil Engineering 324, 331, 338, 339, 340, 341, 342, 350, 374, 380, 438, 469, 497; Engineering 366, 390

**Note:** Civil Engineering 497 students are required to take the Fundamentals of Engineering (FE) exam.

*Technical electives* – 6 hours

Two of Civil Engineering 443, 449, 450, 468, 475, 498, 499; Engineering 409; Mechanical Engineering 432, 434, 446, 448, 463, 466; at least one technical elective must be CE 4xx

*Free electives* – 3 hours

**Note:** Courses numbered Mathematics 202 or lower, Chemistry 10x, or Physics 1xx, software application courses, and English language courses may not be used as electives.

## **Mechanical Engineering**

Mechanical engineering is one of the broadest fields of engineering, encompassing applications as diverse as automotive or aerospace vehicles, power generation, manufacturing processes, plastic and other petrochemical products, and electronic hardware. These applications require a fundamental understanding of the static and dynamic relationships between forces and motion, the nature of materials, principles of energy conservation, and transformation, design, and analyses of machines, the transmission of heat, and the flow of fluids. The mechanical engineering curriculum provides a rigorous treatment of fundamental principles in these subject areas and the necessary background in mathematics and the basic sciences to prepare students for these courses. Through elective choices, students may investigate special areas of mechanical engineering including internal combustion engines, combustion engineering, turbomachinery, power plants, finite elements, mechanical vibrations, and advanced computational methods.

In addition to strong technical skills, today's engineers in the global marketplace must be adept at working with other people who have very different professional backgrounds and who may be from other countries with different cultures. The University of Evansville helps engineers meet that challenge by providing students with a strong liberal arts background and providing an opportunity for an international experience at Harlaxton College.

The mission of the mechanical engineering program is to provide a personalized educational experience for talented and motivated students who seek a Bachelor of Science in Mechanical Engineering. Program educational objectives include:

- Graduates shall be engaged in professional practice, continuing education, and/or other activities benefitting society.
- Graduates shall have developed habits consistent with an attitude of professionalism, an awareness and appreciation for different cultures, and the understanding of engineering influence in a global context.

The mechanical engineering program strives to maintain a balance between a traditional approach to teaching engineering principles and incorporating current industrial practices. For example, computer-aided design and analysis, applications of automatic data acquisition, and concurrent engineering have all been incorporated into the curriculum. Program faculty aggressively seek to develop laboratories and courses that use state-of-the-art equipment. The size of the program allows students to define individual experiences in undergraduate research or projects in student sections of professional societies. Student chapters of the American Society of Mechanical Engineers (ASME) and the Society of Automotive Engineers (SAE) are sponsored by the department to support and encourage the students' professional development. A national honor society for mechanical engineering students, Pi Tau Sigma, is represented. Students may also participate in the college-wide chapter of the Society of Women Engineers (SWE).

A unique and exciting integrated design sequence is offered to freshman through senior students. Students from different grade levels work together on engineering projects. Students apply design skills obtained in their course work and throughout the integrated design sequence directly to meaningful projects. The goal is to teach both technical and non-technical skills through collaborative "design, build, and test" projects.

The integrated design sequence consists of courses numbered Mechanical Engineering 197, 297, 397, and 497 that offer specific skills that will be used in the team environment. The freshman course, Mechanical Engineering 197, provides skills in computer-aided modeling, sketching and product fabrication techniques. The sophomore course, Mechanical Engineering 297, provides

instruction in basic computer-controlled machining and rapid prototyping techniques and further instruction in computer-aided modeling. The junior course, Mechanical Engineering 397, provides skills in instrumentation and automatic data acquisition for measurements. The senior course, Mechanical Engineering 497, provides skills in project management.

After students gain an understanding of fundamental concepts, design education is continued during the junior year through assigned design projects as a part of normal course work. The design projects are progressively more complex up to the senior capstone design experience, Mechanical Engineering 495 and 497. There are many different types of projects including industrially sponsored projects, such as the SAE Mini Baja, Formula SAE cars, and a human-powered lunar rover that are entered into national and regional competitions, and undergraduate research projects. This approach prepares our graduates to enter the professional practice of mechanical engineering or to further their education in graduate school.

## Lower Division Acceptance

Lower division acceptance into the mechanical engineering program requires that degree-seeking students meet the University's admission requirements and the mechanical engineering program's requirements. Program lower division acceptance is required before a student is permitted to participate in any 100- or 200-level mechanical engineering course. A limited number of students are accepted into the program as lower division status to ensure a high quality, personalized, educational experience. The mechanical engineering program's requirements are established to provide the best background for the program's curriculum. The requirements focus on appropriate preparation for the program such as prior course work, GPA, and minimum standardized test scores. Minimum high school preparation for lower division admission must include the following:

- Three-and-one-half years of mathematics with an average grade of B comprised of algebra, plane geometry, trigonometry, pre-calculus, and/or calculus
- Two years of science with an average grade of B including at least one year of chemistry with a laboratory
- SAT-I (MATH only) score of 560 or higher; SAT-R (MATH only) score of 580 or higher; or an ACT (MATH only) score of 26 or higher
- Four years of English

Applicants whose native language is not English must achieve a minimum TOEFL score of 550 (PBT), 79 (IBT), or 213 (CBT), or a minimum IELTS score of 6.5. As an alternate language consideration, a SAT-R (Reading and Writing) minimum score of 560 or an ACT (English) minimum score of 23 may be submitted in lieu of the TOEFL/IELTS requirements by students whose native language is not English.

If program space permits, an interview between an applicant and a faculty member may be considered in the admission process; other evidence of exceptional motivation may be considered in marginal cases. Enrolled university students that do not meet the above math and/or English language standards may apply for mechanical engineering lower division, if program space permits, once the following university preparations have been demonstrated:

- Completion of MATH 105 with a grade of B or better; or completion of MATH 221 with a grade of C- or better
- Completion of all university required English Language courses (EL 102, 103, 106, 107, 110, and/or 111) with a grade of B or better

Admission to full candidacy status in the mechanical engineering program is obtained through the successful upper division application process.

## Upper Division Admission

Students pursuing the Bachelor of Science in Mechanical Engineering (BSME) must be admitted to upper division by the mechanical engineering program faculty before they are permitted to participate in any 300- or 400-level mechanical engineering courses. Application for upper-division admission is normally made at the beginning of the fourth semester of full-time study. The application process consists of submitting an application form for review by the mechanical engineering faculty prior to the review period, which is the third week in the semester. To meet the requirements for admission to upper division, students must have met the following requirements:

- Completion of 60 credit hours with a minimum GPA of 2.5.
- Completion of the following courses with a grade of C- or better: Chemistry 118; Engineering 212, 213, 232; First-Year Seminar 112; Mathematics 221, 222, 323, 324; Mechanical Engineering 101/102, 197, 297; Physics 210.

Following the review period, conditional acceptance will be granted to students who have successfully completed the requirements or who will complete them by the end of the semester. Conditional acceptance allows the student to preregister for 300-level mechanical engineering courses for the upcoming semester. Enrollment in 300-level and 400-level mechanical engineering courses requires fulfillment of all requirements. Students are notified of their full acceptance status within four weeks following the end of the semester.

in which they apply.

Transfer students must also apply for admission to upper division. Transfer students may request a one or two semester probationary period in order to meet the upper division requirements listed above. The request must be made in writing, and submitted no later than the end of the first week in the semester.

## Bachelor of Science in Mechanical Engineering

### Requirements (127 hours minimum)

The Bachelor of Science in Mechanical Engineering requires at least 127 hours of course work distributed as shown below. In addition, the University proficiency requirements in a foreign language and written English must be met (see the University degree requirements). To graduate, students must have a minimum grade point average of 2.0 in courses offered by the College of Engineering and Computer Science (course prefixes CE, CS, EE, ENGR, and ME).

*Enduring Foundations General Education* – 43 hours, including Chemistry 118; Mathematics 221; Mechanical Engineering 495; Physics 210; foreign language proficiency may reduce this requirement by 3-6 hours

For additional departmental general education requirements, please consult the department.

*Lower division required courses* – 44 hours

Electrical Engineering 210, 215; Engineering 212, 213, 230, 232; Mathematics 222, 323, 324; Mechanical Engineering 101/102, 197, 224, 297; Physics 211

*Upper level required courses* – 34 hours

Engineering 366, 390; Mechanical Engineering 318, 330, 342, 344, 360, 362, 368, 397, 452, 497

Note: Mechanical Engineering 497 students are required to take the Fundamentals of Engineering (FE) exam.

*Technical electives* – 9 hours

One of Mechanical Engineering 424, 432, 434, 444, 446, 448, 453; one of Mechanical Engineering 462, 463, 466, 468, 470, 472, 473, 476; three hours technical elective from mechanical engineering, civil engineering, computer science, electrical engineering, engineering, mathematics, physics, biology, chemistry, or Interdisciplinary 380 (with STEM focus).

*Free electives* – 3 hours

**Note:** Courses numbered Mathematics 202 or lower, Physics 1xx, Chemistry 10x, software application courses and English Language courses may not be applied to the 12-hour elective requirement.

### Biomedical Option

Mechanical engineering majors may earn a bachelor's degree in mechanical engineering with a biomedical option. With careful curriculum planning, mechanical engineering students can complete the biomedical option with no additional classes. The note in parenthesis following each course shows where the course might fit into the BSME curriculum plan.

- Exercise and Sport Science 112 Human Anatomy and Physiology I (free elective)
- Exercise and Sport Science 113 Human Anatomy and Physiology II (instead of Mechanical Engineering 318)
- Mechanical Engineering 424 Engineering Biomechanics **or** Exercise and Sport Science 356 Biomechanics (Mechanical Engineering 4xx elective)
- Chemistry 240 (Mechanical Engineering 4xx elective)
- Biology 107 (instead of Physics 211)
- Mechanical Engineering 497 (with approved biomedical focused project) **or** Mechanical Engineering 497 plus an approved biomedical focused project (at least one credit) **or** Internship/Co-op in a biomedical or health-related setting (at least 10 weeks) plus Mechanical Engineering 497
- One of the following (technical elective)
  - Mechanical Engineering 428 Special Topics in Biomedical Engineering
  - Biology 305 Microbial Ecology
  - Biology 322 Biological Physics
  - Chemistry 370 Biochemistry

# Harlaxton College

Harlaxton College, housed in a 100 room English Manor, is a home for living, learning, personal growth and development and travel. Harlaxton has semester programs each fall and spring and a 5 week summer program from late May until the end of June. Each of these programs draws students from the University of Evansville as well as from partner institutions throughout the United States and Internationally.

## Course Offerings

During the semester program, students take a six-credit course titled The British Experience from the Celts to the Present Day. This is an interdisciplinary course taught by a team of British professors. This course is available at 200 and 300 level and may also be taken for honors credit.

Around this core, students take traditional courses offered by visiting American professors from the University of Evansville and our partner universities and colleges. Courses are determined two years in advance and are available for review in the UE Office of Study Abroad or online at [www.harlaxton.ac.uk](http://www.harlaxton.ac.uk). Most students, with some advance planning, can spend a semester at Harlaxton and still complete their course work in normal time frames.

## Travel Programs

Travel is organized in many different ways for Harlaxton students. Students can take advantage of local cultural trips and British Studies field trips, which are built into the price of the program. These trips are organized by Harlaxton and available to students to explore more local and regional offerings. These trips take place each semester and students will receive information on their locations and dates in their Harlaxton orientation.

Students are also encouraged to travel throughout Europe and the UK. This can be done through College Sponsored travel. Each semester Harlaxton will offer a travel package for students to purchase. These options include destinations in Europe such as Paris, Barcelona, and Rome. Students also have options in the UK such as London, Edinburgh, and the Lake District. These trips can be booked before traveling abroad and help the student create a wide ranging travel experience. Should students choose to travel independently while at Harlaxton, there is support from our Student Development Office as well as a weekend check out mandate for safety and security.

## Student Development

A full range of student life programs and support systems are available for students at Harlaxton. Medical and counseling services are available within Harlaxton Manor itself. Student development staff members coordinate all student activities and look after student well-being. Faculty members are close at hand – professors also live in Harlaxton Manor, eat meals in the refectory with students, and themselves participate in choir, sports teams, church, the talent show, and campus life generally.

Students are also engaged in the local community through the Meet-a-Family Experience, sporting competitions, where teams formed at the Manor compete against local teams, and volunteer opportunities to help local community programs.

## Library

The Harlaxton library is open 24 hours a day, 7 days a week. The library maintains an excellent small collection of 25,000 volumes in addition to online resources. An interlibrary loan relationship with the British Library can provide any book in print in the United Kingdom, often overnight. The University of Evansville Libraries also assist the Harlaxton College Library, particularly through web-based journal subscriptions and also through special acquisitions.

## The Centre for British Studies

The University's Harlaxton-based faculty is a truly out-standing collection of teacher-scholars. Their research interests are broad and interdisciplinary and include medieval and modern history, literature, art history, politics, and music. They take a close interest in the pedagogy of British Studies and interdisciplinary teaching.

Building on the model of interdisciplinary centers in British, American, and Continental universities, this faculty forms the Centre for British Studies. Further details of the members of the centre, their research interests, and the programs they offer may be found at the Harlaxton College website ([www.harlaxton.ac.uk](http://www.harlaxton.ac.uk)).



# Adult Education

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The Center for Adult Education demonstrates the University of Evansville's commitment to lifelong learning. The unit serves nontraditional students through both credit and non-credit offerings. Two master's degree programs and one bachelor's degree program designed especially for adults are offered in the evenings. Non-credit classes that meet professional and personal educational needs allow community members to update essential skills or develop new interests. Additionally, the Center for Adult Education provides customized education and training to area businesses and industries.

## Adult Degree Programs

Admission to the organizational leadership program requires an Associate of Art or Associate of Science or the equivalent of 60 credit hours from a regionally accredited university that meets the program's general education requirements.

Adult education offers this undergraduate degree program during the evening.

Admission to a graduate program is a separate process detailed on page 231. Please contact the adult education staff for information.

## Bachelor's Degree

### Organizational Leadership

The Bachelor of Science degree with a major in organizational leadership is designed specifically for the mature adult learner who has earned an Associate of Arts, Associate of Science, or its equivalent (60 hours), and meets University of Evansville general education requirements. The University designed the organizational leadership program to assist mid-career adult learners who wish to complete a bachelor's degree.

### Objectives

The primary objectives of the organizational leadership program are to assist each learner in the following:

- Incorporation of the major dimensions of the general education core goals in course work completed by students, including critical thinking skills, data and statistical analysis, effective writing and creative expression, and the ability to assess and render judgments of value in such areas as ethics, aesthetics, and public policy
- Development of a thorough understanding of the theory and practices associated with modern leadership and organizational management
- Development of the knowledge and skills in research, critical thinking and problem solving, and decision making
- Involvement in teamwork and leadership development through participation in classroom activities and applied research projects
- Understanding of professional ethics and its application to organizational environments

An emphasis on leadership and global issues provides learning experiences which not only enrich the life of the individual but also develop understanding and competencies to meet important societal needs. In the age of change and specialization, the generalist who understands the totality of the human condition and can make wise decisions will make a significant contribution to society. The organizational leadership program at the University of Evansville is designed to meet this societal need and to assist students in achieving their full potential.

### Curriculum

The purpose of the program is to provide qualified individuals with the opportunity to complete a bachelor's degree and develop intellectual capacities necessary for successful leadership. The most significant learning objective is to advance students' abilities in strategic thinking, problem solving, and decision making. Students will be engaged in the practice and application of the fundamental concepts needed for supervision and leadership. The curriculum is designed to develop social responsibility and foster a global perspective.

## Requirements (62 hours)

Organizational Leadership 300, 310, 311, 312, 320, 321, 322, 330, 350, 360, 370, 410, 411, 412, 420, 421, 422, 450, 460

The degree consists of two years of course work. Class sessions meet on Thursday evenings. Students can expect to devote at least 24 hours per class to course work outside the classroom.

Applicants to the program are mature adults who have earned an Associate of Arts, Associate of Science, or its equivalent (60 hours), and meet University of Evansville general education requirements.

## Semester Plan

Four organizational leadership courses are taken each semester for four semesters. Classes are held in the summer as well.

### Block One

Organizational Leadership 300, 310, 311, 350

### Block Two

Organizational Leadership 320, 321, 322, 360, 312 (summer)

### Block Three

Organizational Leadership 330, 370, 410, 411

### Block Four

Organizational Leadership 420, 421, 422, 460, 412 (summer), 450 (summer)

## Individualized Study

Designed for students who previously have completed college courses or those who would like to earn credit through nontraditional methods, the University's Bachelor Degree Completion Program offers adults an individualized study program to complete a Bachelor of Science or Bachelor of Arts degree. The program is well-suited for adults who wish to design a curriculum different from any traditional degrees offered in this geographic area. Courses may be taken during the evening or the day, depending on the student's schedule needs and course availability. This program takes maximum advantage of past educational experiences and provides an opportunity to tailor a degree program to meet specific career and life goals for the future.

## Curriculum Organization

Study plans are made up of four parts: the major, general education, a secondary study area, and electives.

The major consists of a minimum of 45 semester hours of related credits. Depth of learning and coherency are primary guidelines in developing an individualized major. The major is given a title that appropriately reflects the degree content.

The general education segment consists of a minimum of 45 semester hours. Six hours of credit are required in each of the following seven categories, and an extra three hours may be chosen in any one of the seven categories.

- English Competency
- Human Relations
- Second Method of Communications
- Social Science
- Natural Science
- Humanities
- Behavioral Science

The secondary study area is 12 hours of additional work in one of the general education categories. Elective courses can be chosen to reach the 120 hours required for graduation. Students must earn a minimum of 48 credit hours from the University of Evansville, including the final 15 hours, which must be University of Evansville credits to meet the graduation residency requirement.

## Requirements (120 hours)

The individualized study major allows a student to earn a Bachelor of Science or Bachelor of Arts degree. No associate or graduate degrees are offered through this program.

Students in the program are required to earn a minimum of 120 semester hours of credit with an overall grade point average of at least 2.0 (C) on a 4.0 scale. The GPA in the major must also be at least 2.0.

## **Community Service**

Non-credit learning opportunities are offered through the Center for Adult Education as a part of the mission of the University to view education as a lifelong process and commit the University's resources to the continuing education of all people. The University seeks to share its educational and cultural resources with the community and to use the community to create learning opportunities for students at the University.

Non-credit offerings are developed to reflect the University's focus on high quality education. Short courses, workshops, and seminars are all an integral part of the Center for Adult Education program.

The office is committed to programming that fosters broad educational experiences and develops personal and professional skills and knowledge to help students of all ages live more meaningful lives.

# Intensive English Center

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*Mary Kay Purcell, Director*

The Intensive English Center is an integral part of the University's commitment to international educational programs. The center's goal is to enhance the educational opportunities for international students who wish to study English as either a new or a second language. The Intensive English Center coordinates the intensive English program and English language credit courses.

## Intensive English Program

The Intensive English Center teaches English as a second language for international students planning to study in an American college or university. The program also welcomes professionals, businesspersons, and others who wish to improve their knowledge of English.

Two sessions are held during each fall and spring semester. Two additional sessions are offered during the summer. Classes are scheduled Monday through Thursday and generally have 10 to 15 students per class. Full-time students study 20-25 hours per week in a multi-level program. The curriculum at each level includes courses in English structure, listening comprehension, speaking refinement, reading development, and written communication; a state-of-the-art language laboratory strengthens the skills presented in these courses. Study in TOEFL preparation is offered as a supplemental course for interested students. A semi-intensive program, which may include enrollment in the University and English language credit courses, is available for students who have achieved sufficient progress at the advanced level.

Admission to this program is open to participants who have completed secondary school in good standing and are able to meet educational and living expenses.

## English Language Credit Courses

English Language (EL) credit courses for qualified students are administered through the Intensive English Center. All undergraduate, graduate, and special status students whose native language is not English take the Michigan Test of English Language Proficiency and the University's Writing Proficiency Test to determine their placement in appropriate English courses. Language improvement courses taken at the beginning of a student's academic study will provide the student with an opportunity to learn the skills necessary for academic success. A student may apply up to nine hours of English language courses toward graduation requirements if the student's program of study permits free electives. This applies only to non-native English speakers. See English Language (EL) in the course offerings and descriptions section of this catalog for course descriptions.

## Special Programs and University-to-University Agreements

To meet the needs of specific groups, the Intensive English Center can offer adjusted terms of study. As with the standard terms, an on-campus intensive English program facilitates intercultural experiences and enhances global awareness in concert with English language development.

For additional information, please contact:

Director of the Intensive English Center  
University of Evansville  
1800 Lincoln Avenue  
Evansville, Indiana 47722 USA  
812-488-2508  
Fax: 812-488-6389  
iec@evansville.edu  
[www.evansville.edu/intensiveenglish](http://www.evansville.edu/intensiveenglish)

# Undergraduate Course Descriptions

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## Accounting (ACCT)

Accounting courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

ACCT 150 Introductory Accounting Lab (1) Computerized business simulation dealing with the procedural details of financial accounting. Covers analyzing and recording transactions through the preparation of financial statements presented in a corporate approach.

ACCT 210 Introduction to Financial Accounting (3) This course is an introduction to financial accounting concepts, with emphasis on communicating financial information to external users for decision making purposes. Students are introduced to the U.S. Generally Accepted Accounting Principles (GAAP), the accounting process, transaction analysis, financial statement preparation, and related topics.

ACCT 211 Introduction to Managerial Accounting (3) This course is an introduction to managerial accounting concepts, with emphasis on using financial information for decision making purposes. Students are introduced to cost classifications and product costing, multiple methods of income statement and cash flow statement preparation, budget preparation and variance analysis, financial statement analysis, and other related topics. Prerequisite: Accounting 210.

ACCT 310 Intermediate Accounting I (3) Stresses basic theory and alternative approaches to income determination and asset valuation. Includes study of basic financial statements, the accounting cycle, cash, receivables, inventory, property, plant and equipment, intangibles, and liabilities. Prerequisites: Accounting 210. Fall.

ACCT 311 Intermediate Accounting II (3) Examines problems in accounting for stockholders' equity, investment, revenue recognition, income taxes, pensions, and leases. In-depth study of accounting changes and error analysis, statement of cash flows, financial statement analysis, disclosure requirements, and changing prices. Prerequisite: Accounting 310. Spring.

ACCT 317 Cost Accounting (3) Examines issues and procedures in product costing for financial statement purposes under both historical and standard costing. Includes job costing, process costing, and activity-based costing methods, along with inventory management, pricing decisions, cost allocations, and other advanced topics. Prerequisite: Accounting 211. Fall.

ACCT 321 Accounting Information Systems (3) This course is an introduction to the design, implementation and evaluation of accounting information systems. Topics also include transaction processing techniques, internal controls, enterprise resource planning systems, electronic business, and related topics. Prerequisites: Accounting 211. Spring.

ACCT 329 Introduction to Taxation (3) Examines the role of taxes in society and their impact on business entities and individuals. An introduction to income, exclusions, deductions, and credits. Tax planning and analysis for decision-making will also be considered. Prerequisite: Accounting 210. Fall.

ACCT 347 International Accounting (3) Introduces and examines accounting for transactions in a global economy. Course dedicated to an overview of the convergence of Generally Accepted Accounting Principles with International Accounting Standards. Specific topics include financial disclosure, foreign exchange, taxation, and ethics. Prerequisite: Accounting 310. Offered periodically.

ACCT 360 Computer Accounting (3) This course introduces students to popular accounting software applications used by millions of small and medium-size organizations around the world. Students will learn to use the software processes and procedures to prepare reports related to the accounting cycle, general ledger, accounts payable, accounts receivable, payroll and inventory system. Accounting concepts are demonstrated in real-world business situations. Prerequisite: Accounting 211

ACCT 380 Special Topics in Accounting (3) Covers topics not included in other courses, gives greater depth in certain areas, and explores current accounting topics. Repeatable course. Content changes each time course is offered. Prerequisite: Accounting 211. Offered periodically.

ACCT 395 Independent Study (1-3) Independent research in accounting conducted under faculty supervision. Prerequisite: Accounting 210 and permission of instructor.

ACCT 398 Internship in Accounting (3) First internship; a structured assignment that allows student to gain practical experience in an accounting position relating to an area of career interest. Student is directed by the internship director and supervised by a member of the cooperating organization. Enrollment in course must be concurrent with work experience. A contract (available from the business school's internship director) must be approved and an offer letter from the internship provider must be on file before registering for course. Sponsoring institutions may require students to have completed specific courses(s) in addition to the following

prerequisites prior to beginning the internship. Prerequisites: Accounting 310; Experiential Education 90; permission of the internship director of the Schroeder Family School of Business Administration.

ACCT 414 Auditing (3) Student develops an understanding of the auditing profession and its relationship to the financial community. Includes an examination of professional ethics, legal liability, auditing standards, and procedures, reporting and statistics. Prerequisite: Accounting 310. Fall.

ACCT 420 Advanced Accounting (3) Studies the theory and techniques of accounting and reporting for business combinations, consolidated financial statements, partnerships, and fund accounting. Prerequisite: Accounting 310. Offered periodically.

ACCT 429 Advanced Taxation (3) A deeper study of federal, state, and local tax laws as it relates to entities, building upon content covered in Accounting 329. Examines the taxation, formation, reorganization, and liquidation of entities. Prerequisite: Accounting 329. Spring.

ACCT 430 Advanced Managerial Accounting (3) Studies the application of management accounting to strategy and the impact of new and evolving management thinking. Topics include cost allocations, sales variances, management control systems, transfer pricing, performance evaluation, and compensation systems. Prerequisite: Accounting 317. Offered periodically.

ACCT 498 Internship in Accounting (3) Second internship; a structured assignment that allows the student to gain practical experience in an accounting position relating to an area of career interest. Must be a distinct work experience from that provided by Accounting 398. Credits earned apply only as free elective credits. Student is directed by the internship director and supervised by a member of the cooperating organization. Enrollment in course must be concurrent with work experience. A contract (available from the business school's internship director) must be approved and an offer letter from the internship provider must be on file before registering for course. Sponsoring institutions may require students to have completed specific course(s) in addition to the following prerequisites prior to beginning the internship. Prerequisites: Accounting 398; permission of the internship director of the Schroeder Family School of Business Administration.

ACCT 499 Professional Internship (12) A structured, full-time, professional assignment that allows students to gain practical experience in an accounting position relating to an area of career interest. Students are directed by the internship director and supervised by a member of the cooperating organization. Enrollment in the course must be concurrent with work experience and all requirements of course must be met during the semester in which the student is enrolled in the course. A contract (available from the business school's internship director) and an offer letter from the internship provider must be reviewed and approved by a review committee before the student may register for the course. Cooperating organizations may require students to have completed specific courses in addition to the following prerequisites prior to beginning the internship. Student must work at least 35 hours per week, totaling at least 540 hours at the cooperating organization. Prerequisites: Accounting 310; Experiential Education 90; permission of the internship director and review committee of the Schroeder Family School of Business Administration. Fall and Spring only. May not be repeated.

## **Anthropology (ANTH)**

Anthropology courses are taught by the faculty of the Department of Law, Politics, and Society.

ANTH 200 World Prehistory (3) Introduces the field of prehistoric archaeology and traces the evolution of culture from the earliest stone tools to the formation of ancient civilizations in both the Old and New Worlds.

ANTH 207 Cultural Anthropology (3) Studies societies all over the world, from hunter-gatherers to industrial states. Explores the range of variation in forms of subsistence technology, family, language, government, religion, and other institutions. Seeks to explain cultural differences.

ANTH 301 Special Topics in Anthropology (3) Topics chosen on the basis of programmatic need or student interest. Repeatable course. Content changes each time course is offered. Prerequisite: Anthropology 200 or 207.

ANTH 310 Indians of North America (3) Surveys the origins, prehistory and traditional ways of life of the Native Americans. Studies representative societies from each of the major culture areas. Prerequisite: Anthropology 207.

ANTH 315 Indians of the Great Plains (3) Covers the buffalo-hunting societies of the American West, their habitat, prehistory, ways of life, and wars with the United States. Prerequisite: Anthropology 207.

ANTH 319 Peoples of Africa (3) Surveys African geography, history, and representative societies from different regions of the continent. Prerequisite: Anthropology 207.

ANTH 416 Human Evolution (3) Outlines the stages of hominin biological and cultural evolution, with attention to human variation and the primates. Prerequisite: Anthropology 200 or 207.

ANTH 440 Linguistic Anthropology (3) Surveys phonetics and phonology, morphology, syntax, children's language acquisition, language origins, historical linguistics, language contact, ethnolinguistics, and sociolinguistics. Prerequisite: Anthropology 207.

ANTH 453 Anthropology of Religion (3) Explores theories of religious beliefs and behavior in traditional societies. Covers cosmology, myth, ritual, religious specialists, and dynamics. Prerequisites: Six hours of anthropology; junior or senior standing.

ANTH 494 Directed Study (3) Provides an opportunity for specialized advanced study. Prerequisites: Nine hours of anthropology; junior or senior standing; permission of instructor.

ANTH 496 Internship (1-6) Internships available to majors of junior or senior standing who have completed core courses. GPA requirements must be met and student must file an internship application with advisor. Prerequisites: Sociology major; junior or senior standing, or permission of instructor.

ANTH 497 Provides majors of junior or senior standing with a comprehensive, supervised field experience in teaching and anthropological pedagogy. Designed for students who are preparing for graduate study in the social sciences. GPA requirements must be met and students must file a teaching internship application with advisor. Prerequisites: Sociology-Anthropology major, sponsorship by the supervising faculty member, junior or senior standing, or permission of instructor. 1-2 credits.

## **Archaeology (ARCH)**

Archaeology courses are taught by the faculty of the Department of Archaeology and Art History.

ARCH 105 Introduction to Greek Archaeology (3) Comprehensive overview of the material culture of the Greeks from the Bronze Age through the Hellenistic period, tracing the main developmental trends in architecture, city planning, sculpture, and the minor arts both in the Greek mainland and the Greek colonies overseas. Although primarily archaeological in orientation, necessary historical context is provided. Fall.

ARCH 106 Introduction to Roman Archaeology (3) Comprehensive survey of the material culture of the Romans examining architecture, city planning, art, and technology. Traces development of Roman civilization from the Republic to the Late Antique period. Spring.

ARCH 192 Introductory Archaeology Seminar (3) Seminar intended primarily for freshman or new archaeology majors. Emphasizes fundamental concepts relating to stratigraphy, relative and absolute chronologies, types of archaeological data, map/section reading, recording procedures, approaches to interpretation, and research skills.

ARCH 206 Introduction to Near Eastern Archaeology (3) Study of Mesopotamia, Anatolia, and the Levant from the Neolithic period to the establishment of the Persian Empire.

ARCH 207 Introduction to Egyptian Archaeology (3) Overview of Egyptian civilization from the predynastic period to the New Kingdom through the exploration of funerary architecture, sculpture, wall painting, tomb furnishings, and other minor arts. The course examines archaeological evidence from a historical perspective, focusing on both the local history of Egypt and on its relationship with other Mediterranean civilizations.

ARCH 285 Technical Skills for Archaeologists (3) Explores the current use of computers in archaeological research and processing of archaeological data. Emphasizes both how to use specific computer programs and which programs are most appropriate for which types of field data.

ARCH 305 Greek Painted Pottery (3) Traces the development of the shape and decoration of Greek pottery from the Late Bronze Age through the end of the Classical period. The characteristics of individual artists and the treatment of various Greek myths in different periods are studied. Prerequisite: Archaeology 105 or Art History 208 or permission of instructor.

ARCH 306 Greek Architecture (3) Traces the development of Greek architecture from the Late Bronze Age through the Hellenistic period. Studies the development of city planning, temples, secular buildings, and funerary monuments. Prerequisite: Archaeology 105 or Art History 208 or permission of instructor.

ARCH 307 Roman Architecture (3) Examines the development of Roman building from its roots in Greek and Etruscan architecture to the eclectic Roman architectural idiom of the Empire. Emphasizes the Roman integration of traditional building elements with their own increasing technical virtuosity as structural engineers. Prerequisite: Archaeology 106 or Art History 208 or permission of instructor.

ARCH 308 Greek and Roman Sculpture (3) Examines the development of sculpture in the Greco-Roman world. Topics covered include the evolution of naturalism in the Greek Archaic period, the High Classical style of the 5th century BC, the varied genres of the Hellenistic world, Roman Republican portraiture, and Roman historical reliefs. Prerequisite: Archaeology 105 or 106 or Art History 208 or permission of instructor.

ARCH 309 The Etruscans (3) A study of the origins of the Etruscans, who made their appearance in central Italy in the 7th century BC, and their impact on the other cultures of the Mediterranean. An attempt is made to reconstruct their culture as it can be understood from the architecture and artifacts preserved today. Prerequisite: Archaeology 105 or Art History 208 or permission of instructor.

ARCH 311 Archaeology of Syro-Palestine (3) Examines the archaeology of Syro-Palestine (modern Israel, Jordan and the Palestinian National Authority) from late prehistory through the Persian period (ca. 8000-332 BCE). Although archaeological data is the primary source of information, other sources, including the Hebrew Bible (Old Testament) and other texts, are employed where

appropriate.

ARCH 320 Topics in Archaeology (3) Focuses on a topic not offered regularly, such as Aegean archaeology or northern European prehistory. Repeatable course. Content changes each time course is offered. Prerequisite: Archaeology 105 or 106 or Art History 208 or permission of instructor.

ARCH 340 Field Techniques (3) Introduces students to the process of field archaeology. Projects vary from year to year, but involve either excavation of a historical site in Evansville, or assisting with an excavation or survey conducted locally.

ARCH 394 Non-UE Archaeology Field Practica (3-6) This course is used to record archaeological field practica sponsored by institutions other than the University of Evansville.

ARCH 395 Practicum in Archaeology (3-6) This practicum in archaeology introduces students to both the practical and theoretical aspects of archaeology. Students participate in an excavation as well as in documentation and conservation of artifacts. The work is conducted under the supervision of a professional staff of archaeologists. Prerequisite: Archaeology 105 or 106 or permission of instructor.

ARCH 400 Archaeological Method and Theory (3) Examination of the theoretical bases of the discipline of archaeology, the history of the discipline, and the major schools of interpretation. Also, research design, development of chronologies, and the application of scientific techniques to analysis of archaeological remains. Prerequisites: Archaeology 105 or 106; one 300-level archaeology course; or permission of instructor. Course fulfills capstone requirement.

ARCH 415 Women in Antiquity (3) Seminar focuses on women in antiquity. Reviews recent studies of archaeological investigations of women's social and cultural roles and focuses on selected case studies of women in the ancient Near East and eastern Mediterranean from late prehistory through Classical antiquity.

ARCH 420 Northern European Prehistoric Archaeology (3) Examines the archaeology of northern Europe from the Neolithic period through the Roman period. Emphasis on the Celtic cultures of northern Europe.

ARCH 492 Topical Seminars in Archaeology (3) Special seminar topics in archaeology not included in the regular course offerings. Repeatable course. Content changes each time course is offered.

ARCH 493 Independent Study in Archaeology (1-3) Research in areas of archaeology on topics not sufficiently covered in existing courses. Subject and credit earned must be approved by the supervising faculty member and department chair. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Prerequisites: Junior standing; consent of instructor.

## **Art (ART)**

Art courses are taught by the faculty of the Department of Art.

ART 102 Art in Elementary Schools (3) Examination of the perceptual, creative, and aesthetic growth and development of children through art experiences. Some basic studio instruction with art appreciation and historical overview. Lab fee. Spring.

ART 105 Introduction to the Visual Arts (3) Lecture. Studies architecture, painting, and sculpture with emphasis on social and aesthetic considerations. Fall, spring.

ART 200 Introduction to Studio Art (3) An introduction to the studio disciplines for non-art majors. Instruction of the art elements as used in such areas as drawing, painting, printmaking, and sculpture. Lab fee. Fall, spring.

ART 201 Introduction to Art Therapy (3) Introduces students to the fundamentals of art therapy including theory, methods of practice, and techniques through lecture, experience, and case study presentations. No prior art experience required. Prerequisites: Sophomore status; recommended courses Psychology 121, 226. Fall.

ART 210 Design (3) Introductory studio course emphasizes basic principles of design, composition, and color theory. Six hours studio. Fall.

ART 213 Computer Graphics (3) An introduction to the basic uses of the Macintosh computer as used in the visual arts. Emphasizes experimentation with various software packages and the development of the interchangeable and flexible moves from hands-on skills to electronic means. Fall, spring.

ART 214 Basic Photography (3) Introduction to basic camera usage and traditional darkroom techniques. Access to a 35mm print film camera is required. Six hours studio. Lab fee.

ART 220 Drawing (3) Introduces and explores various drawing media with emphasis on perception and drawing techniques. Six hours studio. Fall.

ART 221 Drawing (3) Explores a variety of media and techniques with emphasis given to composition and creative expression. Six hours studio. Spring.

ART 301 Creative Development and Art Therapy (3) Introduces the fundamentals of creative development and art therapy



including theory, methods of practice, and techniques through lecture, experience, and case studies. No prior art experience required. Prerequisites: Sophomore status; recommended courses Psychology 121, 226. Spring

ART 314 Creative Photography (3) Emphasizes creative and innovative uses of photography with instruction in camera and darkroom procedures. Prerequisite: Art 214 or permission of instructor. Six hours studio. Lab fee.

ART 315 Typography (3) A fundamental study of the history of type, its creative use and function as a communicative tool. Explores basic principles of good layout design. Six hours studio. Macintosh lab. Prerequisites: Art 210, 213; or permission of instructor.

ART 316 Publication Design (3) A study of layout design, the creative arrangement of type and visuals on a page. Using appropriate layout software, students create layout designs for various publications (magazines, newspapers, brochures, books). File preparation for print is covered. Six hours studio. Macintosh lab. Prerequisites: Art 213, 315; or permission of the instructor.

ART 322 Digital Photography (3) Introduction to digital photography methods and creative manipulation on the computer, as an alternative to traditional techniques. Familiarity with Photoshop helpful. Macintosh lab. Prerequisite: Art 213 or permission of instructor. Repeatable course. Content changes each time course is offered. Lab fee.

ART 325 Life Drawing (2) Drawing from the model as a means of understanding form, shape, and line. Introduction to drawing the male and female figure from live model, may include nude models. Four hours studio. Repeatable course. Content changes each time course is offered. Lab fee.

ART 330 Printmaking (3) Emphasizes basic printmaking methods to the development of ideas and aesthetic considerations of materials and techniques employed in printmaking. Six hours studio. Repeatable course. Content changes each time course is offered. Lab fee. Spring.

ART 340 Painting (3) Emphasizes basic painting techniques with investigation of different advanced media. Six hours studio. Repeatable course. Content changes each time course is offered. Fall, spring.

ART 345 Watercolor (3) Covers basic, creative, and technical problems in watercolor painting. May be applied toward the painting major in the studio BFA and BS degrees. Six hours studio. Repeatable course. Content changes each time course is offered.

ART 350 Metalwork/Jewelry (3) Studies basic forming methods: fabricating, casting, forging, and raising with investigation of different materials and techniques employed in metalwork and jewelry. Six hours studio. Repeatable course. Content changes each time course is offered. Lab fee.

ART 360 Ceramics (3) Offers basic methods of hand building and wheel throwing and the use of glazes and kiln firing procedures with investigation of materials and techniques employed in ceramics. Six hours studio. Repeatable course. Content changes each time course is offered. Lab fee. Fall, spring.

ART 370 Sculpture (3) Introduces concepts, materials, and tools of sculpture. Creative expression as well as exploration into idea, form, and material relationships. Six hours studio. Repeatable course. Content changes each time course is offered. Lab fee. Fall, spring.

ART 401 Art and Culture (3) Senior seminar devoted to special topics concerning historical traditions in the visual arts, current art issues, and professional development. Prerequisite: Senior status.

ART 405 Art Therapy Seminar (2) In-depth investigation of the fundamentals of creative development and art therapy, focusing on assessment, research, application, and exploration of the dynamics of the group process. Lecture, experiential learning, and case study presentations included. No prior art experience required. Prerequisites: Art 201, 301; Psychology 121, 226.

ART 410 Portfolio Preparation (3) Study of current trends in graphic design fields and possible career paths. Preparation of a professional graphic design portfolio that demonstrates the student's proficiencies and strengths. Includes résumé preparation, personal logo, and self-promotional projects. Six hours studio. Repeatable course. Content changes each time course is offered. Macintosh lab. Prerequisites: Art 213, 315, 316; or permission of instructor.

ART 417 Advanced Imaging and Illustration (3) Study of painting, drawing, and photo manipulation software as well as of traditional media to produce illustrations for various uses. Also explores the creative process and idea generation. Six hours studio. Macintosh lab. Prerequisite: Art 213, 315, 316; or permission of instructor.

ART 490 Practicum in Art (1-3) A practical experience in a supervised university setting that specializes in the field of art or design. Precedes an internship and prepares students to perform for employers outside the university community. Prerequisite: Sophomore standing; permission of sponsoring faculty member. Repeatable course. Content changes each time course is offered. Repeatable up to 12 credit hours.

ART 492 Topical Workshops (1-3) Special topics in art not included in the regular course offerings. Based on lecture or lecture/studio. Repeatable course. Content changes each time course is offered.

ART 493 Independent Study in Art (1-3) Research in an area of visual arts that pertains to individual interests. Should not be substituted for regular course offerings. Subject and credit earned must be approved by the instructor. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Prerequisites: Sophomore level; permission of

instructor; approval of department chair.

ART 495 Internship in Art (3-12) An apprenticeship or internship program designed to meet the educational needs of students' professional goals. Visual communication design majors may qualify for internships with professional agencies, BFA studio majors with professionally qualified artists or institutions, and BS in art and associated studies majors with institutions related to their career interests. Repeatable course. Content changes each time course is offered. A maximum of 12 credit hours may be earned in Art 495 toward the degree. Prerequisites: Junior standing; permission of sponsoring faculty member.

ART 497 Methods of Teaching Art in Senior High/ Junior High/Middle School and in Elementary Schools (3) This course explores the creative and mental growth of elementary, middle school, and secondary school students participating in classes for the visual arts. In addition, development of an area-specific portfolio is required. This class is for art education majors only.

## **Art History (ARTH)**

Art history courses are taught by the faculty of the Department of Archaeology and Art History.

ARTH 208 Survey of Art I (3) A survey of architecture, sculpture, and painting from prehistory through the late Gothic period, including non-Western civilizations of India, Southeast Asia, and China. Fall.

ARTH 209 Survey of Art II (3) A survey of architecture, sculpture, and painting of Western and non-Western regions from the Renaissance to the present, including the Muslim world and Japan. Spring.

ARTH H378 British Romantic Art (3) A study of British art from 1790 to 1850, including academic traditions, landscape painting, genre painting, and the pre-Raphaelites. Taught at Harlaxton College. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH H379 Art and Architecture in Victorian Britain (3) A study of art and architecture produced in Britain during the reign of Victoria, including revival and industrial architecture, the arts and crafts movement, and the "New Sculpture." Taught at Harlaxton College. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH H383 Medieval Art (3) Architecture, sculpture and painting from early Christianity through Gothic in the Byzantine Empire and Western Europe. Taught at Harlaxton College. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH 384 Renaissance Art (3) Architecture, sculpture, and painting in Italy, France, Germany, and the Netherlands ca. 1300-1600. Prerequisite: Art History 208 or 209 or permission of the instructor.

ARTH 385 Baroque Art (3) Architecture, sculpture, and painting in southern Europe, Belgium, England, Germany, and the Netherlands ca. 1600-1750. Prerequisite: Art History 208 or 209 or permission of the instructor.

ARTH 386 Eighteenth and Nineteenth Century Art (3) Study of the major movements of the 18th and 19th centuries, including Neoclassicism, Romanticism, Realism, Impressionism, and Postimpressionism to 1900. Prerequisite: Art History 208 or 209 or permission of the instructor.

ARTH H387 English Art and Architecture from the Late Roman Period to 1533 (3) A study of British art from the late Roman occupation. Migration art, manuscript painting, and domestic and ecclesiastical architecture through the reigns of Henry VII and early Henry VIII. Taught at Harlaxton College. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH H388 English Art and Architecture 1500-1850 (3) Survey of the visual arts in England from Elizabethan times to the mid-19th century. This is a period when the English became a consumer culture. In addition to such artists as Holbein, Van Dyck, Reynolds, Constable, and Turner, the patrons, promoters, collectors, and travelers will be considered. Prerequisites: Art History 208, 209; or permission of instructor.

ARTH 389 Twentieth Century Art (3) Western painting and sculpture from 1900 to the present. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH 391 Topics in Asian Art (3) Thematic introduction to the visual arts of China and Japan, with emphasis on Chinese art from the Han period through the 20th century. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH 492 Topical Seminars in Art History (3) Special topics in art history not included in regular course offerings. Consists of lectures and discussion with an emphasis on research. Repeatable course. Content changes each time course is offered. Repeatable up to nine credit hours. Prerequisite: Art History 208 or 209 or permission of instructor.

ARTH 493 Independent Study in Art History (1-3) Research in areas of art history on topics not covered in existing courses. Subject and credit earned must be approved by the supervising faculty member and department chair. Repeatable course. Content changes each time course is offered. Prerequisites: Junior standing; permission of instructor.

ARTH 495 Internship in Art History (3-12) Internships designed to meet the educational needs of students' professional goals are recommended for art history majors and may be arranged with a professional individual or institution. Repeatable course. Content changes each time course is offered. A maximum of 12 credit hours earned in Art History 495 may count toward the degree. Repeatable up to six credit hours. Prerequisites: Junior standing; permission of faculty advisor, faculty/museum liaison, and department chair.

## **Astronomy (ASTR)**

Astronomy courses are taught by the faculty of the Department of Physics.

ASTR 101 Descriptive Astronomy (3) Studies the solar system, stellar structure and evolution, galaxies and cosmology, emphasizing the historical development and observational basis for our understanding of the universe. Lecture.

ASTR 320 Astrophysics (3) A detailed study of the physical processes that drive a variety of astrophysical phenomena. Topics include radiation production and interaction with matter, accreting systems, and observational techniques from radio to gamma-rays. Specific applications may include (depending on student interest) stellar structure and evolution, compact objects, galactic composition and dynamics, and the origin and structure of the universe. Lecture. Prerequisites: Mathematics 323; Physics 213. Recommended: Astronomy 101. Same as Physics 320.

ASTR 422 Cosmology (2) Explores the history and evolution of the universe with an emphasis on theoretical models that may be tested by modern experimental and observational techniques. Topics include the Big Bang, cosmic microwave background radiation, dark energy, dark matter, origins of structure in the universe, general relativity, and specific topics of interest to researchers in the field. Lecture. Prerequisite: Physics 305. Recommended: Astronomy 101, 320. Same as Physics 422.

## **Athletic Training (AT)**

Athletic training courses are taught by the faculty of the School of Public Health.

AT 280 Introduction to Athletic Training (3) Introduces the field of athletic training and the care and prevention of athletic injuries. Topics include, but are not limited to, the organization, administration, education, and counseling techniques used in caring for athletes, as well as the foundation of injury prevention, assessment, treatment, and rehabilitation.

AT 282 Basic Skills in Athletic Training (3) Addresses various topics that develop the student's competence as an athletic trainer. Emphasis placed on skills such as construction and application of protective devices, taping and bandaging techniques, on-field assessment techniques, and emergency care. Designed to satisfy CAATE competences related to the above-mentioned content areas and intended for athletic training majors. Prerequisite: Athletic Training 280.

AT 287 Therapeutic Modalities in Athletic Training (3) Lecture/lab course addresses the principles, indications, contraindications, physiological effects, safety precautions, and application of therapeutic modalities for the treatment of athletic injuries. Information includes knowledge of the inflammatory response to injury and illness and the effectiveness of therapeutic modalities to assist the body in the healing process. Designed to satisfy CAATE competences related to the use of modalities and intended primarily for athletic training majors.

AT 291 Clinical Education in Athletic Training I (2) One of a series of six clinical education courses designed to provide proficiency instruction and clinical experience in the field of athletic training. Emphasis placed on clinical anatomy and goniometry. Content includes palpation of various bony landmarks and soft tissue structures as well as goniometric skill development. Clinical application and understanding emphasized. Field experience rotations assigned per the clinical instruction plan. Class meets formally approximately one hour per week outside of the clinical setting.

AT 292 Clinical Education in Athletic Training II (2) One of a series of six clinical education courses designed to provide proficiency instruction and clinical experience in the field of athletic training. Emphasis given to clinical application of therapeutic modalities. Field experience includes sport team rotations with an emphasis in the application of modalities. Student works toward completion of the proficiency check-off sheet. Class meets formally at least one hour per week outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies.

AT 350 Administration of Athletic Training (3) Familiarizes students with the administration and management responsibilities of athletic training. Topics of study include management of athletic training facilities, personnel, students, facility design, purchasing of supplies and equipment, and budgeting. Designed to satisfy CAATE competences related to health care administration and intended for athletic training majors. Prerequisite: Athletic Training 280.

AT 388 Evaluation of the Lower Body (3) Addresses the theory, techniques, and laboratory experiences relative to the assessment and evaluation of athletic injuries with emphasis on the lower body. Other topics related to assessment are covered including common illness recognition. Content areas include knowledge and skills for clinical evaluation to determine the proper injury or illness treatment and referral when appropriate. Designed to satisfy CAATE competences related to evaluation and illness of the lower body and intended for athletic training majors. Prerequisite: Athletic Training 280.

AT 389 Evaluation of the Upper Body (3) Addresses the theory, techniques and laboratory experiences relative to the assessment and evaluation of athletic injuries with emphasis placed on the upper body. Other topics related to assessment are covered including common illness recognition. Content areas include knowledge and skills for clinical evaluation to determine the proper injury or illness treatment and referral when appropriate. Designed to satisfy CAATE competences related to evaluation and illness of the upper body and intended for athletic training majors. Prerequisite: Athletic Training 280.

AT 390 Rehabilitation of Athletic Injuries (3) Lecture/lab course provides the student knowledge related to all aspects of the

rehabilitation of athletes. Emphasis placed on development of a theoretical model to assess and fully rehabilitate an athlete following an injury, surgery or related illness. Lab time develops the skills required to implement a rehabilitation program in the clinical setting. Designed to satisfy CAATE competences related to rehabilitation and exercise and intended for athletic training majors. Prerequisite: Athletic Training 280.

AT 391 Clinical Education in Athletic Training III (2) One of a series of six clinical education courses designed to provide proficiency instruction and clinical experience in the field of athletic training. Emphasis on basic taping and bandaging techniques, emergency procedures, and field assessment. Field experience includes local high school football coverage and other field experience as assigned. Student works toward completion of the proficiency check-off sheet. Class meets formally at discretion of the instructor outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies. Prerequisite: Athletic Training 280.

AT 392 Clinical Education in Athletic Training IV (2) One of a series of six clinical education courses designed to provide clinical experience in the field of athletic training. Emphasis given to evaluation of athletic injuries and illness. Field experience spent with a college trainer working primarily in a traditional college athletic training room setting. Student works toward completion of the proficiency check-off sheet. Class meets formally at discretion of the instructor outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies. Prerequisite: Athletic Training 280.

AT 490 Pharmacology and Medical Conditions (2) Offers insight on current trends in pharmacology use in an athletic training environment. Also offers current evaluation of general medical conditions, treatment, and a referral base for conditions found in athletics. Prerequisite: Athletic Training 280.

AT 491 Clinical Education in Athletic Training V (2) One of a series of six clinical education courses designed to provide clinical experience in the field of athletic training. Emphasis given to rehabilitation. Field experience assigned per the clinical instruction plan and may include time in a physical therapy outpatient setting. Student works toward completion of the proficiency check-off sheet. Class meets formally at discretion of the instructor outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies. A case study approach is utilized to emphasize integration of previously learned skills into the complete care of the athlete. Prerequisite: Athletic Training 280.

AT 492 Clinical Education in Athletic Training VI (2) One of a series of six clinical education courses designed to provide clinical experience in the field of athletic training. Emphasis placed on pharmacology, nutritional aspects, psychosocial intervention, and referral. Emphasis also placed on preparation for the NATA-BOC exam. Class meets formally at discretion of the instructor outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies. Field experience assignment made per the clinical instruction plan. Prerequisite: Athletic Training 280.

## **Biology (BIOL)**

Biology courses are taught by the faculty of the Department of Biology.

BIOL 100 Fundamentals of Biology (4) Course for non-science majors that explores fundamental concepts of biology and relates them to social issues. Three hours lecture, two hours lab. Credit not applicable for biology majors or minors. Fall, Spring.

BIOL 107 General Biology (4) Course for science majors that introduces basic principles of cell biology, metabolism, genetics, molecular biology, and evolution. Three hours lecture, two hours lab. Fall.

BIOL 110 Clinical Microbiology (3) Introduces microorganisms and includes isolation, pathogenicity, serology, identification, ecology, and the significance of micro-organisms to humans. Two hours lecture, two hours lab. Credit not applicable for professional biology majors. Fall.

BIOL 112 Human Anatomy and Physiology I (4) Introduces basic anatomy and physiology using a systems approach. Emphasizes cells, tissues, musculoskeletal system, and nervous system. Three hours lecture, two hours lab. Credit not applicable for biology majors or minors. Same as Exercise and Sport Science 112. Fall.

BIOL 113 Human Anatomy and Physiology II (4) Continues the study of topics covered in Biology 112 and includes the endocrine, cardiovascular, immune, respiratory, urinary, and digestive systems. Three hours lecture, two hours lab. Credit not applicable for biology majors or minors. Prerequisite: Biology 112 with a grade of C- or better or permission of the instructor. Same as Exercise and Sport Science 113. Spring.

BIOL 118 Modern Biology: Environmental Perspectives (3) Gives biology majors foundational knowledge and skills for subsequent courses in the major. Seminar-style course introduces environmental topics by exploring ecological, societal, and ethical issues surrounding the relationship of humans to their environment. Prerequisite: Freshmen admission to the biology or environmental sciences programs or permission of the chair of the Department of Biology. Spring.

BIOL 119 Introductory Biology: Molecular Perspectives (4) Designed to give students majoring in applied biology, professional biology, biochemistry, neuroscience, and clinical lab science foundational knowledge and skills for subsequent courses in molecular biology and genetics. The course will introduce basic principles of biochemistry, molecular biology, and genetics, and their relevance to modern society. Class meets twice a week for lectures, discussions, and lab activities. Attendance is required

and will be recorded. Fall.

BIOL 120 Introduction to Organismal Diversity (4) Provides an introduction to the major groups of living organisms, with an emphasis on their structure, function, and evolutionary relationships. Class meets twice a week for lectures, discussions, and lab activities. Attendance is required and will be recorded. Spring.

BIOL 199 Special Topics in Biology (1-4) Lectures, discussions, or special laboratory topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in biology. Repeatable course. Content changes each time course is offered. Prerequisites announced when specific topics scheduled.

BIOL 201 Human Genetics and Society (3) Discusses human genetics and its relation to social issues. Credit not applicable for biology majors or minors.

BIOL 214 Field Zoology (3) Emphasizes the identification, structure, functions, ecology, and behavior of vertebrates. Regional field study involved. Summer.

BIOL 215 Field Botany (3) A study of mosses, ferns, conifers, and flowering plants, including identification, morphology, and ecology. Field study involved. May be taken twice for credit if the field sites are different. Summer.

BIOL 225 Horticulture (3) A study of the growth, development, and technology involved in the production, maintenance, use, and marketing of horticultural plants and products. Two hours lecture, two hours lab. Spring, alternate years.

BIOL 299 Special Topics in Biology (1-4) Lectures, discussions, or special laboratory topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in biology. Repeatable course. Content changes each time course is offered. Prerequisites announced when specific topics scheduled.

BIOL 305 Microbial Ecology (3) Concerned with the wide range of microorganisms that exist and their roles in the environment. Concentrates on microbial environments, detection of microbial activity, impact of microbial activity on the environment in terms of nutrient cycling and pollutant fate, detection and control of pathogens in the environment, and bioremediation (includes risk assessment and environmental biotechnology). Three hours lecture, field studies at sites that utilize microbes (e.g., sewage treatment plants, fermentor facilities). Prerequisite: A 100-level biology course with a grade of C- or better or permission of instructor. Spring, alternate years.

BIOL 310 History of Life (3) A study of major events in the history of life from the origin of life some four billion years ago to the extinction and speciation episodes that have resulted in the variety of organisms that occupy the planet in more recent geologic time. Prerequisite: A 100-level biology course with a grade of C- or better or permission of instructor. Fall, alternate years.

BIOL 315 Ethnobotany (3) This course examines the intimate connection between plants and human society. It is integrative in that it includes information from botany, chemistry, archaeology, anthropology, and history. Topics covered will include agriculture, genetically modified crops, medicinal plants, plant secondary compounds, and psychoactive plants. The goal of the course is to provide students with a better understanding of the importance of plants and plant products to human civilization. Students will gain experience in reading and summarizing scientific articles and books. Prerequisite: Biology 120 with a grade of C- or better or permission of instructor.

BIOL 320 Evolution and Ecology (4) Introduces principles and concepts of evolution and ecology, with emphasis on the intricate and intrinsic relationship between these disciplines. Examines mechanisms of evolutionary change and interactions of organisms, populations, and communities of organisms within their environment. Addresses how these interactions occur, what effects they have on the functioning of natural communities, and how they influence the evolution of populations and species. Three hours lecture, three hours lab. Prerequisites: Biology 120 and 118 with a grade of C- or better or permission of instructor. Fall.

BIOL 321 Microtechnique and Microanatomy (3) Studies a variety of section and non-section techniques for preparation of cells and tissues (primarily animal) for microscopic examination and examines anatomical features of such preparations. Two hours lecture, two hours lab. Prerequisites: Biology 107 or 119, 120 with a grade of C- or better; or permission of instructor. Summer.

BIOL 322 Biological Physics (3) Introduces biophysical methods from a physics perspective and discusses the application of these methods toward research questions in biology. Topics include biomolecular structures, structure determination and simulation, and molecular motors. Three hours lecture. Prerequisite: Mathematics 221; Physics 121 or 210. Same as Physics 322.

BIOL 323 Tropical Ecology of Costa Rica (3) Provides a detailed understanding of the natural history and ecology of Costa Rica, including the identifiable features of many plants and animals of Costa Rica. Designed primarily for biology and environmental studies majors, this course develops writing and presentation skills while also framing student learning in an ecological and conservation context. The course culminates in a trip to Costa Rica (~2 weeks); the trip component of the course helps solidify student learning through experiential learning. Two hours lecture, field trip to Costa Rica. Prerequisite: Biology 118 with a grade of C- or better or permission of instructor. Spring.

BIOL 330 Mycology (4) Introduces fungi with emphasis on ecology, morphology, and taxonomy of representative groups. Two hours lecture, four hours lab. Prerequisite: Biology 120 with a grade of C- or better or permission of instructor.

BIOL 331 Genetics (4) Fundamental principles of inheritance in animals, plants, and microorganisms with emphasis on molecular

genetics. Three hours lecture, three hours lab. Prerequisite: Biology 119 with a grade of C- or better or permission of instructor.

BIOL 333 Animal Behavior (3) Studies the principles of biological rhythms, migration, aggression, competition, learning, reproduction, and social behavior of animals. Three hours lecture, field studies. Prerequisite: Biology 120 with a grade of C- or better or permission of instructor. Spring.

BIOL 340 Cellular and Molecular Biology (4) BIOL 340 will cover the principles of eukaryotic cell structure and function and the molecular bases of cellular processes. Topics will include: macromolecules; energetics; membranes; cellular organelles; gene expression; signaling; cell division; DNA replication; RNA and protein synthesis and processing; and molecular aspects of immunology, cancer and recombinant DNA technology. The course will build on the survey knowledge from the required prerequisite courses. Spring.

BIOL 350 Vertebrate Zoology (4) Emphasizes the taxonomy, comparative morphology, behavior, and life history of vertebrates. Three hours lecture, three hours lab, field studies. Prerequisite: Biology 120 with a grade of C- or better or permission of instructor. Spring.

BIOL 360 Summer Field Station Study (1-3) Biology studies conducted at a marine, freshwater, mountain, or desert field station. Summer.

BIOL 399 Special Topics in Biology (1-4) Lectures, discussions, or special laboratory topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in biology. Repeatable course. Content changes each time course is offered. Prerequisites announced when specific topics scheduled.

BIOL 414 Plant Diversity (4) Studies the identification and classification of local vascular plants. Herbarium collection required. Three hours lecture, four hours lab. Prerequisite: Biology 120 with a grade of C- or better or permission of instructor. Spring, alternate years.

BIOL 415 Biostatistics (4) Explores biological systems using quantitative biological models. Application of statistical tools, numerical data sets, and computer-based techniques to test hypotheses, create predictive models, and interpret results and patterns. Three hours lecture, three hours lab. Prerequisite: Biology 320 with a grade of C- or better or permission of instructor. Spring, alternate years.

BIOL 423 Ecology (4) Examines how organisms interact with each other and with their environment. Addresses the physical environment and the way physiological adaptations organisms have evolved to exploit it, population dynamics, interactions between species populations, biogeography, and environmental issues, especially those that relate to the impact of humans on the ecology of natural populations of plants and animals. Three hours lecture, three hours lab, field studies. Prerequisite: Biology 320 with a grade of C- or better or permission of instructor. Fall, alternate years.

BIOL 425 Developmental Biology (4) Studies the cellular, genetic, and molecular interactions of animal development. Three hours lecture, three hours lab. Prerequisite: Biology 331 with a grade of C- or better or permission of instructor. Spring, alternate years.

BIOL 427 Animal Physiology (4) Studies the major functions of animal organs and systems. Topics include metabolism, transmission of nerve impulses, muscle actions, reproduction, and hormones. Three hours lecture, two hours lab. Prerequisites: Biology 119, 120, and Chemistry 240 with a grade of C- or better; or permission of instructor. Fall.

BIOL 428 Plant Physiology (4) Major biological activities of higher plants with emphasis on water relations, mineral nutrition, metabolism, growth, and development. Three hours lecture, two hours lab. Prerequisites: Biology 120 and Chemistry 118 with a grade of C- or better; or permission of instructor.

BIOL 430 Microbiology (4) Covers general principles of bacterial growth and activities. Three hours lecture, four hours lab. Prerequisite: Biology 119 with a grade of C or better; or permission of instructor. Recommended: Biology 120 with a grade of C- or better. Fall.

BIOL 434 Parasitology (4) Studies the nature of parasitism with respect to morphology, physiology, and host parasite relationships. Three hours lecture, two hours lab. Prerequisites: Biology 119, 120 with a grade of C- or better; or permission of instructor. Fall, alternate years.

BIOL 436 Human Physiology (3) A detailed study of human function, beginning at a cellular level. Emphasis is placed on the neuromuscular, cardiovascular, pulmonary, renal, and endocrine systems. The effects of exercise and pathology are integrated into each system. Prerequisite: Physical Therapy 431 or permission of the instructor. Fall.

BIOL 440 Cell Biology (4) Studies the basic principles and information that form the foundation of cell biology, provides exposure to some of the underlying questions of cell biology, and improves skills in analyzing and communicating scientific information. Three hours lecture, two hours lab. Prerequisites: Biology 119, 120, 331, and Chemistry 240 with a grade of C- or better; or permission of instructor. Spring.

BIOL 442 Immunology (4) Studies cellular and molecular aspects of the immune response. Three hours lecture, two hours lab. Prerequisites: Biology 119, 120, 340 and Chemistry 240 with a grade of C or better; or permission of instructor. Spring, alternate years.

BIOL 445 Molecular Biology (4) Considers the molecular aspects of biology at the cellular and subcellular levels. Emphasis on the genetic material and intercellular processes and laboratory procedures for studying biology at the molecular level. Three hours lecture; three hours lab. Prerequisites: Biology 331 and Chemistry 240, 341 with a grade of C- or better; or permission of instructor. Recommended: Biology 340. Fall, alternate years.

BIOL 450 Evolution (3) Addresses a variety of topics related to evolutionary biology, including the history of evolutionary thought, evolution of sex, group selection, speciation, phylogenetic systematics, coevolution, and molecular evolution. Three hours lecture. Prerequisite: Biology 320 with a grade of C- or better or permission of instructor. Recommended: Biology 107 or 119. Spring, alternate years.

BIOL 455 Research Problems in Genomics (4) A research-based course that provides students the opportunity to actively engage in genomics research projects. Students will study relevant primary literature and use a variety of genomics tools to investigate a specific genomics research problem. The course emphasizes the research process, including oral and written presentations of research results. Three hours lecture, three hours lab. Prerequisites: Biology 119 with a grade of C- or better; or permission of instructor. Spring, alternate years.

BIOL 460 Special Problems (1-3) Independent research of a biological problem under the guidance of a faculty member. Prerequisite: permission of instructor. Fall, spring.

BIOL 480 Senior Seminar I (2) Focuses on the interdisciplinary nature of biology and how life sciences relate to contemporary problems and circumstances. Involves investigative projects, written reports, and presentation of reviews. Prerequisites: At least one 400-level biology course; senior standing. Fall.

BIOL 481 Senior Seminar II (2) Focuses on interdisciplinary nature of biology and how life sciences relate to contemporary problems and circumstances. Involves written and oral analysis of class material. Prerequisites: Biology 480 with a grade of C- or better. Spring.

BIOL 482 Applied Biology Senior Seminar (3) For applied biology majors. Focuses on interdisciplinary nature of biology and how life sciences relate to contemporary problems and circumstances. Involves investigative projects, written reports, presentation of reviews, and integrative book reviews primarily in seminar format. Prerequisites: At least one 400-level biology course; senior standing. Spring.

BIOL 498 Internship in Biology (1-6) Internships are designed to meet the educational needs of students' professional goals and to provide practical experience in a position relating to a specific area of career interest. Developed by the student in conjunction with a faculty supervisor and site supervisor.

BIOL 499 Special Topics in Biology (1-4) Lectures, discussions, or special laboratory topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in biology. Repeatable course. Content changes each time course is offered. Prerequisites announced when specific topics scheduled.

## **Business (BUS)**

Business courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

BUS 265 Contemporary European Business Issues (3) Strategic business concepts in the context of the European Union. Multidisciplinary approach to issues related to the European Monetary Union, global challenges facing European business, and comparative business and leadership experiences. Students participate in site visits in the United Kingdom to develop understanding of operations of corporations from a global perspective. Exposure to historical and cultural context of European business to enhance business decision-making skills. Conducted at Harlaxton College. Open to majors in accounting, business administration, and economics. Prerequisite: Economics 102 or Interdisciplinary 150.

BUS 365 Contemporary European Business Issues (3) Strategic business concepts in the context of the European Union. Multidisciplinary approach to issues related to the European Monetary Union, global challenges facing European business, and comparative business and leadership experiences. Students participate in site visits in the United Kingdom to develop understanding of operations of corporations from a global perspective. Exposure to historical and cultural context of European business to enhance business decision-making skills. Conducted at Harlaxton College. Open to majors in accounting, business administration, or economics. Prerequisite: Interdisciplinary 150 or Economics 102.

BUS 380 Special Topics in Business (3) Covers topics not included in other courses to give greater depth in certain areas and to explore current topics. Repeatable course. Content changes each time course is offered. Prerequisite: Interdisciplinary 150. Offered periodically.

BUS 398 Internship in Business (3) First internship; a structured assignment in which student gains practical experience in a business position related to an area of career interest. Student is directed by the internship director and supervised by a member of the cooperating organization. Enrollment in course must be concurrent with the work experience. A contract (available from the business

school's internship director) must be approved and an offer letter from the internship provider must be on file before registering for course. Sponsoring institutions may require students to have completed specific courses(s) in addition to the following prerequisites prior to beginning the internship. Prerequisites: Experiential Education 90; at least one of Finance 361, Management 311, Management 377, or Marketing 325; permission of the internship director of the Schroeder Family School of Business Administration.

BUS 400 ACES Passport Program (0) The ACES Passport Program provides a roadmap for students to develop career advancement techniques and network contacts. All students are required to establish an alumni/career mentor, attend career fairs, take the Experiential Education 090 course, and complete Business 398. Students are also required to select other professional development activities, including but not limited to joining a business club; attending career advancement speaker events, networking, and Employer in the Foyer events; conducting mock interviews; and engaging with employers at company information sessions. Activities will be approved and documented by the Schroeder Family School of Business Administration career advancement office. Enrollment limited to students majoring in business or accounting. Corequisite: Management 497.

BUS 498 Internship in Business (3) Second internship; a structured assignment in which student gains practical experience in a business position related to an area of career interest. Must be a distinct work experience from that provided by Accounting 398 or Business 398. Credits earned apply only as free elective credits. Student is directed by the internship director and supervised by a member of the cooperating organization. Enrollment in course must be concurrent with the work experience. A contract (available from the business school's internship director) must be approved and an offer letter from the internship provider must be on file before registering for the course. Sponsoring institutions may require students to have completed specific course(s) in addition to the following prerequisites prior to beginning the internship. Prerequisites: Accounting 398 or Business 398; permission of the internship director of the Schroeder Family School of Business Administration.

## **Chemistry (CHEM)**

Chemistry courses are taught by the faculty of the Department of Chemistry.

CHEM 100 Fundamentals of Chemistry (4) Includes historical development of some fundamental concepts illustrating methodology and experimental basis of chemistry. Examines impact of chemistry on modern society. Credit may not be applied to science majors. Intended for students with little or no chemistry background. Three hours lecture, two hours lab. Fall.

CHEM 108 Elementary Chemistry (4) Considers fundamental concepts of chemistry, organic chemistry, and biochemistry and their applications in science, technology, and society. Three hours lecture; two hours lab. Prerequisite: Chemistry 100 or two semesters of high school chemistry. Spring.

CHEM 118 Principles of Chemistry (4) Covers principles of stoichiometry, chemical bonding and structure, thermochemistry, chemical equilibrium, and kinetics. Three hours lecture, two hours lab. Prerequisite: Two semesters of high school chemistry. Fall, spring.

CHEM 195 Introduction to Chemical Research (1) Participation in a directed research project. Prerequisites: Chemistry 118; permission of instructor. Fall, spring.

CHEM 201, 301 (0) Required of all sophomore and junior chemistry and biochemistry majors. Students receive a pass or fail grade based on their attendance to at least 50 percent of the scheduled departmental seminars and presentations. No prerequisite. Fall and Spring.

CHEM 240 Organic Chemistry I (4) Introduction to the structure, nomenclature, and chemistry of carbon compounds. Covers all major functional group classes and their simple characteristic reactions. Introduces mechanistic considerations as a basis for understanding reactions. Laboratory includes basic techniques, simple reactions, and qualitative analysis. Three hours lecture, three hours lab. Prerequisite: Chemistry 118 with a grade of C- or better. Spring.

CHEM 280 Inorganic Chemistry I (4) An introduction to the inorganic chemistry of metallic and nonmetallic elements with special attention given to the applied industrial and biochemical uses of their compounds. Surveys the behavior of selected elements, solid state, and coordination compounds. Three hours lecture, three hours lab. Prerequisite: Chemistry 240 with a grade of C- or better or permission of instructor. Spring.

CHEM 299 Special Topics in Chemistry (1-4) Lecture, discussion, or lab course devoted to a topic not covered in regular chemistry course offerings. Topics vary depending on interests of faculty and students. Repeatable course. Content changes each time course is offered. Prerequisites announced when course scheduled. Fall, spring.

CHEM 341 Organic Chemistry II (5) Studies the reactions of organic and bioorganic molecules organized around mechanistic principles. Introduces multistep syntheses and synthetic strategies. Laboratory includes studies of reactions, synthesis, and identification of compounds. Four hours lecture, four hours lab. Prerequisite: Chemistry 240 with a grade of C- or better. Fall.

CHEM 351 Physical Chemistry I (4) Introduction to thermodynamics and chemical kinetics as applied to the states of matter, chemical reactions, and chemical equilibria. Three hours lecture, four hours lab. Prerequisites: Chemistry 280; Mathematics 222; Physics 121 or 210. Fall.

CHEM 360 Quantitative Analysis (4) Studies fundamental principles of chemical analysis and their application. Topics include data



handling, chemical equilibrium, volumetric analysis, and certain instrumental methods of analysis. Laboratory experiments illustrate realistic examples of chemical analysis. Three hours lecture, four hours lab. Prerequisite: Chemistry 240 or 280 with a grade of C- or better, or permission of instructor. Fall.

CHEM 370 Biochemistry I (3) An introduction to biologically important molecules and their role in biological systems at a cellular level. Three hours lecture. Prerequisite: Chemistry 341. Fall.

CHEM 371 Biochemistry I Lab (1) An introduction to important basic techniques used in the biochemistry laboratory. Four hours laboratory. Fall.

CHEM 452 Physical Chemistry II (4) Introduction to quantum theory and statistical thermodynamics. Emphasis on the study of the structure of small molecules using visible, infrared, and magnetic resonance spectroscopy. Three hours lecture, four hours lab. Prerequisites: Chemistry 351; Mathematics 323; Physics 122 or 211. Spring.

CHEM 461 Instrumental Analysis (4) Studies modern methods of instrumental analysis. Topics include electronics in instrumentation, spectroscopic methods of analysis, and separation science. Laboratory experiments provide experience with instrumental design and operation. Three hours lecture, four hours lab. Prerequisites: Chemistry 341, 351, 360. Recommended: Chemistry 452. Spring.

CHEM 473 Biochemistry II (3) A discussion of advanced topics includes biologically important compounds and their role in biological systems at a cellular level. Three hours lecture. Prerequisites: Chemistry 280, 360, 370 with grades of C- or better. Spring.

CHEM 474 Biochemistry II Lab (1) An introduction to advanced techniques used in the biochemistry laboratory. Four hours laboratory. Prerequisites: Chemistry 370 and 371 with grades of C- or better, must be taken concurrently with Chemistry 473. Spring.

CHEM 483 Inorganic Chemistry II (4) Surveys classical and contemporary approaches to the study of molecular structure, chemical bonding, spectra, x-ray diffraction, materials, and organometallic compounds. Three hours lecture, four hours lab. Prerequisites: Chemistry 341, 351, 360. Fall.

CHEM 493 Short Topics in Advanced Chemistry (1-3) Each 4<sup>1</sup>/<sub>2</sub> week section explores an advanced topic in chemistry. Topics vary, depending on interests of faculty and students. May be offered with or without lab. Fourteen class hours, four lab periods if lab is offered. Repeatable course. Content changes each time course is offered. Prerequisites: Vary but generally include several upper-level chemistry courses. Fall, spring.

CHEM 495 Research (1-2) Involves participation in and completion of an individual research project under the direction of a faculty member. Requires written and oral report of the literature search and laboratory work. Prerequisite: Permission of instructor. Repeatable course. Content changes each time course is offered. Fall, spring.

CHEM 498 Internship in Chemistry or Biochemistry (1-6) Supervised and structured assignment in a workplace or similar setting where student works with chemical or biochemical professionals and gains practical experience in a position related to a specific area of career interest. Internship arranged in advance by the student, the site supervisor and the faculty supervisor. Repeatable course. Content changes each time course is offered. Prerequisites: Completion of at least eight hours of college chemistry courses; permission of faculty advisor and faculty internship supervisor. Fall, spring, summer.

CHEM 499 Chemistry Capstone (3) Required of all senior chemistry and biochemistry majors. Serves as a senior capstone for students majoring in chemistry/biochemistry. Involves book reviews, written thesis, large group project, and presentations. Prerequisite: Senior standing. Spring.

### **Civil Engineering (CE)**

Civil engineering courses are taught by the faculty of the Department of Mechanical and Civil Engineering. Pre-engineering students and students not admitted to the College of Engineering and Computer Science may not enroll in any civil engineering (CE) course numbered 200 or above without specific permission of the instructor, chair, or dean.

CE 183 Surveying (3) Introduces students to modern surveying instruments, surveying methods, and engineering graphics. Includes instruction in measurement of distances, horizontal angles and vertical angles, traverse and differential leveling, mapping, survey computations, and computer applications using AutoCAD®. One hour lecture, five hours lab. Fall.

CE 324 Construction Management (3) Covers basic construction management functions, general principles of planning, contracting, scheduling, and cost estimating. Also covers construction safety, sustainability, productivity, quality control, and cost accounting. Includes the use of project scheduling and cost estimation software. Fall.

CE 331 Construction Materials (3) Introduction to civil engineering materials in construction, specifically steel, timber, aggregate, Portland cement concrete, and asphaltic concrete. The focus is on the manufacture, origin, and design of materials; physical and chemical properties of materials; stress-strain behavior of materials up to failure; sustainability of materials; and evaluation of materials through destructive and nondestructive methods. Hands-on labs emphasize characterization of physical and

mechanical properties of materials, planning and execution of experiments, and interpretation of experimental data. Two hours lecture, three hours lab. Prerequisite: Engineering 232 or permission of instructor. Spring.

CE 338 Soil Mechanics and Soil Behavior (3) Covers soil origin, index properties of soil, weight volume relationships, soil classification, principles of effective stress, stress distribution, permeability, seepage, lab and field compaction, theory of consolidation, elastic and consolidation settlement, time rate of settlement, and shear strength of cohesive and cohesionless soil. Three hour lecture. Prerequisite: C- or better in Engineering 232. Spring.

CE 339 Soil Mechanics Laboratory (1) Experiments in index and engineering properties of soil such as moisture content, specific gravity, sieve analysis, Atterberg Limits, permeability, field and lab compaction, consolidation, triaxial, and direct shear. Corequisite: Civil Engineering 338. Spring.

CE 340 Structural Analysis (3) Load determination and tributary area calculations, analysis of statically determinate structures for internal forces and displacements, influence line theory, approximate analysis techniques, energy methods, and analysis of statically indeterminate systems. Prerequisite: Engineering 232 with a grade of C- or better or permission of instructor. Fall.

CE 341 Design of Steel Structures (3) LRFD design of basic structural steel members. Includes design for block shear and shear lag in tension members, lateral torsional buckling and bearing criteria of flexural members, and effective length criteria and base plate design for columns. Design of simple bolted and welded connections. Prerequisite: Civil Engineering 340. Spring.

CE 342 Design of Concrete Structures (3) Design and analysis of reinforced concrete structural members including rectangular sections for bending and shear. Design of columns for axial load and bending. Rebar development length concepts. Prerequisites: Civil Engineering 331, 340. Fall.

CE 350 Transportation Engineering (3) Covers road vehicle performance, geometric design of highways, empirical pavement design, fundamentals of Superpave, traffic flow, traffic surveys, highway capacity and level of service analysis and fundamental concepts in railway engineering. Emphasis on land transportation. Prerequisites: Civil Engineering 183; Engineering 213. Spring.

CE 374 Environmental Engineering I (3) Introduction to environmental engineering topics, including water quality, water treatment processes, air quality, solid and hazardous waste management, and environmental sustainability. Includes a study of environmental laws. Prerequisite: Chemistry 118 with lab. Spring.

CE 380 Hydraulics Laboratory (1) Experiments in fluid mechanics and hydraulics, including viscosity, flow measuring devices, momentum forces, turbines, weirs, and frictional losses in pipes. Corequisite: Engineering 366. Fall.

CE 438 Geotechnical Engineering (3) Application of soil mechanics to the design of building foundations, including shallow and deep foundation systems; foundation repair; stability analysis of earth slopes; lateral earth pressures and design of retaining walls. Also includes subsoil exploration and seismic site characterization. Prerequisite: C- or better in Civil Engineering 338 or permission of instructor. Fall.

CE 443 Intermediate Structural Analysis (3) Analysis of statically determinate and indeterminate structures using force and displacement methods such as energy methods, stiffness method, slope-deflection relationships, moment distribution, and matrix techniques. Settlement and sidesway calculations are considered throughout. Prerequisites: Civil Engineering 340.

CE 449 Advanced Structural Design (3) Advanced topics in structural design including steel connections, plate girders, composite beams, steel and concrete frames, two-way slabs, and reinforced concrete foundations. Prerequisites: Civil Engineering 341, 342.

CE 450 Advanced Pavement Design and Management (3) Application of mechanistic empirical methods for flexible and rigid pavement design, perpetual design of pavements, design of continuously reinforced concrete pavements, airfield pavement design, network & project level pavement management, distresses in rigid and flexible pavements, distress surveys, pavement management system development, maintenance strategies for rigid and flexible pavements, and new and emerging technologies in pavement design, management and rehabilitation practices. Pre-requisite: CE 350

CE 468 Engineering Hydrology (3) Study of the hydrologic cycle, watershed characteristics, unit hydrographs, stream flow analysis, ground water hydrology, flood frequency analysis, flood hydrographs, routing methods, and hydrologic design using computer simulation models. Prerequisite: Engineering 366.

CE 469 Design of Hydraulic Structures (3) Design methods for open channels, spillways, outlet works, and conduits. Water distribution system design and pipe network analysis. Design of drainage structures such as inlets, storm drain pipes, detention and retention basins, and culverts. Prerequisite: Engineering 366. Fall.

CE 475 Environmental Engineering II (3) Design and analysis of unit operations and processes for water and wastewater treatment. Topics include physical, chemical, and biological unit processes. Design of sewer networks. Analysis of water treatment plant processes and wastewater treatment plant facilities. Prerequisites: Civil Engineering 374; Engineering 366; or permission of instructor.

CE 495 Civil Engineering Design Project I (3) Introduces concepts of project management, business, public policy, globalization, and leadership, the importance of professional licensure, professional and ethical responsibility, and skills such as technical writing, time management, teamwork, and negotiations. Selection of senior project, incorporating appropriate engineering standards, multiple

realistic constraints, and sustainability concepts. Written and oral presentation of preliminary work. Pre-requisites: Senior standing. Corequisites: Civil Engineering 342, 438, and 469 or permission of instructor.

CE 497 Civil Engineering Design Project II (3) Completion of project selected in Civil Engineering 495. Design plans and a formal written report covering all phases of the project are prepared and submitted. Oral presentation of the design before peers, professional sponsors, and faculty. Discussion of the project's impact on the environment, compliance with engineering codes, standards, and society. Prerequisite: Civil Engineering 495.

CE 498 Independent Study in Civil Engineering (variable credit) Independent study of topic of interest to the student. Requires faculty sponsor and approved detailed study plan of proposed topic.

CE 499 Special Topics in Civil Engineering (1-3) Study of topics of special interest. Topics will be announced. Repeatable course. Content changes each time course is offered. Prerequisite will be announced when scheduled.

### **Cognitive Science (COGS)**

Cognitive science courses are taught by the faculty of several departments.

COGS 100, 200, 300, 400 Proseminar in Cognitive Science (0 or 1) Explores current issues in cognitive science insofar as they are pertinent to the interests of students as individuals. Facilitates oral presentation skills by having students make short presentations and receiving feedback from other students and the instructor. Grading for the course will be pass/fail. Students may take the course for 1 hour of credit no more than three times. Freshmen should enroll in Cognitive Science 100, sophomores in Cognitive Science 200, juniors in Cognitive Science 300, and seniors in Cognitive Science 400. Prerequisite: A declared major in cognitive science.

COGS 111 Introduction to Cognitive Science (3) Introduces basic concepts, issues, and methodologies associated with the study of human cognition. Insights appropriately drawn from several fields including biology, computer science, philosophy, and psychology. Fall, spring.

COGS 292 Internship in Cognitive Science (1-3) Offers students at the lower division the opportunity for supervised field experience in teaching or research either on campus or at some other facility appropriate to the student's field of study. Repeatable course. Content changes each time course is offered.

COGS 345 Complex Systems (3-4) Explores complex systems, that is, systems of self-similar entities that exhibit non-linear and emergent behavior, in theory and in application through an intensive reading, writing and presentation format including lab experience with agent-based modeling. No previous experience in mathematics or computer science required. Prerequisite: Permission of the instructor.

COGS 492 Internship in Cognitive Science (1-3) Offers students the opportunity for supervised field experience in teaching or research either on campus or at some other facility appropriate to the student's field of study. Prerequisite: At least two courses in cognitive science, philosophy, psychology, or computer science. Repeatable course. Content changes each time course is offered.

COGS 498 Seminar in Cognitive Science (3) Explores a specific interdisciplinary topic that is pertinent to the contemporary study of cognition and behavior. Repeatable course. Content changes each time course is offered. Prerequisite: Four other courses in cognitive science, philosophy, psychology, or neuroscience.

COGS 499 Independent Study in Cognition and Behavior (1-3) Offers research on special problems or persons under the direction of an individual faculty member. Prerequisite: Permission of the director of the cognitive science program. Repeatable course. Content changes each time course is offered.

### **Communication (COMM)**

Communication courses are taught by the faculty of the Department of Communication.

COMM 130 Introduction to Communication (3) Introduction to the fundamental questions, methods, and theories that define the communication discipline and professions in advertising, journalism, public relations, multimedia production, and organizational communication.

COMM 210 Professional Speaking (3) This course focuses on a variety of presentations often used in business and organizational settings in order to prepare students for the realities of career life through development and practice of professional-level presentation skills. Sample topics include audience and context analysis, clear conceptualization of goals, organization of content, effective use of technology and visual aids, critiquing presentations, and improving overall professionalism of public speaking and presentation skills. Students will develop and present a variety of presentations such as briefings, sales pitches, training sessions, news conferences, and special occasion speeches.

COMM 211 Advertising and Promotion Strategy (3) Focuses on the practical and creative skills necessary for advertising professionals. Students learn broad fundamentals of advertising, including brand positioning, copyrighting and media placement. An introduction to marketing research is included allowing students to learn how to create advertising that sells based on qualitative and quantitative research. How advertising fits into an overall integrative communication plan will be discussed.

Prerequisite: Communication 130 or permission of instructor.

COMM 220 Principles of Public Relations (3) This course is intended to offer students an overview of the field of public relations. Students will learn basic public relations concepts and processes including the evolution of public relations; public relations in corporations, government, and institutions; public opinion; target audiences; and ethics of public relations. Prerequisite: Communication 130 or permission of instructor.

COMM 221 Media Writing (3) Develop basic writing and research skills necessary for creating persuasive tools in print, broadcast, and online media. Special focus on developing a competency in the mechanics of concise clear writing through appropriate use of Associated Press style. Prerequisite: Communication 130 or permission of instructor.

COMM 231 Basic Reporting (3) Basic news gathering, writing, reporting, and editing skills relevant to journalism and mass communication. Examines the news selection process and focuses on the principles of news writing and reporting, construction of the news story to include lead writing, Associated Press style, and ethical and legal issues. Emphasis on interviewing and research skills. Prerequisite: Communication 130 or permission of instructor.

COMM 240 Live Events (3) This course teaches students the necessary skills to be part of a live event broadcast including camera operation and event production. Course offers hands-on opportunities to apply those skills in real-world settings.

COMM 251 Principles of Multimedia (3) Introduces basic concepts of Web site development, video production, and Photoshop. Prerequisite: Communication 130 or permission of instructor. COMM 312 Advertising Copy and Layout (3) Advanced techniques in message creation, emphasis on advertising campaign development and presentation. Covers product and audience research, creative strategy statements, idea generation techniques, computer-assisted layouts, preparation of a professional portfolio, and job hunting strategies. Prerequisite: Communication 211.

COMM 314 Advertising and Public Relations Campaigns (3) Details the establishment of advertising and public relations strategies, and the execution and evaluation of outcomes using research-based goals. Students create and carry out a campaign for a real-world client. Course offers an opportunity for students to integrate prior learning and problem-solving for a comprehensive campaign plan which incorporates traditional and new media platforms. Prerequisite: Communication 211.

COMM 322 Strategic Public Relations (3) Includes the historical evolution of public relations with in-depth instruction on the concepts of public opinion, audience analysis, and persuasion. Professional, ethical, and legal responsibilities of public relations examined. Emphasis on use of communication strategies to achieve organizational goals and objectives. Covers applications of public relations in a global environment. Prerequisite: Communication 220 and 221.

COMM 325 Sports Promotion (3) This course covers relationship management within the sports industry, including sponsorship (endorsement and licensing). Students will gain skills in research and market segmentation, marketing mix considerations, ticket sales and special events. Prerequisites: Communication 221 and Communication 231. COMM 332 Advanced Reporting (3) In-depth instruction and critiques of student's journalistic work done with different reporting methodologies including interviewing, official records, direct and participant observation, and survey research. Emphasis on how to cover speeches and meetings and report on local government. Prerequisite: Communication 231.

COMM 333 News Copyediting (3) Overview of the skills and uses of editing. Emphasizes the practice of copyediting and headline-writing skills for print and online publications. Skills developed include tightening writing, sharpening leads, headline writing, cutline writing, and basics of layout. Prerequisite: Communication 231.

COMM 335 Sports Writing (3) This writing-intensive course helps students gain skills in sports journalism through various story forms, including newspapers, magazines and social media. Students will explore human-interest stories and social significance and gain understanding in the transcendent value of sports in society. Prerequisites: Communication 221 and Communication 231.

COMM 345 Video Production (3) The focus of this class will be on understanding the key principles and characteristics of video production – from project concept to completion of the editing process. Prerequisite: Communication 251 or permission of instructor.

COMM 351 Web Production (3) Introduces the basic concepts of website development. Utilizes HTML and appropriate text and graphics software applications to build websites. Includes overview of basic design, writing and information architecture principles that apply to website development. Prerequisite: Communication 251 or permission of instructor. COMM 352 Multimedia Strategies (3) This class will focus on the application of multimedia principles through actual multimedia projects. These projects will be done with the larger goal of helping students demonstrate a strong understanding of the current communications landscape and the skill to develop communication strategies and messaging that is effective for the client. Prerequisite: Communication 251 and 350

COMM 380 Intercultural Communication (3) Examines the communication process of individuals from different cultures or subcultures. Explores possible sources of misunderstandings in intercultural communication (e.g., time/space factors, linguistic and nonverbal factors, ethnocentric communication, communication problems of persons engaged in personal or professional intercultural contacts).

COMM 381 Relationship Management (3) Critical examination of research and theories dealing with selected variables in one-to-one relationships. Explores development, maintenance, and deterioration stages of professional and personal relationships. Prerequisite: Communication 130 or permission of instructor.

COMM 382 Team Building and Group Communication (3) Theoretical foundations and practical skills for examining and applying communication principles in groups. Surveys concepts such as cohesiveness, leadership, groupthink, deviance, networks, choice shift, and brainstorming as they relate to communication. Prerequisite: Communication 130 or permission of instructor.

COMM 388 Organizational Communication Models (3) Application of the tools of communication in an organization. Topics include information flow, motivation and influence, power, leadership transactions, networks, channels, teamwork, and territoriality. Prerequisite: Communication 130 or permission of instructor.

COMM 390 Practicum (1-3) Supervised practical experience in student media or other university information outlets. May be repeated for up to three hours credit in a semester. Repeatable course. Content changes each time course is offered. Repeatable up to eight credit hours.

COMM 391 Professional Development Practicum (1) The course is designed to integrate students to the demands of the communication industry and to help prepare them for entering the job market. Students will gain insight in brand messaging, résumé and cover letter development, interviewing skills, negotiation tactics, traditional and online portfolio building, and the proper protocols and etiquette maintained during the job-seeking process.

COMM 395 Internship (1-3) Supervised practical experience in communication-related activities with an off-campus organization. Application required. Repeatable course. Content changes each time course is offered. Repeatable up to three credit hours. Prerequisites: 30 hours of completed academic credit and at least one 200-level communication course.

COMM 410 Health Communication (3) Provides students the opportunity to learn how communication in different contexts (interpersonal, organizational, mediated, etc.) can be utilized effectively to promote physical, mental, and social well-being. Contexts include provider-patient communication, communication in health care organizations, risk communication, and new media technologies related to health communication. Prerequisite: Junior or senior level status.

COMM 450 Multimedia Portfolio (3) The focus of this class will be on understanding the key principles and characteristics of video production and building a portfolio of material that will prepare students to succeed in the field after graduation. Prerequisite: COMM 352 or permission of instructor. COMM 483 Media Theory and Research (3) Introduction to theory and research in the field of mass media. Examines the role of mass media in modern society and the influence of media institutions and messages on individuals, communities, and society. Includes an overview of basic research methods associated with media research. Students integrate theoretical knowledge into media research areas relevant to communication professionals today. Prerequisite: Junior or senior standing.

COMM 485 Media Law and Ethics (3) Examines the rights, responsibilities, and constraints on public communication in the United States. Emphasis on the effects and interaction of differing ethical constructs and First Amendment theories and sources of constraints on the mass media. Covers regulatory policies affecting advertising, public relations, journalism, and present and future electronic mass mediums. Also examines legal areas of libel, privacy, obscenity, access to and ownership of information, and media outlets. Prerequisite: Junior or senior standing.

COMM 488 World Media Systems (3) The focus of this class is to help students identify and understand the key elements that define and influence media systems around the world. These will include specific philosophies of media systems, the state's relationship with media, how the media is financed, accessibility of the media, and the influence of culture on media audiences. Specific attention will be given to the process of media globalization and how media imports and exports influence various media systems around the world, but also to develop a greater appreciation for the factors that influence the development of the media system of the United States. Prerequisite: Senior standing.

COMM 490 Special Topics in Communication (3) Varied topics of periodic interest not covered in regular course offerings. Repeatable course. Content changes each time course is offered. Prerequisite: Senior standing and permission of instructor.

COMM 499 Independent Study in Communication (1-3) Completion of individual course of study under faculty supervision. Topic and credit hours must be approved in advance in accordance with University policy. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours.

## **Computer Science (CS)**

Computer science courses are taught by the faculty of the Department of Electrical Engineering and Computer Science. Pre-engineering students may not enroll in any computer science (CS) course numbered 206 or above without specific permission of an instructor, chair, or dean.

CS 101 Introduction to Computer Science (3) Hands-on introduction to computer science and engineering. Meets with electrical and computer engineering sections of Engineering 101. Includes short introductions to programming, robotics, and sensors. Fall.

CS 105 Survey of Computer Science (3) Intended for students who are not computer science or engineering majors. Provides broad introduction to various concepts and tools used in computing. Topics include number systems, Boolean algebra, problem solving, computability, databases, networking, Internet/web, user interfaces, artificial intelligence, robotics, and short introduction to programming. Background should include two semesters of high school algebra. Credit not given for more than

one of Computer Science 101 or 105 or Engineering 101.

CS 205 Programming for the Sciences (3) Explores the power and limitations of using computers in the sciences. Includes the study of various approaches to solving scientific problems such as numerical representations, computational numerical methods, and scientific simulations. Course may not be counted toward graduation for computer science or engineering majors. Prerequisite: Mathematics 134 or 221.

CS 210 Fundamentals of Programming I (3) Emphasizes problem-solving techniques used in the analysis and design of software solutions, including structured top-down design, abstraction, good programming style, debugging, and testing. Programming constructs covered include control structures, functions, and basic and aggregate data types. Introduction to recursion and dynamic allocation. Fall, spring.

CS 215 Fundamentals of Programming II (3) Project and problem-solving course emphasizes the use of classes for encapsulation of abstract data types and abstract data structures. Topics include classes, templates, dynamic allocation, searching and sorting, recursion, and exception handling. Introduction to algorithm analysis. Prerequisite: A grade of C- or better in Computer Science 210. Fall, spring.

CS 220 Logic Design and Machine Organization (3) Introduction to logic design and computer hardware concepts. Topics include Boolean algebra, number representations, sequential logic, counters and registers, microcomputer architecture, and assembly language programming. Spring.

CS 290 Object-Oriented Design (3) In-depth study of abstract data types and objects, including inheritance and polymorphism, frameworks and design patterns, and the use of these principles in problem solving and program design. Prerequisite: Computer Science 215. Spring.

CS 310 Puzzle Programming (1) Study of problem solving under time pressure. Simulation of the programming contest environment. All problems considered come from past programming contests. Highly recommended for any student interested in programming competitions. Prerequisite: Computer Science 215 or permission of instructor. Repeatable course. Content changes each time course is offered. It may be repeated for up to three credit hours. Fall.

CS 315 Algorithms and Data Structures (3) Design and implementation of algorithms and advanced data structures with attention to complexity and space analysis. Problem-solving strategies including greedy and divide-and-conquer algorithms as well as dynamic programming techniques. Prerequisites: Computer Science 215; Mathematics 370. Spring.

CS 320 Computer Architecture (3) Studies the architecture of computer systems from four-bit machines to supercomputers. Memory systems, I/O processors, and multi-computer systems are studied in detail. RISC, CISC and Neural Nets are introduced. Establishes the relationship of hardware and software. Includes hands-on projects. Prerequisites: Computer Science 210; Computer Science 220 or Electrical Engineering 254. Spring.

CS 350 Computer/Human Interaction (3) Study of user interface design, including ergonomic factors. Includes hands-on projects dealing with graphical user interfaces and their implementation. Prerequisite: Computer Science 215.

CS 355 Computer Graphics (3) Fundamental course in computer graphics. Topics include rendering two and three-dimensional images, two and three-dimensional transformations, line clipping, hidden lines, shading, and perspective projections. Prerequisites: Computer Science 215; Mathematics 323.

CS 375 UNIX System Programming (3) Coverage of UNIX software development and UNIX administration. Includes discussion of common shells and scripting languages, X Windows, and interprocess communication. Prerequisite: Computer Science 215.

CS 376 Small Computer Software (3) Introduction to graphical user interface provided by Windows™ operating system using C#.NET. Topics include console applications, Windows Presentation Foundation graphics, ASP.NET web forms, ADO.NET, TCP/IP connection between computers, and dynamic-link libraries (DLLs), and/or device drivers. Prerequisites: Engineering 123 or Computer Science 210; Electrical Engineering 254 or Computer Science 220. Same as Electrical Engineering 356. Fall.

CS 380 Programming Languages (3) Comparative analysis of high-level language constructs from various computational models with emphasis on a declarative computational model and declarative programming techniques. Covers representation of data types, sequence control constructs, data access, scoping, typing systems, runtime storage management, and operational semantics. Prerequisite: Computer Science 215. Fall.

CS 381 Formal Languages (3) Models of computation including finite automata, regular grammars, regular expressions, pushdown automata, context-free grammars, Turing machines, computability, and undecidability. Prerequisites: Computer Science 210; Mathematics 370. Fall.

CS 390 Software Engineering (3) Study of the software design and development process in the context of a large group-programming project. Topics covered include: project management, software management, requirements and specifications methods, software design and implementation, verification and validation, aspects of software testing and documentation standards, technical documents, contracts, risks, and liabilities. Prerequisite: Computer Science 215. Recommended: Computer Science 290. Fall.

CS 391 Software Engineering II (3) A continuation of Computer Science 390, Software Engineering. Real-world experience developing a large-scale, ongoing software applications for external clients. Topics covered include: project management, quality assurance, and expectation management. Prerequisite: Computer Science 390. Spring.

CS 395 Software Project Management (3) Issues and techniques for managing software projects. Project evaluation, scope management, stakeholder management, risk assessment, scheduling, quality, rework, negotiation and conflict management. Ethics of software development. Prerequisite or concurrently: Computer Science 390.

CS 413 Software Security (3) Provides a systematic treatment for software design and implementation to create computer programs and applications that are secure. Types of vulnerabilities and security issues involving software implementation and as well as web, cryptographic, and networking applications are identified and solutions provided including software development lifecycle models that incorporate security. Prerequisite or concurrently: Computer Science 390.

CS 415 Cryptography (3) Introduces conventional and public-key cryptography, cryptosystems such as DES and RSA, and applications of cryptography to network and system security. Prerequisites: Computer Science 215; Mathematics 370.

CS 430 Artificial Intelligence (3) Basic ideas and techniques underlying the design of intelligent computer systems. Topics include heuristic search, problem solving, game playing, knowledge representation, logical inference, and planning. Advanced topics such as robotics, expert systems, learning, and language understanding as time allows. Prerequisite: Computer Science 215. Recommended: Computer Science 315, 380.

CS 440 Databases (3) Presents database concepts and architectures. Topics include basic file structures, data dictionaries, data models, languages for data definition and queries, and transaction management for data security, concurrency control, and reliability. Hands-on experience with database and query systems. Prerequisites: Computer Science 215; Mathematics 222.

CS 445 Programming in the Large (3) Techniques for scaling software to large numbers of users. Topics will include web application programming, database scaling techniques, using web services and APIs, virtualization and containers. Prerequisite: Computer Science 380.

CS 455 Advanced Computer Graphics (3) Advanced course in computer graphics. Topics include raster graphics, texture mapping, curve approximation, and ray tracing. Prerequisite: Computer Science 355.

CS 470 Operating Systems (3) Components of operating systems. Tasking and processing, process coordination and scheduling, memory organization and management, device management, security, networks, distributed and real-time systems. Prerequisite: Computer Science 215. Recommended corequisite: Computer Science 320. Spring.

CS 472 Concurrent and Parallel Programming (3) The various programming models used for parallel architectures. Topics will range from concurrent programming on clusters, to multi-core programming, to highly parallel and GPU programming. Parallel algorithms and strategies. Prerequisite: Computer Science 470.

CS 473 Mobile Application Development (3) Hands-on, project-oriented course that explores the principles and tools involved in the design and construction of applications for mobile devices. Topics include an overview of mobile application development, application architecture, managing application resources, designing user interfaces, data storage options, integrating audio and video, and location-based services. Each offering will concentrate on one of the current mobile platforms. Repeatable course for different mobile platform content. Prerequisite: Computer Science 215. Recommended: Computer Science 290.

CS 475 Networks (3) Digital data communication systems in hardware and software, synchronous and asynchronous communication, standards, protocols, network configurations, network applications. Prerequisites: Computer Science 215; Mathematics 222.

CS 478 Embedded Systems and Real-Time Programming (3) Covers real-time programming techniques that are commonly used on embedded systems. Topics include real-time operating system concepts, concurrent programming and task scheduling algorithms, mutual exclusion and synchronization methods, and interprocess communication. Real-world experience writing applications for several embedded operating systems. Prerequisites: Computer Science 215; Electrical Engineering 354 or Computer Science 220; or permission of instructor. Same as Electrical Engineering 458. Spring.

CS 491 Software Quality Assurance (3) Various aspects of software quality assurance. Dynamic analysis approaches, such as assertions and testing. Static analysis approaches such as reviews and verification. Emphasis on various testing techniques such as unit, integration, system, acceptance and regression testing. Prerequisite or concurrently: Computer Science 390.

CS 494 Senior Project Seminar (0) Provides guidance for the selection of a topic for the senior design project. Projects (some industry-sponsored) are presented for student selection. An outline and short presentation of the project selected is required. Prerequisite: 12 hours of 300-level computer science courses. Computer engineers may substitute Electrical Engineering 494. Spring.

CS 495 Senior Project Phase I (3) Plan the computer science project and formulate the preliminary design under the guidance of faculty and industrial advisors. Discussion of the relationship of computer science as a discipline to the humanities and social sciences. Preparation of a written formal proposal and an oral presentation of the proposal. Seminar session addresses ethical,

environmental, economic, safety, and ergonomic aspects of computer science. Written reaction to seminar topics. Prerequisites: Computer Science 494; GPA of at least 2.0. Computer engineers may substitute Electrical Engineering 495. Fall.

CS 497 Senior Project Phase II (3) Student completes and builds the design proposed in Computer Science 495. A formal design review is conducted early in the semester. A practice oral report, a written final report, a final oral report, and a demonstration of the completed project are required. Prerequisite: Computer Science 495. Computer engineers may substitute Electrical Engineering 497.

CS 498 Independent Study in Computer Science (variable credit) Independent study of a topic of interest to the student. Requires faculty sponsor and approved detailed study plan. Repeatable course. Content changes each time course is offered.

CS 499 Special Topics in Computer Science (1-3) Study of topics of special interest. Topics will be announced. Repeatable course. Content changes each time course is offered. Prerequisites will be announced when scheduled.

### **Cooperative Education (COOP)**

COOP 91-95 Professional Practice (0) For co-op students only. Students register for Cooperative Education 9X during the Xth co-op work period (e.g., Cooperative Education 93 during the third work period). Requires satisfactory work performance and written co-op work report.

### **Criminal Justice (CJ)**

Criminal justice courses are taught by the faculty of the Department of Law, Politics, and Society.

CJ 205 Introduction to Criminal Justice (3) Views crime and crime control in historical and societal context. Explores the extent of crime and its impact on modern society. Explores causes of crime and the development and operation of the criminal justice system with emphasis upon constitutional restraints. Explores the police, court, and correctional system.

CJ 210 Deviance and Crime (3) Examines deviance and crime through a number of sociological, psychological, and criminological perspectives.

CJ 301 Special Topics in Criminal Justice (3) Topics chosen on the basis of programmatic needs or student interest. Repeatable course. Content changes each time course is offered. Prerequisites: Criminal Justice 205 or Criminal Justice 210/Sociology 210.

CJ 342 Criminal Law (3) Studies both substantive and procedural law including specific topics in each. Prerequisite: Criminal Justice 205 or Legal Studies 125.

CJ 354 Introduction to Forensic Science (3) Studies the organization and functions of investigative agencies, basic considerations in the investigation of crime, collection and preservation of physical evidence, and the apprehension process. Prerequisite: Criminal Justice 205 or permission of instructor.

CJ 360 The Correctional System (3) Explores the entire correctional process: history and development, probation and parole, institutional corrections, and community based corrections. Prerequisites: Criminal Justice 205; Criminal Justice 210/Sociology 210; or permission of instructor.

CJ 370 The Police (3) Survey of the organization and functions of police agencies, focusing on law enforcement, peacekeeping, and public service responsibilities. Prerequisites: Criminal Justice 205; Criminal Justice 210/Sociology 210; or permission of instructor.

CJ 380 Courts and Justice (3) Introduction to the American court system. The role of the criminal courts emphasized. Prerequisites: Criminal Justice 205; Legal Studies 125; Sociology 105; or permission of instructor.

CJ 410 Juvenile Delinquency (3) Studies the nature, extent and causes of juvenile crime, at-risk behavior and child abuse. The juvenile justice system and methods of prevention, treatment and correction are analyzed. Prerequisites: Criminal Justice 205; Criminal Justice 210/Sociology 210; or permission of instructor.

CJ 420 International Crime and Justice (3) Focuses on international criminals and a cross-cultural examination of criminal justice systems. Also deals with the relationship between international crime and crime in the United States. Prerequisites: Criminal Justice 205; Criminal Justice 210/Sociology 210; or permission of instructor.

CJ 430 Organized Crime (3) Examines the historical development of organized crime, as well as contemporary organized crime activities. Prerequisites: Criminal Justice 205; Sociology 105, 210; or permission of instructor.

CJ 440 Criminal Justice Ethics (3) This course provides an overview and exploration of the study of ethics as they relate to the criminal justice system. The course begins with a broader approach and examination of general ethics and morality and then applies ethical frameworks to issues of crime and justice. Specific attention is paid to issues surrounding law enforcement, the law and courts, and corrections issues – especially issues surrounding the punishment of criminals. Prerequisites: Criminal Justice 205 or Criminal Justice 210/Sociology 210; or permission of instructor.

CJ 450 Senior Seminar in Criminal Justice (3) Capstone educational experience in criminal justice, offering students the opportunity to use their substantive and methodological training to complete and present an original research project.



Prerequisites: Criminal justice major or minor; senior standing; Sociology 235, 344; or permission of instructor.

CJ 496 Internship (1-6) Internships available to majors of junior or senior standing who have completed core courses. GPA requirements must be met and student must file an internship applications with advisor. Repeatable course. Content changes each time course is offered. Prerequisites: Criminal justice major; junior or senior standing.

### **Discussion (DISC)**

Discussion groups are sponsored by faculty members from various University departments. These groups are organized throughout the academic year, and are available for academic credit.

DISC 100 Journeys and Discoveries (1) This discussion class is designed to encourage new UE students who are undecided about their academic major to examine their own journeys and discoveries as college students, including their explorations of new subjects through general education classes, readings, and activities outside the classroom. The course will feature readings about personal quests, focused exploration of majors, opportunities to talk with faculty members from various disciplines, attendance at cultural events that broaden students' perspectives, and interaction with the Center for Career Development and other relevant student support services. Class discussion and oral reports are required. A grade of P for passing or a grade of F for failure will be assigned upon completion. Enrollment is limited to entering students who have not declared an academic major. Learning objectives include practice in critical reading, thinking, and discussion.

DISC 300 Faculty Sponsored Discussion Group (1) Provides a forum in which teachers and students meet in small groups to discuss readings each week. May be repeated for a total of three credit hours to be used as free elective credit only. A grade of P for passing or a grade of F for failure will be assigned upon completion. Each discussion group centers on a single topic. Students are required to read one-and-a-half to two hours per week and then meet for one hour per week with the group (including a faculty member) to discuss the reading assignment. Students are limited to one discussion group enrollment per semester. Prerequisite: Permission of instructor.

### **Economics (ECON)**

Economics courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the Schroeder Family School of Business Administration section of this catalog for the complete leveling policy.

ECON 101 Principles of Macroeconomics (3) Macroeconomics is the branch of economics that studies the domestic economic system as a whole and its interaction with foreign economies. This course focuses on the behavior of the aggregate economy as it pertains to the determination of national income, production, level of employment, general price level, and trade flows. Particular attention is devoted to fiscal policy and monetary policy and their respective impact on the economic system. Satisfies Outcome 9.

ECON 102 Principles of Microeconomics (3) Markets are among the oldest social institutions known to man. Microeconomics is a branch of economics that studies the dynamics of individual markets and prices. Focuses on the behavior of producers and consumers and the interdependence in the market process. Pays particular attention to the structure and evolution of competitive markets. Satisfies Outcome 9. Economics 101 is not a prerequisite.

ECON 300 Regression Analysis (3) Second course in applied statistics for students in economics and other social sciences, business administration, mathematics, or natural sciences. Topics include simple and multiple regression analysis, extensions of the classical regression model, and problems associated with forecasting. Assigned work exposes students to problems from a wide range of applications. This course includes introduction to econometric software and experiments involving a variety of real world data sets. Prerequisite: Quantitative Methods 227 or another course in principles of statistics. Offered alternate fall semesters.

ECON 345 Intermediate Microeconomics (3) Microeconomics provides the foundation for logical and disciplined reasoning in virtually every aspect of economics. A rigorous introduction to the behavior of buyers and producers and their interaction in the market, course covers theories of rational choice, principles of production, and the economic costs of production. Attention devoted to the nature of competitive and monopoly markets and to markets for factors of production. In each area, emphasizes the principles of economic efficiency and the concept of economic welfare. Prerequisites: Economics 102; Mathematics 134 or higher. Offered alternate years.

ECON 346 Intermediate Macroeconomics (3) Macroeconomics is the study of the economy as a whole. Course analyzes the factors determining the growth in income, changes in prices, and the rate of unemployment. As appropriate, the course makes use of models suited to the long run and the short run and models of both open and closed economies. Prerequisites: Economics 101, 102. Offered alternate years.

ECON 372 Money and Banking (3) Monetary economics examines the effect of money on economic outcomes. The course focuses on the theory and applications of monetary economics with emphasis on how money supply and interest rates are controlled in practice. Discussion topics include the role of interest rates in the economy and their determination in financial markets, operating goals and procedures of the Federal Reserve in its implementation of monetary policy, and alternative theories regarding the determination of aggregate output, employment, and prices. Prerequisites: Economics 101, 102.

ECON 380 Special Topics in Economics (3) Covers topics not included in other courses, to give greater depth in certain areas and to explore current economic topics. Repeatable course. Content changes each time course is offered. Prerequisites: Economics 101, 102. Offered periodically.

ECON 381 Economics of Public Policy (3) Uses the normative standards of efficiency, equity, and freedom to evaluate various public policies. Policies discussed include policies on agriculture, housing, the environment, market power, income distribution, taxation, and economic growth. Prerequisites: Economics 101, 102. Offered alternate years.

ECON 395 Independent Study (1-3) Independent research in economics conducted under faculty supervision. Prerequisite: Permission of instructor.

ECON 398 Internship in Economics (3) A structured assignment in which student gains practical experience in an economics position. Student is directed by the internship director and supervised by a member of the cooperating organization. Enrollment in course must be concurrent with the work experience. A contract (available from the business school's internship director) must be approved and an offer letter from the internship provider must be on file before registering for course. Sponsoring institutions may require students to have completed specific course(s) in addition to the following prerequisites prior to beginning the internship. Prerequisites: Experiential Education 090; Economics 101, 102; one from Economics 300, 345, 346, 372; permission of the internship director of the Schroeder Family School of Business Administration. Not repeatable.

ECON 400 Econometrics (3) Continuation of Economics 300. An introductory treatment of econometric techniques and their application to business and social science research. Topics include general linear regression models, nonlinear regression, simultaneous equation models, and models with limited dependent variables. Based on a series of experiments using real world data sets. Prerequisite: Economics 300. Offered alternate spring semesters.

ECON 425 International Trade (3) Analyzes theories and empirical foundations of international trade and factor movement, trade barriers, international monetary relations, foreign exchange systems, balance of payments, and current international economic problems. Prerequisites: Economics 101, 102. Offered alternate years.

ECON 435 International Monetary Economics (3) This course focuses on the theory of international monetary economics and applies it toward gaining an understanding of current developments and policy issues. The discussion topics on the theory side include the national income accounting, the foreign exchange markets and exchange rate determination, the effect of money and inflation on interest rates and exchange rates, the effect of exchange rates on aggregate demand and output, the choice of the exchange rate regime, and the effect of monetary and fiscal policy on employment and output in an open economy under flexible and fixed exchange rate regimes. The insights gained from the theoretical discussion will help discuss various topics such as the US current account deficit, the impact of the Chinese exchange rate policy on its trade partners, and the role of monetary and fiscal policy coordination in the aftermath of the global financial crisis. Prerequisites: Economics 101, 102.

ECON 470 Financial Institutions and Markets (3) The operation and management of financial institutions and the markets in which they operate discussed. Managerial and public policy issues toward financial institutions and markets also addressed. Prerequisite: Finance 361. Same as Finance 470. Offered alternate years.

ECON 475 Development of Economic Thought (3) Surveys the range of economic ideas from ancient times to the present. As in other seminars, the student is responsible for substantial research and presentation of his or her ideas. Prerequisites: Economics 101, 102. Offered periodically.

## **Education (EDUC)**

Education courses are taught by the faculty of the School of Education.

EDUC 100 History and Foundations of American Education (3) History of schooling in America and how the current structures, philosophies, and policies came to be. Covers how contemporary schools are structured, managed, funded, and staffed. Helps students identify and build the necessary skills (writing, communicating, using technology, knowing content, and building lifelong skills) to teach. Fall, spring.

EDUC 150 Foundations and Diversity in American Education (3) This course is a combination of lecture/seminar/small group and practicum. After about six weeks of classwork directed toward the historical and foundational aspects of American education, students are placed in local schools that are classified as highly diverse with respect to both ethnicity and economic circumstances (high levels of free and reduced lunch.) The course will remain classified as a writing-intensive course, and all of the current writing assignments will be retained; these writing assignments are related to both the foundational and historical components of schooling as well as the various multicultural components that will help students become more culturally competent.

EDUC 200 Introduction to Diversity in Schools, Teachers, and Learners (3) Examines the complex realities of schools, teachers, and learners in contemporary American society. Issues include cultural competency, models of effective teaching, diversity in learning, professional standards, and accountability. Includes significant time spent in local school placements. Prerequisite or corequisite: Education 100. Fall, spring.

EDUC 201 Introduction to Special Education (3) An overview of exceptionality and special education, including definitions, basic legal requirements, and the history and development of the field. Also examines etiology, characteristics, and educational interventions as they relate to following categories of special education: behavior disorders, communication disorders, health impairments, learning disabilities, mental retardation, orthopedic disorders, and visual impairments. Finally, addresses current issues such as inclusion, early childhood programming, transition, assessment, and multiculturalism.

EDUC 204 Teaching Students with Mild/High Incidence Disabilities (3) Studies theoretical and research-based considerations of educating individuals with mild/high incidence disabilities including etiology, assessment, interventions, and service delivery. Theories of behavior, procedures of identification, diagnosis, and educational planning are examined. Prerequisite: Education 320.

EDUC 205 Clinical Practicum I – Mild Intervention, Elementary Level (3) Emphasizes practical application of the content in Education 204 or 206. All clinical experiences involve assignments of approximately three hours a day, four days a week, for 14 weeks. Students are assigned to a special education class, resource room, itinerant teacher or community agency serving handicapped children. Activities in the clinical placement are designed to enhance the instruction presented in the corequisite courses. Corequisite: Education 204 or 206.

EDUC 210 Introduction to Special Education and Mild Disabilities (3) Introduction to educational services for children whom are included in the exceptional children categories of mildly mentally handicapped and learning disabled. A brief overview of educational services for students in low incidence categories of physical and health impairment, visual impairment, hearing impairment and communication disorders, mental retardation, and serious emotional handicap. Other areas covered are etiological, psychological, and sociological factors related to each disability category. Emphasis on elements of coordinated programming between special and regular education personnel that are required to effectively educate special needs learners.

EDUC 224 Introduction to Kindergarten Education (3) Introduces historical roots and current practices involving a holistic approach to educating a diverse population of young children. Areas of initial exploration include philosophy, scheduling, developmentally appropriate materials, transitions to kindergarten from preschool environment, and the concept of “readiness” for school situations. Laboratory experiences provided. Prerequisites: Education 100, 200.

EDUC 230 Experiences in the Arts for Young Children (3) Acquaints student with activities, materials, equipment, and methods appropriate in music, creative play, and arts programming for young children.

EDUC 233 Child Development (3) Studies general behavior theory and child development techniques for helping the child deal with problems in the home and school, preventing and eliminating deviant and undesirable behaviors, and developing parental cooperation and educational programs. Identification, observation, and recording of maturation sequences emphasized. Laboratory experiences included. Prerequisite: Psychology 226 or permission of instructor.

EDUC 235 Mathematics for Primary School Children (2) Emphasizes the value of science and mathematics experiences for young children. Procedures and materials used to develop mathematical and scientific concepts through the inquiry method are studied.

EDUC 236 Classroom Techniques for the Teacher of Preschool Children (3) Discussions cover motivational techniques, classroom activities, use of methods and materials, and construction of lesson plans to meet individual needs of young children. Emphasizes relationships between techniques and goals of early childhood education.

EDUC 264 Assessment, Evaluation, and Remediation of Students with Special Needs (3) Students learn the nature of educational assessment by studying the principles and practices of diagnostic procedures in special education. Examines formal and informal assessments, standardized tests, test administration, test interpretation, and summary writing in the primary academic areas of reading, mathematics, and written expression. Learn to utilize assessment as a means for formulating educational goals and instructional objectives along with measuring a student’s progress. An instructional remediation practicum in reading, mathematics, and written expression is assigned.

EDUC 265 Role and Application of Computers in Education (3) Introduction to the roles of computers in education with an emphasis on computer-assisted and computer-managed instruction. Students learn to use software tools and write simple programs. Two hours lecture, two hours lab.

EDUC 306 Teaching Students with Emotional Handicaps and Behavior Disorders (3) Covers issues of definition, incidence, and prevalence in a historical context. Classification systems are identified along with the major conceptual models (e.g., biological/biogenic, behavioral, cognitive/behavioral, ecological/sociological, psychodynamic/humanistic, and psycho-educational). Finally, educational planning techniques and strategies outlined for improving behaviors and teaching socialization.

EDUC 307 Clinical Practicum III – Intervention for Students with EH/BD (3) Emphasizes practical application of the content in Education 306. Corequisite: Education 306. Note: All clinical experiences involve assignments for three hours a day, four days a week, for 14 weeks. Students are assigned to a special education class, resource room, itinerant teacher, or community agency serving handicapped children. Activities in the clinical placement are designed to enhance the instruction presented in the

corequisite courses.

EDUC 308 Teaching Students with Severe and/or Multiple Disabilities (3) Introduces prevalence, etiology, and definitions of severe and/or multiple disabilities. Students learn to design education programs and develop community service programs to supplement family support. Ethical issues (e.g., genetic screenings, abortion, withholding of medical treatment) are explored. Additional issues include assistive technology, functional skills, and vocational skills. Finally, the idea of inclusion and the transition of students with severe disabilities from school to community life are discussed.

EDUC 309 Clinical Practicum IV – Intense Intervention (3) Emphasizes practical application of the content in Education 308. All clinical experiences involve assignments for three hours a day, four days a week, for 14 weeks. Students are assigned to a special education class, resource room, itinerant teacher, or community agency serving handicapped children. Activities in the clinical placement are designed to enhance the instruction presented in the corequisite course. Corequisite: Education 308.

EDUC 320 Teaching Strategies in K-12 Schools (3) For prospective kindergarten-12 teachers. Addresses curricular and teaching issues from both the theoretical and practical perspectives. Emphasis on understanding the K-12 curriculum and preparing developmentally appropriate instructional strategies. Prerequisites: Education 100 & 200 or 150; or permission of instructor, Fall, Spring.

EDUC 321 Teaching Social Studies (3) Examines methods of teaching the social sciences using current materials and basic concepts. Unit planning and inquiry methods of teaching, including the knowledge and use of learning resources, emphasized. Prerequisite: Education 320. Corequisites: Education 323, 324, 419; or permission of instructor. Spring.

EDUC 322 Strategies for Special Needs Students in K-12 Schools (3) Designed for K-12 teachers, includes development of skills, strategies, and knowledge needed to meet the educational needs of students with special needs. Special needs students, including those with learning disabilities, cultural or language differences, or other conditions that inhibit learning, have a right to access the regular education curriculum and are often included in regular classrooms. This course includes a practicum in local schools. Prerequisites: Education 100 & 200 or 150, 320; or permission of instructor. Fall, Spring.

EDUC 323 Teaching Science, Conservation, and Ecology (3) The discovery approach to teaching science emphasized. Prerequisites: Two general science courses; Education 320. Corequisites: Education 321, 324, 419; or permission of instructor. Spring.

EDUC 324 Principles and Practices in Mathematics Education (3) Provides experiences in methods, materials, and organization of elementary and middle school mathematics education. Emphasis on activity-based learning and meeting individual needs of students including mainstreamed students. Two hours lecture, two hours lab. Prerequisites: Education 320; Mathematics 101, 202. Corequisites: Education 321, 323, 419; or permission of instructor.

EDUC 325 Developmental Linguistics (4) Examines linguistic development in humans from the initial attempts at speech and language to the production of mature language. Content assists the prospective talker in identifying speech disorders and evaluating speech and language development. Theories of language acquisition presented along with their implications for language arts programming from infancy through the junior high/middle school. Lab experiences and report writing included. Prerequisites: Education 100, 200; Psychology 226.

EDUC 326 Principles and Methods of Teaching ENL (3) Provides a comprehensive overview of effective English-as-a-new-language (ENL) techniques and explains how to apply techniques to the fundamentals of language acquisition. Designed for those who are either presently teaching or will be teaching English to international students, either in the United States or overseas. Prospective ENL teachers learn practical classroom applications and various teaching techniques. Provides participants with guidelines for planning lessons involving specific techniques, activities for enhancing textbook exercises, and effective methods for correcting student errors.

EDUC 327 Integrated and Innovative Approaches in ENL (3) Continuation of ENL techniques and methods covered in Education 326. Provides students more in-depth knowledge and additional applications of ENL foundations, techniques, and learning variables. Students study the latest ENL approaches and then work on the application of these principles as they pertain to classroom management, learning styles, and classroom interaction/dynamics. Participants also examine the acquisition of both first and second languages so they can compare and contrast the two processes for a better assessment of errors and approaches for learning.

EDUC 330 Literature for the Elementary and Adolescent Child (3) Literature, stories, essays, issues, and language materials for kindergarten through young adult reviewed. Prerequisite: 320. Spring.

EDUC 331 Communicating Values of Literature (2) Studies values of literature for middle school (grades five to nine) and junior and senior high school students, and develops techniques for helping the character. Teachers and community leaders are trained to lead small and large group discussions. Materials are selected to further the interests, tastes, and values of all available literature. Prerequisites: One general education literature course; Education 100, 200; or permission of instructor.

EDUC 345 Designing Developmentally Appropriate Curriculum for Kindergarten Education (3) Models of kindergarten education based on various child growth and development philosophies of how young children grow and develop are utilized as the basis for designing age-appropriate effective instruction for meaningful school programs for young children. Topics include developmentally appropriate curriculum planning, classroom management (rules, procedures, discipline), environmental design, organization, and administration of model programs. Laboratory experiences are provided. Prerequisite or corequisite 320: Fall.

EDUC 362 All-Grade Curriculum and Teaching Strategies (3) For prospective teachers in all-grade art, music, and physical education programs. Addresses curriculum and teaching issues at elementary, middle school, and senior high school levels. Practicum experiences included. Should be taken in the same semester that the teaching major special methods course is taken. Prerequisites: Education 100, 200; or permission of instructor.

EDUC 363 Principles and Strategies of Teaching in Secondary Schools (3) The application of learning principles, analysis of forces influencing the educational process, and the general methods and procedures used in teaching in secondary schools are studied. Intern teaching experiences required in addition to class time. Additional internship hours required. Junior-level course. Prerequisites: Education 150, 320; admission to teacher education. Corequisite: Appropriate methods course selected from Education 451, 453, 454, 456, 459, 461, Art 497, Music 476, Music 373, Music 372. Fall, spring.

EDUC 385 Multicultural Understanding (3) Introduction to diverse lifestyles related to a variety of cultural groups. The worth of each individual emphasized, and the importance of this view for developing the understanding required for intercultural relationships stressed.

EDUC 401 Developing Educational Programs for Individuals with Disabilities (3) This course evaluates various types of educational programs (IFSP, IEP, and ISP) developed across the life span (birth to adulthood) of individuals with disabilities. Effective strategies for collaboration between educational professionals and related service providers are examined.

EDUC 403 Classroom Management Techniques for the Elementary Teacher (1) Introduces basic classroom management techniques designed to promote teaching with individuals and groups. Areas of emphasis include avoiding behavior problems, solving behavior problems, and fostering personal growth. Utilizes research-based approach. Prerequisites: Education 100, 200. Fall.

EDUC 409 Practicum in Kindergarten Education (4) Opportunities to integrate basic skills and knowledge in applied practice situations. Observations, assessment, lesson presentation, and curriculum planning in primary setting stressed. Laboratory experiences provided. Prerequisites: Education 224, 345. Fall.

EDUC 410 Programming for Handicapped Preschoolers (3) Explores a variety of methods, materials, and theories regarding the identification and integration of handicapped children 0-5 years of age into preschool programs. Emphasizes identification, assessment, intervention, teaching techniques, abnormal development, program administration, curriculum revision, physical facilities and adaptations, referral processes, and resources. Prerequisite: Psychology 226 or permission of instructor.

EDUC 411 Creative Learning and Play Experiences for Young Children (3) Stresses the roles of creative learning and play experiences in the child's intellectual, social, and emotional development. Studies the developmental and therapeutic aspects of play and appropriate methods and materials for structuring play.

EDUC 412 Home-School Relationships/Preschool (3) Ways to build effective home-school relationships and provide parent effectiveness training emphasized; teaching parents how to teach their children stressed.

EDUC 416 Kindergarten Education (2) An overview of kindergarten programming. Topics include the social climate of the classroom, ways to provide for the child's well-being, available equipment and supplies, curricular and daily schedule plans, preparing records and reports, foundations of learning and readiness for first grade, and kindergarten organization and administration. Laboratory experiences included. Prerequisites: Education 100, 200. Offered alternate spring semesters.

EDUC 417 Practicum in English as a New Language (3) Opportunities to integrate basic skills and knowledge in selected applied practice situations. Includes a field experience with observations, assessments, lesson presentation and planning in an English-as-a-new-language setting. Prerequisites: Admission to teacher education; Education 325, 326, 327; or permission of instructor.

EDUC 418 Practicum: Implementing the Language Arts Curriculum (4) Integrates communicative skills with classroom experiences. Give students opportunities to apply skills and methodology learned in language arts, reading, and children's literature courses in actual classroom situations in individualized, small group, and whole group teaching situations. Supervision by the classroom teacher and the college instructor blends theory, methodology, and practical experience in teaching the language arts in the classroom. Additional internship hours required. Prerequisites: Junior status; Education 100, 200, 320. Corequisites: Admission to teacher education; Education 403, 421, 422; or permission of instructor. Fall.

EDUC 419 Practicum: Implementing Social Studies and Science Curriculum (4) Coordinates the teaching of mathematics, science,

and social studies in the elementary school. Students placed so they can apply the appropriate methodology for each of these subject areas. Provides practicum experiences that allow the developing teacher to apply newly developed skills. Additional internship hours required. Prerequisite: Junior status; Education 100, 200, 320. Corequisites: Admission to teacher education; Education 321, 323, 324; or permission of instructor. Spring.

EDUC 420 Teaching Language Arts in the Elementary Schools (3) The processes, procedures, and problems encountered in teaching the language arts discussed. Consideration for developing and refining the pupil's proficiency in the oral and written language domains included. Spelling, usage, handwriting, and linguistics for the classroom teacher also studied. Prerequisite: Education 320. Corequisites: Education 330, 418, 426; or permission of instructor.

EDUC 421 Preschool and Beginning Reading Skills (3) Explores developmental aspects of reading acquisition as they relate particularly to the early stages of learning to read. Provides background and techniques to promote reading acquisition. Evaluation, diagnosis, and remediation of those early skills stressed. Students learn to involve parents in the development of pre-reading skills. Prerequisites: Education 100, 200. Fall

EDUC 422 Teaching Reading and Language Arts in the Elementary School (4) Explores process, procedures, and problems in teaching reading and language arts. Reading content includes basic knowledge and competency required for planning and implementing developmental reading programs. Language arts content includes basic knowledge and skills for instruction designed to develop and refine students' proficiency in oral and written language. Prerequisites: Education 100, 200; or permission of instructor.

EDUC 426 Teaching Reading (3) Theory and methodology of teaching reading emphasized. Stresses basic knowledge and competency required for planning and implementing developmental reading programs in the elementary school. Basic instrumental emphasis on developing the diagnostic-prescriptive instructional design. Prerequisite: Education 320. Corequisites: Education 330, 418, 420; or permission of instructor. Fall.

EDUC 427 Corrective Reading (3) Diagnosis and treatment of reading difficulties for the classroom teacher are discussed. Emphasizes diagnostic strategies and treatment procedures for common kinds of reading problems. Clinical experiences integral to this course. Prerequisite: Education 422. Spring.

EDUC 428 Reading in the Content Areas (3) Provides overview of basic reading skills and specific comprehension and vocabulary skills for the content areas. Study techniques, reading levels, and comprehension development are examined, and skills in teaching content area lessons developed. Field placement included. Prerequisites: Education 426, 427, 436, 443; or permission of instructor. Fall, spring.

EDUC 430 Supervised Teaching in Kindergarten Education (6) Students receiving kindergarten endorsements must complete teaching and other observational and participatory activities under the supervision of a cooperating kindergarten teacher and a University supervisor. A grade of C or better must be earned in student teaching to be recommended for a teaching license. Prerequisites: Admitted to teacher education; grade C or better in all education courses; Education 224, 345, 411 with GPA of at least 2.75 in these courses; senior status with at least 2.70 overall GPA. Spring.

EDUC 432 Supervised Teaching in Elementary School (6-12) Teaching, observation, and participation activities under the supervision of a cooperating teacher and a University supervisor. A grade of C or better must be earned in student teaching to be recommended for a teaching license. Prerequisites: Admitted to teacher education; grade of C or better in all education courses; Art 102, Education 320, 321, 323, 324, 418, 419, 420, 426, Music 270, with GPA of at least 2.75 in these courses; senior status with at least a 2.70 overall GPA. Fall, spring.

EDUC 433 Supervised Teaching and Observation in English as a New Language (6) Integrates the knowledge, skills, and dispositions learned in course work and practicum with actual teaching experiences in school or community-based English as a new language classes. Supervision by the ENL teacher and the college instructor. Blends theory, research, and methodology.

EDUC 434 Supervised Teaching in Middle School (6) Teaching and other observation and participation activities under the supervision of a cooperating teacher and a University supervisor. A grade of C or better must be earned in student teaching to be recommended for a teaching license. Prerequisites: Admitted to teacher education; grade of C or better in all education courses; Education 426, 427, 443, with at least a 2.75 GPA in those courses; at least 15 hours of course work in the teaching subject with at least a 2.80 GPA in those courses; senior status with at least a 2.70 overall GPA. Fall, spring.

EDUC 435 Supervised Teaching Seminar (1) Emphasis is on the discussion of professional expectations and student teaching experiences. Topics of importance and interest to teachers will be presented by authorities in those areas. Corequisite: Supervised teaching – Education 432, 433, 434, 436, 437, 439, 497, Music 478 or Music 479.

EDUC 436 Supervised Teaching in Senior High or Middle School (6-12) Teaching and other observation and participation activities under the supervision of a cooperating teacher and a University supervisor. A grade of C or better must be earned in student teaching to be recommended for a teaching license. Prerequisites: Admitted to teacher education; grade of C or better in all

education courses; Education 363, 428, and special methods course (may be taken concurrently) with GPA of at least 2.75 in those courses; at least 30 hours of course work in the major teaching subject with a GPA of at least 2.80 in those courses; at least 18 hours of course work in the minor teaching subject with a GPA of at least 2.50 in those courses; senior status with at least a 2.70 overall GPA. Corequisites: Education 428, 443. Fall, spring.

EDUC 437 MD, SD, EH Supervised Teaching in Special Classes (for Mild Disabilities, Severe Disabilities, Emotionally Handicapped) (6) Teaching and other activities under the supervision of a cooperating teacher and a University supervisor in special education. Prerequisites: Admitted to teacher education; grade of C or better in all required courses; Education 210, 324, 420, 426, 427, with GPA of at least 2.75 in those courses; senior status with overall GPA of at least 2.70. Students register for Education 437 MD, SD, EH according to the certification area desired. Students in the Clinical Training Program in special education enroll in Education 437 and in Education 439 in a second exceptionality area. Fall, spring.

EDUC 439 MD, SD, EH Supervised Teaching in Special Classes (for Mild Disabilities, Severe Disabilities, Emotionally Handicapped) (6) Student teaching and observation in a second area of disability. See course description for Education 437. Fall, spring.

EDUC 443 Curriculum and Learning in Junior High/ Middle School (3) Designed for prospective teachers in junior high and middle schools. Addresses curricular issues and learning issues from the theoretical and practical vantage points for the middle school. A strong focus on developing an understanding of the curriculum in junior high and middle schools, how it is designed and taught, and the policies that have an impact on its continued development. Examines learning theories in relationships to student needs in junior high and middle schools. Field placement included. Additional internship required. Prerequisites: Education 320; admission to teacher education.

EDUC 447 Mental Retardation and Assorted Severe Disabilities (3) Examines the psychological, sociological, and educational implications of mental retardation and its causes, characteristics, diagnosis, and treatment. Special problems of low functioning, multiple handicapped populations are analyzed. Prerequisite: Education 210 or Psychology 121 or permission of instructor. Fall.

EDUC 451 Methods of Teaching Science in Senior High, Junior High, Middle Schools (2) This course is a one-semester introduction to methods and issues surrounding the teaching of science in middle, junior, and senior high levels. The course is specifically designed to connect the student's training in science to educational theories. The course will focus on issues surrounding science instruction and teaching techniques. Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 453 Methods of Teaching English in Senior High, Junior High, Middle Schools (2) This course is a one-semester introduction to methods and issues surrounding the teaching of English Language Arts in middle, junior, and senior high levels. The course is specifically designed to connect the student's training in English Language Arts to educational theories. The course will focus on issues surrounding English Language Arts instruction and teaching techniques. Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 454 Methods of Teaching Foreign Language in Senior High, Junior High, Middle Schools (2). This course is a one-semester introduction to methods and issues surrounding the teaching of foreign language in middle, junior, and senior high levels. The course is specifically designed to connect the students training in foreign language to educational theories. The course will focus on issues surrounding foreign language instruction and teaching techniques. Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 456 Methods of Teaching Mathematics in Senior High, Junior High, Middle Schools (2). This course is a one-semester introduction to methods and issues surrounding the teaching of mathematics in middle, junior, and senior high levels. The course is specifically designed to connect the students training in mathematics to educational theories. The course will focus on issues surrounding mathematics instruction and teaching techniques. Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 457 Methods of Teaching Physical Education in Elementary, Senior High, Junior High, Middle Schools (2) Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 459 Methods of Teaching Theatre Arts in Senior High, Junior High, Middle Schools (2) This course is a one-semester introduction to methods and issues surrounding the teaching of theatre arts in middle, junior, and senior high levels. The course is specifically designed to connect the students training in theatre arts to educational theories. The course will focus on issues surrounding theatre arts instruction and teaching techniques. Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 460 Methods of Teaching Speech in Senior High, Junior High, Middle Schools (2) Prerequisite: Admission to teacher education. Corequisite: Education 363.

EDUC 461 Methods of Teaching Social Studies in Senior High, Junior High, Middle Schools (2) This course is a one-semester introduction to methods and issues surrounding the teaching of Social Studies in middle, junior, and senior high levels. The

course is specifically designed to connect the students training in social studies to educational theories. The course will focus on issues surrounding Social Studies instruction and teaching techniques. Prerequisite: Admission to teacher education. Co-requisite: Education 363.

EDUC 463 Inclusion and Collaborative Teaching (3) Studies the integration of special education in the regular classroom. Service delivery models for students with special needs are identified and analyzed. Emphasis on collaborative procedures, special services, and instructional adaptation that regular and special education teachers use to meet the learning needs of special needs students enrolled in general education classes.

EDUC 465 Advanced Application of Computers in Education (3) Teachers, counselors, and administrators introduced to the roles of computers in education in the areas of administration, computer-assisted instruction, computer-managed instruction, and computer-assisted guidance programs. Computer-assisted instruction and computer-managed instruction emphasized. Prerequisites: Education 100, 200, 265.

EDUC 472 Adolescent Development and Learning Patterns (3) A detailed study of the physical, intellectual, social, and emotional characteristics of early adolescence (from about 14 to 18 years). Instructional implications of developmental patterns investigated. Topics include the developmental characteristics of youth as they relate to and determine curriculum goals, relevance of content, instructional organization, independence and leadership development goals, career education goals, and other special needs of the early adolescent and middle student. Prerequisite: Psychology 226 or permission of instructor. Alternate years. Fall.

EDUC 475 Supervision and Organization of Clinical Experience in Literacy (4) Experiences to engage in supervision and organization of diagnosis and remediation of literacy difficulties in a classroom setting. Under supervision of a University instructor. Prerequisites: Education 422, 427, or permission of instructor. Fall, spring.

EDUC 480 Orientation to Deafness (1) General overview of deafness. Many aspects of the deaf community and skills necessary for individuals who plan to work or associate with deaf persons emphasized. Anatomic and medical aspects of deafness, audiology, communication with the deaf, telecommunication devices, educational issues, vocational rehabilitation, sociological factors, psychological factors, and legal aspects of deafness.

EDUC 481 Basic Sign Language (3) Familiarity with the basic structures of sign language. Emphasizes acquisition of a core vocabulary of signs and finger spelling in American Sign Language or signed English. Develops skills and techniques of nonverbal communication necessary to communicate effectively with deaf persons.

EDUC 482 Intermediate Sign Language (3) Expands sign vocabulary and ability to utilize the manual alphabet. The use of conceptually appropriate signs in conversation emphasized; receptive skills developed further. Prerequisite: Education 481 or permission of instructor. Spring.

EDUC 483 Advanced Sign Language (3) Opportunities to communicate solely in sign language in a variety of activities and situations. Prerequisites: Education 481, 482; or permission of instructor.

EDUC 487 Education of Gifted and Talented Children (3) Examines definitions of the term "gifted," delineates characteristics unique to the gifted and talented, and reviews procedures used to identify these children. The nature of creativity and the direction of programs for youth of diverse abilities considered. Related research reviewed. Prerequisite: Junior level in teacher education or permission of instructor.

EDUC 488 Curriculum and Methodology in Gifted-Talented Education (3) Reviews curricular programs for gifted and talented children and youth. Introduces methods for developing creativity and problem-solving skills. Examines procedures for content augmentation are considered and program models. Prerequisite: Junior level in teacher education or permission of instructor.

EDUC 490 Schools in a Changing Society (3) Capstone course in education. Focuses on the many ways education and other social institutions are influenced by societal and cultural changes. Historical and current social issues affecting education are analyzed and evaluated from historical, economic, political, multicultural, legal, moral, and ethical perspectives. Limited to seniors who have been fully admitted to teacher education and who meet all student teaching requirements or who have permission of instructor. Fall, spring.

EDUC 497 Supervised Teaching and Observation in Elementary, Middle School, Junior High, Senior High, and Community Agency (1-12). Teaching, observation, and participation activities under the supervision of a classroom teacher or community agency staff member and a University supervisor. Fall, spring.

EDUC H498 Seminar: Field Experience in English Schools (1-6) Study of the British education system. May include both classroom and field-based experiences to promote understanding of contrasts and comparisons of the American and British system.

EDUC 499 Seminar: Basic Issues in Education (1-3) Seminar, workshops, or independent research projects on issues and problems in modern education. Prerequisite: Instructor's approval. Repeatable course. Content changes each time course is offered.



## Electrical Engineering (EE)

Electrical engineering courses are taught by the faculty of the Department of Electrical Engineering and Computer Science. Pre-engineering students and students not admitted to the College of Engineering and Computer Science may not enroll in any electrical engineering (EE) course numbered 200 or above without specific permission of the instructor, chair, or dean.

EE 210 Circuits (3) Integrated lab/lecture covers the fundamentals of electrical circuit analysis. Introduces foundational circuit theorems and analysis methods. These include: Ohm's law, Kirchhoff's laws, circuit reduction, node voltage analysis, mesh current analysis, superposition, and Thevenin and Norton equivalent circuits. The current-voltage characteristics for resistors, capacitors, and inductors are discussed. Additional topics include analysis of resistive DC circuits, operational amplifiers, the natural and step responses of first and second-order RLC circuits, the steady-state sinusoidal response of RLC circuits, and common diode and transistor applications. Theoretical principles verified by circuit construction and measurement and through the use of circuit simulation software. Students learn to use a variety of electrical test equipment including voltmeters, ammeters, ohmmeters, and digital oscilloscopes. Prerequisite: Mathematics 222. . Fall, spring.

EE 215 Circuits and Systems (4) An integrated lab/lecture covers linear system theory as applied in the analysis of electrical circuits. Topics include the sinusoidal steady-state response and phasors, the Laplace transform, Fourier series and the Fourier transform, passive and active frequency selective circuits (filters), and Bode diagrams. Theoretical principles verified by circuit construction and measurement and through the use of circuit simulation software. Prerequisites: Electrical Engineering 210. Corequisite: Mathematics 324 or permission of instructor. Spring, summer.

EE 254 Logic Design (3) Presents a thorough treatment of combinational and sequential logic design. Topics include number systems, Boolean algebra, minimization procedures, sequential circuit design, flipflops, counters, registers, and finite-state machines. Logic design is applied to computer architecture and microprogramming and hard-wired concepts are introduced. Programmable logic devices and computer aided design tools for digital circuits used for class projects. Spring.

EE 310 Linear Systems and DSP I (3) Provides a unified treatment of continuous-time and discrete-time linear signals and systems. Topics include introduction to the mathematical representation of signals, system characterization, convolution, and system analysis in the time and frequency domains using differential equations, difference equations, and transform techniques. Fourier, Laplace, Z, and discrete-Fourier transform techniques of signal and system analysis presented. Prerequisites: Electrical Engineering 215; Mathematics 324. Fall.

EE 311 Linear Systems and DSP II (3) Provides an application of discrete system analysis and design techniques to digital signal processing (DSP). Reviews difference equations, the Z transform and the discrete Fourier transform. Topics include analysis and design of recursive and non-recursive filter structures, analog filter approximations, the realization problem, the Fast Fourier Transform, and two-dimensional filtering. Projects include MatLab simulations and implementations on real-time DSP systems using C. Prerequisite: Electrical Engineering 310. Spring.

EE 320 Engineering Electromagnetics (3) Introduction to electromagnetic field theory. Topics include Maxwell's equations, divergence, Poisson's and Laplace's equations, conductance and capacitance, Stokes's theorem, retarded potentials, Poynting theorem, and skin effect. Prerequisites: Electrical Engineering 215 or permission of instructor; Mathematics 323. Recommended: Mathematics 324, Physics 211. Fall.

EE 330 Introduction to Power Systems (3) Introduces the principles and concepts that are the basis of electric power systems. Topics include single phase and three phase systems, the per-unit system, synchronous generators, single phase and three phase power transformers modeling and design, transmission line models for steady state operation, transmission system design, line load-ability and stability limits, power flow analysis, fault tolerance, and optimal dispatch of generation. Prerequisite: Electrical Engineering 215.

EE 342 Electronics I (3) Lecture/project covers analysis and design of diode and transistor circuits. Diode, metal-oxide-semiconductor field-effect transistor (MOSFET) and bipolar junction transistor (BJT) device characteristics are explored in detail. Major topics include diode applications, transistor amplifiers, the pn junction, ideal diodes, modeling diode forward characteristics, reverse breakdown of diodes, MOSFET and BJT device structures, MOSFET and BJT amplifiers in DC, MOS small-signal operation and discrete-circuit amplifiers, complimentary metal-oxide-semiconductor (CMOS) inverters, CMOS logic-gate circuits, pass-transistor logic (PTL) circuits, and emitter-coupled logic (ECL) circuits. Several small team projects are used to reinforce theory and to develop design skills. Prerequisite: Electrical Engineering 210. Corequisite: Electrical Engineering 254 or permission of the instructor. Fall.

EE 343 Electronics II (3) Lecture/project with continued coverage of material presented in Electrical Engineering 342. Major topics include BJT amplifiers, IC amplifiers, differential amplifiers, non-ideal operational amplifiers, and frequency effects. Specific topics include small-signal operation and models of BJTs, discrete-circuit BJT amplifiers, IC amplifiers, current-mirrors with improved performance, BJT and MOS differential pair circuits, common-mode rejection ratio, DC imperfections of op amps, large signal operations of op amps, LM741 op amp circuit, high frequency BJT and MOS models, and the high and low frequency response of transistor amplifiers. Several small team projects are used to reinforce theory and to develop design skills. Prerequisites: Electrical

Engineering 215, 342.

EE 354 Digital Systems (3) Takes up the logical design of computer systems with emphasis on the interaction between hardware and software. Topics include register design, memory systems, programmable I/O devices, interrupt driven I/O, controller design and microprogramming, bus systems, interface electronics, and assembly language programming. Computer aided design tools are used throughout course. Several different microcontrollers are used for projects to illustrate concepts. Assembly language and C used for class projects. Prerequisites: Electrical Engineering 254; working knowledge of C or C++. Fall.

EE 356 Small Computer Software (3) Introduction to the graphical user interface provided by the Windows™ operating system using C#.NET. Topics include the console applications, windows forms, Windows Presentation Foundation, graphics, ASP.NET web forms, ADO.NET, TCP/IP connection between computers, and dynamic-link libraries (DLLs) and/or device drivers. Prerequisites: Engineering 123 or Computer Science 210; Electrical Engineering 254 or Computer Science 220. Same as Computer Science 376. Fall.

EE 360 Linear Control Systems (4) Introduction to analysis and design of linear analog and digital feedback control systems. Topics include system modeling, time and frequency domain performance analysis, stability analysis, and controller design. Introduces both root-locus and frequency domain techniques of system analysis and design. Presents emulation techniques for digital controller design. Prerequisite: Electrical Engineering 310. Spring.

EE 380 Intermediate Electrical Projects Lab (2) Provides for the design and construction of several open-ended projects chosen from 300 level electrical engineering courses. Project areas include digital and analog electronics, linear systems, logic design, microcomputers, electromagnetics, electro-optics, and circuits. Prerequisites: Electrical Engineering 310, 342, 354 and either Electrical Engineering 320 or Electrical Engineering 356. Spring.

EE 410 Analog Circuit Synthesis (3) Lecture/project covers analysis and design of active circuits. Topics include first and second order building-block circuits (Tow-Thomas, Sallen-Key, Single-Amp Biquad, General Impedance Converter, etc.), design of circuits that implement an arbitrary transfer function, practical cascade design techniques, frequency transformation methods, design of circuits with specific magnitude response (Butterworth, Chebyshev, Inverse Chebyshev, etc.), and design of delay filters and delay equalization. Prerequisites: Electrical Engineering 310, 343.

EE 415 Digital Image Processing (3) A study of the computer methods used in processing digital images. Topics include: image acquisition, image enhancement and restoration, image representation, computer image file formats, and image compression. Processing of both monochrome and color images is discussed. Representation and processing of images in the spatial (pixel) and frequency domains is covered. Prerequisite: EE 310

EE 421 Photonics I (3) Introduction to basic optics, optical devices and lasers. Topics include geometrical and physical optics, ray matrices, optical fiber characteristics, losses, dispersion, transverse electromagnetic modes, and communications. Examples of current applications and laboratory demonstrations provided. Prerequisite: Electrical Engineering 320 or permission of instructor. Spring.

EE 422 Photonics II (3) Introduction to lasers and laser systems. Topics include stable optical cavity design, atomic media characteristics, gain equations, rate equations, cavity modes, cavity devices mode control, and pulse forming networks. Prerequisite: Electrical Engineering 421.

EE 425 Lines Waves and Antennas (3) Examines transmission lines, waveguides, and antennas. Topics include transmission line equations, Smith charts, slotted lines, microwave impedance matching, plane wave propagation, radiation patterns, and antenna arrays. Prerequisite: Electrical Engineering 320. Taught by request.

EE 430 Energy Conversion Systems (3) Introduces theory of operation and analysis of energy conversion devices and systems. Topics include magnetic and electric forces, electromechanical energy conversion, motors, energy storage, solar electric, wind power, small hydro, fuel cells, biomass, and geothermal. Includes a project lab. Prerequisites: Electrical Engineering 210; Mathematics 222.

EE 432 Analysis of Power Systems (3) Covers operation, control, protection, and stability of power systems. Topics include power flow analysis, synchronous machine transient analysis, symmetrical components, balanced and unbalanced fault analysis, power system control, frequency control, automatic generation control, reactive power and voltage control, stability analysis, and protection of power systems. Prerequisite: Electrical Engineering 330 or 430.

EE 437 Power System Planning (3) Covers topics in distribution system planning, load characteristics, design of subtransmission lines, distribution substations, primary and secondary systems, application of capacitors, voltage regulation, distribution system protection, and reliability. Prerequisite: Electrical Engineering 330.

EE 438 Electric Power Quality (3) Focuses on such subjects as harmonics, noise, filtering, and communication interference in power systems. Modeling, analysis, and solutions are points of emphasis. Topics include measures and standards of power quality, measurements and errors, modeling and design of components, harmonics, loads that cause power quality problems, susceptibility of loads to unwanted signals, and power quality improvement.

EE 440 Communication Electronics (3) Lecture/project focuses on circuits used in modern wireless communication devices. Topics include high frequency passive component models, transmission line and microstrip theory and the Smith chart, multiport networks and scattering parameters, radio frequency filter design, high frequency active devices and models, matching networks, radio frequency amplifiers, oscillators, and mixers. Prerequisites: Electrical Engineering 320, 470. Spring.

EE 445 Industrial Electronics and Controls (3) Introduces power electronic systems and design of power electronic devices used for commercial and industrial instrumentation and control. Topics include magnetic materials and design, semiconductor switches, power diodes, rectifiers, inverters, ac voltage controllers, level triggered switching devices, power MOSFETS, IGBT, pulsed triggered devices, thyristors, GTO, MCT, thyristor circuits, power transistors, dc to dc converters, switch-mode power supplies, dc to controlled ac, UPS, ac to controlled ac, ac and dc motor drivers. Prerequisite: Electrical Engineering 342.

EE 454 Microcontroller Applications (3) Focuses on the use of microcontrollers in real-time applications. Organized around several open-ended projects. Each project requires the complete design of a working microcontroller system for a given application and programming in C. Prerequisite: Electrical Engineering 354. Spring.

EE 456 Small Computer System Design (3) Project-based course covers advanced design and development topics related to real-time microcomputer systems and networks. Topics include memory management, data structures, network architecture, communication protocols, power considerations, hardware design, and hardware/software trade-offs. Prerequisites: Electrical Engineering 354, 454. Taught by request.

EE 458 Embedded Systems and Real-Time Programming (3) Covers real-time programming techniques that are commonly used on embedded systems. Topics include real-time operating system concepts, concurrent programming and task scheduling algorithms, mutual exclusion and synchronization methods, and interprocess communication. Real-world experience writing applications for several embedded operating systems. Prerequisites: Computer Science 215; Electrical Engineering 354 or Computer Science 220; or permission of instructor. Same as Computer Science 478. Spring.

EE 465 Digital Control Systems (3) Advanced analysis and design of linear systems. Analysis and design of digital control systems emphasized through classroom discussions, homework assignments and design projects. Both classical and modern control system design techniques studied. Prerequisite: Electrical Engineering 360.

EE 470 Electronic Communication Theory (3) This is a senior-level course covering both analog and digital electronic communication theory in a single one-semester course. Topics include (1) baseband communication with applications in the traditional (landline) telephone system and digital recording systems (CD, MP3), (2) amplitude modulation with applications in AM radio and broadcast television (traditional and HDTV), (3) frequency modulation with applications in FM radio and (4) phase modulation with applications in computer WiFi networks. Prerequisite: EE 310 .

EE 471 EE 471 Wireless Communication Theory (3) This is a senior level course that provides a systems-level view of modern wireless communication systems. Special emphasis will be placed upon development and understanding of the cellular telephone network. Topics include: wireless propagation, antenna radiation, channel characteristics, interference, cellular concepts including clustering, cell sectoring and splitting, traffic engineering, pulse detection, the matched filter, correlation receivers, digital modulation, spread-spectrum signaling, channel access methods including frequency division (FDMA), time division (TDMA), and code division (CDMA) multiple access. Prerequisites: Electrical Engineering 470. Spring.

EE 494 Senior Project Seminar (0) Provides guidance for the selection of a topic in the senior design project sequence. Projects, including industry-sponsored projects, presented for student selection. Prerequisite: Electrical Engineering 310, 342, 354 and either Electrical Engineering 320 or Electrical Engineering 356. . Spring.

EE 495 Senior Project Phase 1 (3) Plan the engineering project and formulate the preliminary design under the guidance of faculty and industrial advisors. Seminar sessions address professional ethics and the social and political contexts of engineering. The economic, environmental, health, and safety aspects of the project are addressed in a written engineering proposal, as are the issues of manufacturability and sustainability. An oral presentation of the proposal is required. Students submit written reaction to seminar topics. Prerequisites: Electrical Engineering 380, 494; GPA of at least 2.0. Fall, spring.

EE 497 Senior Project Phase 2 (3) Complete the design proposed in Electrical Engineering 495 and build a prototype. A formal design review conducted early in the semester. Written final report, oral report, and demonstration of the completed project required. Prerequisite: Electrical Engineering 495. Fall, spring.

EE 498 Independent Study in Electrical Engineering (variable credit) Independent study of a topic of interest to the student. Requires faculty sponsor and approved detailed study plan. Repeatable course. Content changes each time course is offered.

EE 499 Special Topics in Electrical Engineering (1-3) Study of topics of special interest. Topics will be announced. Repeatable course. Content changes each time course is offered. Prerequisites announced when scheduled.

## **Engineering (ENGR)**

Interdepartmental engineering courses are taught by the faculty of the College of Engineering and Computer Science. Pre-engineering students and students not admitted to the College of Engineering and Computer Science may not enroll in any

engineering (ENGR) course numbered 200 or above without specific permission of the instructor, chair, or dean.

ENGR 71-73 Internship (0) Full-time employment for a period of 10-16 weeks in a professional or paraprofessional role associated with the student's major. Students register for Engineering 07X in the Xth term of employment. Requires prior approval of the job description by the co-op director or designee and submission of a written summary and evaluation of the work experience. May be repeated for a total of three experiences. Prerequisite: At least 18 hours of course work of which at least nine hours represent progress toward a degree in engineering or computer science must have been taken during the previous two academic terms.

ENGR 81-89 Concurrent Co-op (0) Part-time employment in a professional or paraprofessional role associated with the student's major. Students register for Engineering 08X in the Xth term of employment. Requires full-time student status, prior approval of the job description by the co-op director or designee and submission of a written summary and evaluation of the work experience. Students are expected to work no less than eight and no more than 15 hours per week. At least 10 weeks of work must be completed during the semester or summer session. May be repeated. Corequisite: Registration for at least 12 hours of course work, of which at least six represent progress toward a degree in engineering or computer science during fall and spring semesters; registration for six hours, of which three represent progress toward the degree during summer.

ENGR 100 Technical Learning Skills for International Students (3) Introduces technical concepts to students for whom English is a second language. Reviews basic material from mathematics, physics, chemistry, and computer application with emphasis on problem formulation, technical communication skills, and teamwork. Offered as needed.

ENGR 101 Introduction to Engineering (3) A hands-on introduction to civil, computer, electrical, and/or mechanical engineering. Topics include the use of the computer in engineering and an introduction to the design process. Student teams complete design projects in a particular discipline. Prerequisite: Completion of all required English language courses or permission of instructor. Fall.

ENGR 102 Introduction to Engineering for International Students (3) Hands-on introduction to civil, computer, electrical, and/or mechanical engineering. Includes the use of computers in engineering and an introduction to the design process. Completion of a project under the direction of a faculty member. Special attention given to proper use of the English language in engineering education and practice. Enrollment limited to students for whom English is a second language. Prerequisite: Completion of all required English language courses or permission of instructor. Credit not given for both Engineering 101 and 102. Offered as needed.

ENGR 123 Programming for Engineers (3) Introduction to structured programming of computers in a modern high level language. Students complete programming projects that include loop and branch constructs, the use of subprograms, algorithm design, arrays, debugging software and techniques, file I/O, and class constructs. Spring.

ENGR 189 Technical Skills (1-3) An independently studied laboratory course in which students carry out projects designed to teach basic technical skills in the student's field of interest. Repeatable course. Content changes each time course is offered. Repeatable up to three credit hours. Prerequisite: Permission of instructor.

ENGR 212 Statics (3) Includes resolution and composition of forces and moments using vector analysis, principles and application of equilibrium to trusses, beams, frames and machines, centroid calculations, second moments of areas, internal load determination, shear and moment diagrams, and friction. Prerequisite: Mathematics 221 with a grade of C- or better or permission of instructor. Fall, spring.

ENGR 213 Dynamics (3) Covers rectilinear and curvilinear motions, force, mass, acceleration, projectiles, pendula, inertia forces in machines, work and energy, impulse and momentum, and impact. Prerequisite: Engineering 212 with a grade of C- or better. Fall, spring.

ENGR 230 Materials Science (3) Introduces properties of materials, discusses bonding, nature of metals, polymers, ceramics, crystals and crystal defects, and structure sensitive and insensitive properties. Prerequisite: Chemistry 118 or permission of instructor. Fall, spring.

ENGR 232 Mechanics of Materials (3) Covers general principles of stress and strain, including elastic and inelastic behavior, stress and strain transformation, stress calculations for direct shear and torsion; analysis of beam behavior, including flexural stresses and deflections, combined stresses, applications involving statically indeterminate systems, and buckling of compression members. Prerequisite: Engineering 212 with a grade of C- or better. Fall, spring.

ENGR 283 Technical Skills for Archaeologists I (2) Introduces archaeology students to skills and techniques useful in field work. Topics include introduction to surveying equipment, measurement of distance, horizontal angles, traverses, differential leveling, and mapping. Prerequisite: Sophomore standing. Fall.

ENGR 366 Fluid Mechanics (3) Introduces the physical properties of fluids and the mechanics of fluid flow. Covers general properties of fluids, fluid statics and dynamics, and dimensional analysis. Applications studied include pipe systems, aerodynamic drag, open channel flow, and compressible flow. Prerequisite: Engineering 213 with a grade of C- or better. Fall, spring.

ENGR 390 Applied Engineering Mathematics (3) Develops understanding of practical mathematical analysis with applications in

various engineering disciplines. Probability and statistical analysis. Practical numerical analysis. Linear algebra and matrices. Applications in civil, mechanical, and electrical engineering. Prerequisite: Mathematics 222. Fall, spring, summer.

ENGR 409 Engineering Economy and Decision Making (3) Introduction to engineering economy including cash-flow, time value of money, equivalence, annuities, present and future worth, rate of return, break-even analysis, replacement analysis, and benefit cost analysis. Includes industrial cost measurement techniques, risk analysis, and project scheduling and management techniques. Case studies and guests from industry offer realistic perspective.

ENGR 495 Interdisciplinary Design Project I (3) Preliminary planning and conceptual design for interdisciplinary project. Students form teams with members from several branches of engineering and/or other disciplines as appropriate to the project. Students participate in class discussions on professional ethics, scheduling and time management, technology and society, as developed in one of: Civil Engineering 495, Computer Science 495, Electrical Engineering 495, Mechanical Engineering 495. Prerequisites: Permission of the College of Engineering and Computer Science Executive Committee plus all prerequisites listed for one of Civil Engineering 495, Computer Science 495, Electrical Engineering 495, Mechanical Engineering 495. Fall.

ENGR 497 Interdisciplinary Design Project II (3) Final design and construction of interdisciplinary project. Completion of work begun in Engineering 495. Students form teams with members from several branches of engineering and/or other disciplines as appropriate to the project. Teams make oral and written presentations to faculty advisors and project sponsor(s). Performance standards developed in one of Civil Engineering 497, Computer Science 497, Electrical Engineering 497, Mechanical Engineering 497. Prerequisites: Permission of the College of Engineering and Computer Science Executive Committee; Engineering 495. Spring.

ENGR 498 Independent Study in Engineering Management (1) Independent research project in engineering management. Requires review of current literature, interviews with professional representatives, and other forms of data collection appropriate for the research topic with results documented in a final research report. Prerequisite: Engineering 390 or 409 and permission of instructor.

## English (ENGL)

English courses are taught by the faculty of the Department of English.

ENGL 120 Introduction to Literature (3) Provides an introduction to close reading in the three major genres: fiction, poetry, and drama. Students will learn technical vocabulary appropriate for literary analysis and write frequent papers based on reading and class discussion.

ENGL 122 Modern World Literatures (3) Covers poetry, short fiction, novel, and drama of the 20<sup>th</sup> and 21<sup>st</sup> centuries, primarily in translation.

ENGL 223 World Classics (3) Explores some of the finest imaginative literature from the age of Homer through the 19<sup>th</sup> century. Specific works vary from section to section.

ENGL 231 Masterpieces of British Literature I (3) Studies major works of British literature from 750 to 1780. Includes such authors as Chaucer, Spenser, Marlowe, Jonson, Milton, Defoe, and Swift.

ENGL 232 Masterpieces of British Literature II (3) Examines classics of British literature from 1780 to the present. Considers such authors as Wordsworth, Byron, Shelley, Dickens, Wilde, Woolf and Beckett.

ENGL 241 Major American Writers I (3) Focuses on significant American works before the US Civil War; the emphasis is on the central figures of the American Renaissance, including Poe, Emerson, Douglass, Thoreau, Hawthorne, Melville, Whitman, and Dickinson.

ENGL 242 Major American Writers II (3) Covers major American works from the US Civil War until World War II. This course emphasizes writers such as Frost, Eliot, Faulkner, Cather, Hughes, Hemingway, Fitzgerald, and Steinbeck.

ENGL 300 Early English Writers (3) Studies Anglo-Saxon verse as well as major works of later medieval literature such as *The Canterbury Tales*, *Sir Gawain and the Green Knight*, *Pearl*, *Piers Plowman*, *Morte D'Arthur*, and lyric poetry. Prerequisite: one ENGL course or permission of instructor.

ENGL 310 Renaissance and Seventeenth Century (3) Covers English literature from Wyatt and Surrey through Milton. Prerequisite: one ENGL course or permission of instructor.

ENGL 330 Special Topics in Literature (3) Focuses on particular writers or a particular literary movement, subject, or period. Past topics have included Fitzgerald and Hemingway, Modern Irish Literature, and JRR Tolkien. Repeatable up to three times with different subjects. Prerequisite: one ENGL course or permission of instructor.

ENGL 340 Contemporary World Literatures (3) Explores contemporary literature (fiction, poetry, drama) in English and English translation from around the world. Prerequisite: one ENGL course or permission of instructor.

ENGL 343 Norse Myth, Saga, and Legend (3) Studies the Eddas and sagas of Norway and Iceland plus related works from elsewhere in northern Europe. Prerequisite: one ENGL course or permission of instructor.

ENGL 344 Masterpieces of Russian Literature (3) Explores the great works of 19<sup>th</sup> and 20<sup>th</sup>-century Russian literature with focus on such writers as Pushkin, Gogol, Turgenev, Dostoyevsky, Tolstoy, and Chekhov. Prerequisite: one ENGL course or permission of instructor.

ENGL 348 Women's Literature (3) Focuses on women writers in a variety of genres and contexts. Repeatable up to three times

with title change. Topics have included 20<sup>th</sup>-century American Women Novelists, Modernism in Women's Literature, and a Jane Austen seminar. Prerequisite: one ENGL course or permission of instructor.

ENGL 350 Shakespeare (3) Studies eight of Shakespeare's greatest plays. This course engages with the histories, the comedies, and the tragedies. Prerequisite: one ENGL course or permission of instructor.

ENGL 351 The British Novel (3) Explores the development of the British novel with focus on major authors such as Defoe, Goldsmith, Austen, Bronte, Dickens, Hardy, Joyce, and Woolf. Prerequisite: one ENGL course or permission of instructor.

ENGL 353 The American Novel (3) Surveys several landmark achievements in the American novel. This course may include works by Melville, James, Cather, Fitzgerald, Hemingway, Faulkner, and others. Prerequisite: one ENGL course or permission of instructor.

ENGL 361 African-American Literature (3) Focuses on significant texts and major aesthetic achievements of the African-American tradition, as well as their historical contexts. Includes politically and socially significant drama, poetry, short stories, novels, and essays. Prerequisite: one ENGL course or permission of instructor.

ENGL 370 The Age of Enlightenment (3) Studies eighteenth-century British figures such as Pope, Swift, Johnson, Boswell, Sheridan, and Goldsmith. Prerequisite: one ENGL course or permission of instructor.

ENGL 375 The Romantic Movement (3) Covers major English writers from 1789 to 1837. Emphasizes works by Wordsworth, Coleridge, Byron, Shelley, and Keats. Prerequisite: one ENGL course or permission of instructor.

ENGL 380 The Victorian Period (3) Explores British literature from 1837-1901 with emphasis on the Victorian writer as poet, sage, and novelist. Includes such authors as Elizabeth Barrett Browning, Tennyson, Newman, Gaskell, and Dickens. Prerequisite: one ENGL course or permission of instructor.

ENGL 385 The Twentieth Century (3) Focuses on various authors, genres, and literary movements in the twentieth century, depending on the emphasis chosen by the professor. Topics have included American immigrant literature and European modernism. Prerequisite: one ENGL course or permission of instructor.

ENGL 399 Independent Study in Literature (1-3) Provides opportunity to do independent study in English language literature. This course might be one-on-one or in a small group with a designated professor. Prerequisite: one ENGL course and permission of instructor.

ENGL 445 Seminar in Literary Criticism (3) Introduces the student to major literary critics from Plato to the present and covers critical approaches to drama, fiction, and poetry. Prerequisite: one ENGL course or permission of instructor.

ENGL 480 Literature and Its Relations (3) Relates a body of literature to theoretical and/or artistic works of kindred disciplines. Specific topics vary from semester to semester. Capstone course for English majors. Prerequisite: one ENGL course or permission of instructor.

### **English Language (EL)**

English language courses are taught by the faculty of the Intensive English Center. Enrollment is limited to students whose native language is other than English. A nonnative speaker of English may use up to nine hours of English language courses as elective credit if the student's program of study permits free electives.

EL 102 Pronunciation and Listening Comprehension (2) Focus on pronunciation problems and aural comprehension skills. Listening dictation with emphasis on note-taking skills is a major part of course. Offered first half of each semester.

EL 103 Academic Conversation and Speaking (2) Focus on ability to participate effectively in open discussions and in giving speeches. Emphasis on listening to lectures and comprehending and discussing main ideas. Continued pronunciation practice included. Oral presentations may be required. Offered the second half of each semester; however, student must be registered at the beginning of the semester.

EL 106 Reading Development (2) Emphasizes a number of reading skills including skimming, inference, and dictionary usage. Appropriate for the University student who has learned English as a foreign language. Reading selections may be both prose and non-prose. Vocabulary development and reading comprehension through context emphasized. Offered the first half of each semester.

EL 107 Advanced Reading (2) Expands upon skills learned in English Language 106 and enables students to improve comprehension of academic writing. Reading selections may be both prose and non-prose. Class activities include discussion, group work, projects, and written exercises. Offered the second half of each semester; however, student must be registered at the beginning of the semester.

EL 110 Fundamentals of Composition (3) For students whose primary language is other than English. Provides instruction in writing English sentences, well-organized paragraphs, short compositions, and research paper format. Attention given to all aspects of composition – sentence structure, grammar, vocabulary, spelling, and punctuation.

EL 111 Advanced Composition (3) For students whose primary language is other than English. Builds on writing skills studied in English Language 110 and applies these to compositions, reaction papers, and research papers. Emphasis centers on vocabulary

choice, syntax, conciseness, and reader-interest techniques. Prerequisite: English Language 110 or demonstrated proficiency on a UE administered writing placement exam.

### **Environmental Studies (ES)**

Environmental studies courses are taught by faculty members of various departments.

ES 103 Fundamentals of Environmental Science (3) Introduces interdisciplinary nature of problems relating to the human environment, including social, political, and economic aspects.

ES 299 Special Topics in Environmental Studies (1-4) Lecture, discussion, and/or lab devoted to a topic not covered in regular environmental studies courses. Topics vary depending on interests of faculty and students. Repeatable course. Content changes each time course is offered. Prerequisites announced when scheduled. Fall, spring.

ES 360 Science of Environmental Pollutants (3) Using discussion format and student presentations, course clarifies the sources of pollutants and their transport in the environment and discusses monitoring and remediation of pollution. Special attention given to pollution of the atmosphere, surface water, and groundwater. Presumes a familiarity with ecological concepts. Some discussion of important legislation related to pollution incorporated. Prerequisite: Chemistry 118. Recommended: Biology 118 or Environmental Studies 103

ES 440 Environmental Law and the Regulatory Process (3) Analysis of political and organizational processes that influence the formulation, implementation, and evaluation of public policy. Focus placed on ecosystems, population, biodiversity, and global as well as domestic governance. Prerequisites: Biology 118 or Environmental Studies 103; Political Science 143.

ES 495 Environmental Studies Internship (3-8) Field experience for environmental studies majors under the supervision of a professional in an environmentally related area. Prerequisite: Written application for internship must be received by the environmental studies program director prior to beginning the internship. Fall, spring.

ES 499 Advanced Special Topics in Environmental Studies (1-4) Lecture, discussion, and/or lab devoted to an advanced topic not covered in regular environmental studies courses. Topics vary depending on interests of faculty and students. Repeatable course. Content changes each time course is offered. Prerequisites announced when scheduled. Fall, spring.

### **Ethics and Social Change (ETH)**

Ethics and Social Change courses are taught by faculty members of the Department of Philosophy and Religion.

ETH 121 Introductory Ethics (3) Presents a systematic and historical discussion of moral and social values through classical and contemporary readings. Emphasis on applying moral theories to concrete moral problems.

ETH 200 Social Justice Movements (3) Studies the role of world religions in a wide range of liberation struggles and social justice movements from around the globe.

ETH 375 Social Change Field Experience (3) Offers students the opportunity for supervised field experience in an area of work directly relevant to ethics and social change under the direction of a member of the Ethics Committee. Prerequisite: ETH 121. Open only to students majoring or minoring in Ethics and Social Change.

ETH 401 Ethics and Social Change (3) Provides opportunity for integration of the academic study of ethics with a particular ethical problem. Prerequisite: Senior standing and ETH 121, 200, and 375.

ETH 475 Social Change Field Experience (3) Offers advanced students the opportunity for supervised field experience in an area of work directly relevant to ethics and social change under the direction of a member of the Ethics Committee. Prerequisite: ETH 200, 375. Open only to students majoring or minoring in Ethics and Social Change.

### **Exercise and Sport Science (EXSS)**

Exercise and sport science courses are taught by the faculty of the School of Public Health.

#### **Service and Skills**

Courses meet the equivalent of two hours per week for each credit hour offered.

#### **Professional Curriculum**

Most of these courses are designed for majors or minors in exercise and sport science. Students not pursuing a major or minor in an exercise and sport science area must receive permission of the instructor before enrolling. The following courses are designed to give the future professional the knowledge and skills to become successful in the appropriate curricula.

EXSS 112 Human Anatomy and Physiology I (4) First half of a two-semester course that provides a comprehensive study of the structure and function of the human body, from the cell to the entire organism. Uses a systems approach emphasizing how these systems work together to maintain homeostasis. Systems studied include: integumentary, skeletal, muscular, digestive, reproductive. Three hours lecture, two hours lab.

EXSS 113 Human Anatomy and Physiology II (4) Second half of a two-semester course continues study of the structure and function of the human body using a systems approach. Systems studied include: nervous, endocrine, circulatory, immune, respiratory, urinary. Three hours lecture, two hours lab. Prerequisite: Exercise and Sport Science 112 with a grade of C- or better.

EXSS 150 Introduction to Exercise and Sport Science (2) Overview of the subdisciplines that make up the discipline of exercise science. This course provides information about academic and career opportunities available in the various areas of exercise and sport science, allowing students to gain an understanding about this multidisciplinary field.

EXSS 182 Lifetime Individual Sports (1) An accelerated course designed to develop the neuromuscular skills necessary for successful exercise and athletic performance. Course includes units covering activities such as badminton, golf, pickleball, racquetball, and tennis.

EXSS 201 Introduction to Sport Management (3) Overview of the career opportunities available in the sport industry. Includes introductions to management theory, leadership, sport marketing, sport finance, and current trends in the sport industry.

EXSS 218 Social Aspects of Sport (3) Explores the social roots of sport in contemporary society. Student thinks critically about sports to identify and understand social problems and issues associated with sports in society. This class examines issues of physical performance and records to see sports as social constructions that influence how people feel, think, and live. Emphasis is placed on American sport and society.

EXSS 220 Essentials of Human Anatomy and Physiology (4) Provides the essential details of anatomy and physiology of the body systems. Topics and systems covered include cells, tissues and organs, gross anatomy, and physiology of the nervous, endocrine, cardiovascular, respiratory, urinary, digestive, reproductive, muscular, and skeletal systems.

EXSS 221L Applied Human Anatomy Laboratory (2) Utilizes an in-depth regional approach to the study of human anatomy through the use of previously dissected human cadavers. Prerequisites: Exercise and Sport Science 112, 220; and permission of instructor.

EXSS 244/245 Practicum (1) A directed experience for the student who demonstrates a career interest in one of the majors offered within the Department of Exercise and Sport Science. Repeatable course. Content changes each time course is offered. Prerequisite: Exercise and Sport Science 150 or consent of instructor.

EXSS 250 Officiating (1) Covers rules and procedures for officiating and provides opportunities for IHSA certification in specific sports. Also offers practical experience in officiating.

EXSS 255 Recreational Sports Programming (2) Examines the fundamental aspects of a recreational sports program in varied settings. These settings include educational, industrial, correctional, public/private, commercial, and municipal. Upon completion of this course, students understand tournament and facility scheduling, participant development, equipment concerns, legal and financial concerns, and other aspects of recreational sports programming.

EXSS 285 Sport Communication (3) The purpose of this course is to help students learn the role that media and public relations play in the sport industry. It will examine in detail media relations, public relations, and community relations departments within various sport organizations. Students in this class will work on projects with local sport organizations.

EXSS 300 Principles and Theories of Strength and Conditioning (3) Provides practical skills necessary to design strength and conditioning programs. Special emphasis placed on ability to evaluate exercise movements, prescribe appropriate exercise programs, administer tests, and support program prescription with a sound knowledge of anatomical and physiological adaptation to exercise. Includes laboratory experiences that teach skills such as how to organize speed, agility, and quickness drills; how to select and administer appropriate tests for athletic performance; and how to evaluate Olympic lifting technique. Prerequisites: Exercise and Sport Science 150.

EXSS 310 Sport Law and Ethics (3). Provides students with an overview of US law and how it applies to the sport industry. Topics include tort law, contract law, anti-trust law, and constitutional law. It also helps students learn to question, reason, and think in a fashion that will aid them in ethical dilemmas they may face in their future careers. Prerequisite: Exercise and Sport Science 150 or permission of instructor.

EXSS 320 Nutrition for Performance and Health (3) Provides an overview of the important concepts of nutrition that are required for athletic performance and general health benefits. Current topics in nutrition, team nutrition, performance, ergogenic aids, and diets reviewed and critiqued. Prerequisite: Exercise and Sport Science 150.

EXSS 350 Sport Facility and Event Management (3) The purpose of this course is to educate students with a broad knowledge in facility and event management. Students will learn fundamental skills that are necessary for sport managers to run a facility or host an event. Topics include management theory, planning, facility systems, site design, volunteer management, and social responsibility. Prerequisites: Exercise and Sport Science 150; or permission of instructor.

EXSS 352 Physiology of Exercise (3) Introduces the physiological changes associated with exercise and sport training. Concentrates on cardiorespiratory, muscular, and metabolic adaptations to training, and how these changes affect human performance. This course also examines the influence of environmental factors and ergogenic aids upon exercise and athletic performance. Prerequisites: Exercise and Sport Science 150.



EXSS 355 Practicum in Intramurals and Recreational Sports (1) Because course focuses on practical application of running recreational sports programs, students are required to (1) plan, implement, and research new and existing events and sports offered within the existing UE intramural program; (2) are on-site during many of the events to gain supervisory experience in event management; and (3) receive individual instruction from the intramural director and staff. Prerequisite: Exercise and Sport Science 150.

EXSS 356 Biomechanics (3) Covers principles of anatomy, physiology, physics, and other related sciences applied to analysis of motion. Prerequisites: Junior or senior standing; Exercise and Sport Science 150.

EXSS 384 Lifeguarding (2) Provides the knowledge and skills necessary for the student to recognize and eliminate or minimize potential dangers at various types of swimming and diving facilities. Course content includes American Red Cross CPR certification for the professional rescuer. Additionally, the American Red Cross certification is available to successful candidates. Prerequisite: Exercise and Sport Science 150.

EXSS 388 Exercise Prescription (3) Introduces and examines the anatomic and physiologic principles for prescribing exercise. Emphasis on skills required to evaluate fitness levels and develop programs for various components of fitness, including cardiorespiratory, flexibility, body composition, and strength for a variety of populations. Prerequisites: Junior or senior standing; Exercise and Sport Science 150; or permission of instructor.

EXSS 415 Exercise Physiology II (2) A continuation of Exercise and Sport Science 352. Focuses on cardiovascular, respiratory, and metabolic responses to exercise. Emphasis on proper laboratory techniques, data collection, and data interpretation. Prerequisite: Exercise and Sport Science 150.

EXSS 417 Advanced Exercise Science (3) Provides an in-depth study of selected topics not contained in the required course work. Topics chosen from the following areas: anatomy, biomechanics, statistical analysis, and exercise physiology. Prerequisites: Exercise and Sport Science 150; or permission of instructor.

EXSS 427 Exercise Testing and Leadership (2) The application of exercise physiology and prescription to examine the physiologic responses to exercise. Emphasis is placed on appropriate testing methodologies, formulation of exercise prescriptions, and safe exercise leadership in a diverse population of individuals. Prerequisites: Exercise and Sport Science 150; current CPR; or permission of instructor.

EXSS 428 Cardiovascular and Pulmonary Rehabilitation (3) Applies principles of rehabilitation science to patients with disorders of cardiovascular or pulmonary systems. Topics include physiology, pathophysiology, patient assessment, medical and surgical disease management, and safety. In addition, the course will examine design implementation and administration of multidimensional therapeutic cardiopulmonary rehabilitation programs. Prerequisites: Exercise and Sport Science 150; or permission of instructor.

EXSS 451 Exercise and Sport Psychology (3) Provides an overview of the rapidly developing fields of exercise and sport psychology, including psychological aspects of sport performance and psychometric characteristics of sport participants. Topics in this class include the relationship of exercise to mental health. Special emphasis on theoretical and research issues important in the field of sport psychology is given. Prerequisites: Junior or senior standing or permission of instructor; Exercise and Sport Science 150.

EXSS 453 Motor Learning (2) Provides an overview of the factors that affect the acquisition and performance of motor skills. Topics include the neural basis of human movement, perception, psychomotor learning and theories of neuromuscular integration, information processing, and individual differences. Methods for structuring the learning environment for optimal learning also discussed. Prerequisites: Exercise and Sport Science 150 or permission of instructor.

EXSS 478 Clinical Laboratory Science Clinical (1) Credit granted upon successful completion of two semesters of clinical experience and a summer clinical. Prerequisite: Successful admission into clinical laboratory program and Exercise and Sport Science 150.

EXSS 488 Internship (1-12) Provides the exercise and sport science major practical experience in a specialized career area. Fosters development of skills, competencies, and organizational and administrative techniques needed for successful entry into the work force, while working under direct supervision of selected professionals. Prerequisites: Exercise and Sport Science 150 for sport communication and sport management majors; Exercise and Sport Science 150, and current CPR for all exercise science majors. This is a repeatable course that can be taken up to 12 hours to fulfill requirements.

EXSS 491 Planning and Implementing the Coaching of ... (2) Provides an in-depth overview of the competencies to coach in a specific sport area. Covers advanced techniques for teaching, coaching, and performing. Repeatable course. Content changes each time course is offered. Prerequisite: Junior or senior standing and Exercise and Sport Science 150.

EXSS 493 Current Issues in Exercise and Sport Science (3) The capstone course for all majors in the department. Discussion topics include research methodology, the use of basic statistics and other selected areas of research design. Students learn to critically read and evaluate research papers. Additionally, discussion and writing focuses on the current and future status of the student's career choice in today's society. Prerequisite: Final year status for majors in the department and Exercise and Sport Science 150.

EXSS 499 Special Topics in Exercise and Sport Science (1-3) Provides students the opportunity to study topics of special interest not covered in regular course offerings. Topics announced. Course may be repeated, but the topic must be different. Prerequisite: Exercise

and Sport Science 150. Permission of instructor.

### **Experiential Education (EXED)**

EXED 71-73 Internship (0) Full-time or part-time employment for a period of 10-16 weeks in a professional or paraprofessional role associated with the student's major. Requires prior approval of the job description by the co-op director or designee and submission of a written summary and evaluation of the work experience. May be repeated. Prerequisite: At least 18 hours of course work of which at least nine hours represent progress toward degree completion and must have been taken during the previous two academic terms.

EXED 90 Building a Professional Image (0) Seminar for second year students seeking an internship or considering entering the co-op program for the first time. Covers job interviewing, résumé preparation, currently available intern and co-op jobs, and details of program administration. Application for admission to the co-op program is part of this seminar. Fall, spring.

### **Finance (FIN)**

Finance courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

FIN 280 Introduction to Personal Finance (3) Covers information that allows students to begin their working careers well informed of their financial responsibilities. Covers the fundamentals of personal finance and emphasizes the life cycle approach to personal financial planning. Primary goals of course are (a) make participants aware of need to plan their financial future and (b) increase their knowledge of the various aspects of personal finance in order to plan their financial future effectively. Major topics are managing assets, credit and insurance, investments, and retirement planning. Helps participants begin lifelong journey toward financial literacy. Offered periodically.

FIN 383, 384 Credit Analysis/Lending Practicum I & II (3) (3) This course sequence is an experiential learning program that engages students directly with a participating lending institution. Students will team with supervising faculty and commercial lending professionals in the process of assessing applications for commercial loans, formulation of lending decisions, and execution of the lending process. Additional emphasis is on the effects of lending outcomes on the bank's financial statements. A maximum of 3 credit hours of practicum from FIN 383, 384, 385, 386 will apply as an upper level elective in the major area for students pursuing the Bachelor of Science in Accounting, Bachelor of Science in Business Administration, or the Bachelor of Science or Bachelor of Arts degree majors in economics. Prerequisites: FIN 383 - FIN 361 or permission of Instructor; FIN 384 - grade of B or better in FIN 383.

FIN 385, 386 Wealth Management Practicum I & II (2) (2) This course sequence is an experiential learning program that engages students directly with individual clients in a participating wealth management firm. Students will team with supervising faculty and wealth management professionals in the process of client consultation, formation of clients' investment objectives, execution of portfolio strategies, and evaluation of investment outcomes. A maximum of 3 credit hours of practicum from FIN 383, 384, 385, 386 will apply as an upper level elective in the major area for students pursuing the Bachelor of Science in Accounting, Bachelor of Science in Business Administration, or the Bachelor of Science or Bachelor of Arts degree majors in economics. Prerequisites: FIN 385 - FIN 361 or permission of Instructor; FIN 386 - grade of B or better in FIN 383.

FIN 361 Fundamentals of Finance (3) Introduces core principles of time value of money, risk return analysis, financial forecasting, and security valuation. Analyzes foundations of capital budgeting techniques, cash flow estimation, taxation, and depreciation methods. Prerequisites: Accounting 210; Economics 102; or permission of instructor.

FIN 362 Corporate Financial Policy (3) Examines the capital budgeting, financing, dividend policy, and working capital decisions of value-maximizing firms with use of case studies. Prerequisite: Finance 361. Spring.

FIN 380 Special Topics in Finance (3) Covers topics not included in other courses, provides in-depth understanding of selected areas in finance, and explores relevant current topics. Repeatable course. Content changes each time course is offered. Prerequisite: Finance 361. Offered periodically.

FIN 395 Independent Study (1-3) Independent research in finance conducted under faculty supervision. Prerequisites: Finance 361, permission of instructor.

FIN 426 International Financial Management (3) Analyzes foreign exchange, currency futures, and options markets. Examines aspects of international banking, bond, and equity markets from the perspective of multinational corporations and institutions. Prerequisites: Economics 101, 102; Finance 361 is highly recommended but not required.

FIN 427 Financial Derivatives and Alternative Investments (3) The course introduces financial derivatives and their applications. Topics include features of primary financial derivatives (forwards, futures, swaps, and options), the basics of derivatives analysis, and the structure of their markets. The course also covers some advanced topics in investment strategies and risk management; includes discussion of alternative investments and investing in commodities. Prerequisites: Finance 361 or Mathematics 330

FIN 462 Investments (3) Develops the principles governing investment of personal funds based on modern capital market theory. Common stocks, bonds, options, and futures contracts analyzed. Prerequisite: Finance 361.

FIN 470 Financial Institutions and Markets (3) The operation and management of financial institutions and the markets in which they operate discussed. Managerial and public policy issues toward financial institutions and markets also addressed. Prerequisite: Finance 361. Same as Economics 470. Offered alternate years.

FIN 478 Risk Management (3) Examines the principles and terminologies of insurance. Analyzes variety of insurance contracts and risk management plans. Discusses the public policy issues related to the insurance industry. Prerequisite: Finance 361. Offered periodically.

FIN 482 Financial Planning: Process and Environment (3) Financial planning principles, areas, application, process, effective communication, risk evaluations, ethics and practice standards, financial planning problem solving, regulations, financial institutions. Prerequisite: Finance 361. Offered periodically.

### **First-Year Seminar (FYS)**

The First-Year Seminar Sequence is the cornerstone of the Enduring Foundations General Education program. The courses are taught by faculty members from all of the University's colleges and schools.

FYS 111 First-Year Seminar (3) Topic-based seminars developed by individual faculty members. Engages students in classroom activities that promote the acquisition of critical reading, writing, and thinking skills appropriate to college-level discourse. Toward that end, students will learn the basics of the expository essay: development of a central thesis, organization of material, and responsible use of supporting detail.

FYS 111E First-Year Seminar (3) All sections of FYS 111E engage students in activities that promote the acquisition of critical reading, writing, and thinking skills necessary in collegiate discourse as well as in professional and personal contexts. Toward that end, students will learn the basics of the expository essay: development of a central thesis, organization of material, and responsible use of supporting detail with emphasis on the writing process and rhetorical situation. First Year Seminar for EL students provides additional structured support for ESL students in order to aid in the transition to college level courses that are reading and writing intensive.

FYS 112 First-Year Seminar (3) Topic-based seminars developed by individual faculty members. Engages students in classroom activities that promote the acquisition of critical reading, writing, and thinking skills appropriate to college-level discourse. Toward that end, students will complete a significant research paper. Prerequisite: First-Year Seminar 111 or demonstrated proficiency based on ACT/SAT exam score or on a UE administered writing placement exam.

FYS 312 First Year Seminar for Transfer Students (3) Engages students in classroom activities that promote the acquisition of critical reading, writing, and thinking skills appropriate to college-level discourse. Toward that end, students will learn the basics of the expository essay: development of a central thesis, organization of material, and responsible use of supporting detail. Additionally, they will explore a variety of genres as well as writing practices and conventions for disciplines across the university.

FYS 499 Teaching Internship (3) Provides select students the opportunity for supervised field experience in teaching at the college level. Repeatable for up to six hours. Prerequisite: Permission of First-Year Seminar director.

### **Foreign Languages and Cultures (FL)**

Foreign languages courses are taught by the faculty of the Department of Foreign Languages and Cultures.

FL 401 Language, Culture, and Literature (3) Capstone course for foreign language and international studies majors. Seminar examines how the concept of national identity is reflected cross-culturally in language and literature. Topics vary. Course taught in English.

FL 420 Foreign Language Internship (3-6) Internship opportunities abroad are highly encouraged. Prerequisite: two 300-level courses or permission of instructor.

### **French (FREN)**

French courses are taught by the faculty of the Department of Foreign Languages and Cultures. All courses are taught in the target language unless otherwise noted. Completion of 311 or permission of instructor required for all 300- and 400-level courses.

FREN 111, 112 Elementary French (3 each) Emphasizes practice in speaking, listening, writing, reading, and cultural awareness. Fall (111), spring (112). Prerequisite for 112: C- or higher in 111 or the relevant placement exam score.

FREN 211, 212 Intermediate French (3 each) Continues practice in speaking, listening, writing, reading, and cultural awareness. Fall (211), spring (212). Prerequisite for 211 C- or higher in 112 or the relevant placement exam score. Prerequisite for 212: C- or higher in 211 or the relevant placement exam score.

FREN 311 French Conversation and Composition (3) Includes oral-aural practice, free and directed composition, and review of syntax. A prerequisite for all 300- and 400-level courses. Prerequisite: C- in 212 or the relevant placement exam score.

FREN 312 French Conversation in Context (3) Advanced oral practice and analysis of non-literary texts. Focus on pronunciation and phonetics. Prerequisite: French 212.

FREN 313 French Phonetics (3) This course teaches students the theory and practice of French pronunciation, including changing sounds and syllable structure when words are combined into phrases and sentences. It will also allow students to compare French and English phonetics. Students will learn and identify geographic and social variation in the pronunciation of French speakers. Requisites: Must have completed FREN-212, take it concurrently with FREN-212, or have permission of instructor.

FREN 314 Business French (3) Emphasizes speaking, writing, reading, and listening skills in business contexts as well as cross-cultural communication and comparison of French and American business cultures.

FREN 315 Introduction to French Literature (3) Studies French culture in literary context. Introduces students to French literature, literary analysis, and discourse.

FREN 316 Quebec and Francophone Studies (3) Introduces the literary, political, economic, and cultural traditions of Quebec and the Francophone world.

FREN 317 Introduction to French Theatre (3) Introduces students to major authors, periods and conventions of French theatre. Emphasizes conversation, composition, and reading skills and includes an introduction to literary analysis and discourse.

FREN 318 Translation (3) Introduces theory and practice of written translation in French cultural context. Includes translation of documents from the following fields: law, medicine, business, entertainment, industry and technology, literature. Prerequisites: Two 300-level courses or permission of instructor.

FREN 330 Independent Study (1-3) Course content and credit hours determined in consultation with instructor. Repeatable course. Content changes each time course is offered. Prerequisite: French 311 or permission of instructor. Department chair approval required.

FREN 333 Introduction to French and Francophone Cultures (3) Introduces French and Francophone cultures, relating historical events and geographical settings to the evolution of the language.

FREN 335 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content does not match closely any of the 300-level courses offered in the Department of Foreign Languages and Cultures. Meets the 300-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: French 212.

FREN 415 Topics in French Literature (3) In-depth examination of French literature by author, period, and/or genre. Emphasizes advanced application of literary analysis and discourse. Topics vary. Repeatable course. Content changes each time course is offered. Prerequisites: Two 300-level courses or permission of instructor.

FREN 434 French Civilization (3) Study of French civilization, art, and culture from origin to present. Taught in French.

FREN 435 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content does not match closely any of the 400-level courses offered in the Department of Foreign Languages and Cultures. Meets the 400-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: French 311 or 315.

FREN 438 Seminar (3) Topics vary. Generally covers outstanding French authors and literary works. Repeatable course. Content changes each time course is offered. Prerequisites: Two 300-level courses or permission of instructor.

### **Gender and Women's Studies (GWS)**

Core, cross-listed, and affiliated gender and women's studies courses are taught by faculty members of various departments.

GWS 101 Introduction to Gender and Women's Studies (3) Through readings, films, and class discussion, students engage in a critical examination of theories of gender and their social implications. By examining their own experiences as well as the ways in which they fit, or do not fit, into the patterns revealed through gender and women's studies scholars, students arrive at a better understanding of the relationship of women and men to the society at large.

GWS 492 Special Topics in Gender and Women's Studies (3) Special topics in gender and women's studies not included in regular course offerings. May consist of lectures and discussion with an emphasis on research. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Prerequisite: Gender and Women's Studies 101 or permission of instructor.

GWS 493 Independent Studies in Gender and Women's Studies (3) Research in areas of gender and women's studies on topics not covered in existing courses. Subject and credit earned must be approved by a faculty member, coordinator of gender and women's studies, and dean of the College of Arts and Sciences. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Prerequisite: Junior standing or permission of coordinator of Gender and Women's Studies.

## **Geography (GEOG)**

Geography courses are taught by the faculty of the School of Education.

GEOG 120 World Regional Geography (3) Introduction to regions of the world such as Anglo-America, Western Europe, Eastern Europe and the former Soviet Union, Monsoon Asia, Africa, and others. Emphasizes themes which give each of these regions a distinctive character.

GEOG 230 Physical Geography (4) Studies and analyzes the distribution of major elements of the physical environment, including earth in space, earth motions, time zones, the earth's atmospheric envelope, topography, and mapping. Includes lab experience.

GEOG 240 Cultural Geography (3) Examines human technologies and cultural practices which give regions distinctive character. Emphasizes process of settlement and development and how the resulting cultural landscape varies through time and over space.

## **Geology (GEOL)**

Geology courses are taught by faculty members of the Department of Mechanical and Civil Engineering.

GEOL 130 Environmental Geology (3) A study of the relationship between humans and earth processes, such as earthquakes and volcanoes, geologic structures, plate tectonics, mountains, ocean basins, streams, glaciers, deserts, coasts, rocks, minerals, and mineral resources.

## **German (GERM)**

German courses are taught by the faculty of the Department of Foreign Languages and Cultures. All courses are taught in the target language unless otherwise noted. Completion of 311 or 312 is required for the major or minor. Students placing into 311 or above may automatically sign up for the upperlevel course offered their incoming semester.

GERM 111, 112 Elementary German (3 each) Emphasizes practice in speaking, listening, writing, reading, and cultural awareness. Fall (111), spring (112). Prerequisite for 112: C- or higher in 111 or the relevant placement exam score.

GERM 211, 212 Intermediate German (3 each) Continues practice in speaking, listening, writing, reading, and cultural awareness. Fall (211), spring (212). Prerequisite for 211 C- or higher in 112 or the relevant placement exam score. Prerequisite for 212: C- or higher in 211 or the relevant placement exam score.

GERM 311 German Conversation and Composition (3) A systematic grammar review while focusing on the process and development of effective writing skills and expression in German. A prerequisite course for completion of the German major or minor. Prerequisite: C- in 212 or the relevant placement exam score.

GERM 312 Topics in German Studies (3) Topics vary. Repeatable course. Content changes each time course is offered. Topics range from aspects of German film and the Alps, to crime novels and biographies, to other aspects of German culture and society.

GERM 314 Career German (3) Studies the specialized vocabulary and nature of career German.

GERM 321 Survey of German Literature to 1830 (3) Readings for broad overview of literary development in German-speaking Europe.

GERM 322 Survey of German Literature, 1830 to the Present (3) Readings for broad overview of literary development in German-speaking Europe.

GERM 330 Independent Study (1-3) Content and credit hours determined in consultation with instructor. Repeatable course. Content changes each time course is offered. Prerequisite: German 311 or permission of instructor. Department chair approval required.

GERM 333 Introduction to German Culture (3) Introduces the student to the impact of historical events on German art, music, cinema, and literature.

GERM 335 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content does not match closely any of the 300-level courses offered in the Department of Foreign Languages and Cultures. Meets the 300-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: German 212.

GERM 410 Advanced German Grammar (3) Primarily for German majors and minors. Emphasizes aspects of grammar important for high school instruction in the language.

GERM 414 Twentieth and Twenty-first Century Literature (3) In-depth examination of major German, Austrian, and Swiss writers of the 20th and 21st centuries.

GERM 433 German Civilization (3) Traces history and culture of German-speaking Europe from beginnings to the present. Taught in German.

GERM 435 Foreign Language Study Abroad (3) This is a 400-level course that is taught in the target language in a study abroad program and whose content does not match closely any of the 400-level courses offered in the department of Foreign Languages and Cultures. Meets the 400-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: GERM 311 or 312.

GERM 438 Seminar (3) Outstanding German authors and literary works. Topics vary. Repeatable course. Content changes each time course is offered.

## **Gerontology (GT)**

Gerontology courses are taught by the faculty of the Department of Law, Politics, and Society.

GT 401 Biology and Health and Aging (1½) Covers basic biological and health factors related to aging. Topics include life course changes, normal aging, nutrition, aging related diseases, frailty, and incontinence. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 402 Social Aspects of Aging (1½) Covers basic social factors related to aging. Topics include attitudes, communication, demographics, cross-cultural aging, education, politics, minority aging, and successful aging. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 403 Later Life Issues (1½) Covers key issues faced by the elderly and their families in late life. Topics include ethical issues, end of life reviews, and health care issues. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 404 Personality Dimensions of Aging (1½) Covers personality factors related to aging. Topics include cognition, anxiety and depression, dementia, and personality changes. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 405 Institutional Care (1½) Covers institutional settings that serve the needs of the elderly. Topics include assisted living, residential care, home-based care, community-based long-term care, and designing physical environments for the elderly. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 406 Geriatric Assessment (1½) Covers various issues related to geriatric assessment. Topics include comprehensive geriatric assessment, specific functional assessments, and an overview of geriatric assessment instruments. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 407 Economics of Aging (1½) Covers various issues related to the economic welfare of the elderly. Topics include employment of older workers, retirement, social security, and pensions. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 408 Aging and the Spiritual Dimension (1½) Covers key issues related to death and dying and the spiritual needs of the elderly. Topics include death and dying, bereavement, ethics, and the role of religion over the life cycle. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 409 Social Policies and Legal Issues of Aging (1½) Covers key issues related to aging-based policies and specific legal considerations of relevance to aging. Topics include Medicare, Medicaid, managed care, financing age related programs, and personal legal issues. Prerequisite: Enrolled in Gerontology Certificate Program or permission of director of Gerontology Center.

GT 410 Research/Internship (1½) Students may elect to do a short research study or complete a community-based internship in a setting serving the elderly. Prerequisite: Completion of at least six modules in the Gerontology Certificate Program or permission of director of Gerontology Center.

## **Greek (GRK)**

Greek courses are taught by faculty members in the classical studies program.

GRK 111, 112 Elementary Ancient Greek (3 each) Presents the basic grammar, syntax, and vocabulary of ancient Greek so that students can begin reading passages from ancient authors. Fall (111), spring (112) in alternate years.

GRK 211 Intermediate Ancient Greek (3) Continues to develop skills in the grammar, syntax, and vocabulary of ancient Greek begun in Greek 111 and 112. Reading of extended passages from Herodotus, Plato, Thucydides, and the Gospel of John.

GRK 212 Introduction to Greek Prose (3) Reading of prose texts in both Attic and Hellenistic Greek. Emphasis on reading a variety of literary genres and prose styles. Review and enhance knowledge of Greek grammar. Texts include the Tabula of Cebes, Lysias' On the Murder of Eratosthenes, Paul's letters, and the book of Acts.

GRK 351 Attic Prose (3) Advanced ancient Greek course dedicated to the reading, analysis, and discussion of Attic prose texts of the 4th century bc. Authors read depend on student interest; may include Aristotle, Plato, Lysias, and Isocrates.

GRK 371 New Testament Greek Exegesis (3) Advanced Greek course devoted to reading and exegesis of the New Testament in

the original language. Emphasis on gaining competence in koine Greek, skill in exegesis and literary analysis, and facility in the use of scholarly tools for New Testament study.

GRK 411 Ancient Greek Drama (3) Advanced ancient Greek course dedicated to the reading and analysis of Greek plays. Authors read depend on student interest; may include: Aeschylus, Sophocles, Euripides, and Aristophanes. Prerequisite: Greek 212.

GRK 421 Greek Poetry (3) Advanced ancient Greek course dedicated to reading Greek poetry. Students read a variety of Greek poets and poems, gain exposure to several Greek dialects, and learn about poetic meter and scansion. Authors read depend on student interest; may include Homer, Hesiod, Sappho, and Solon.

GRK 430 Individual Readings in Greek Literature (1-6) Topics and credit hours must be prearranged with the instructor. Repeatable course. Content changes each time course is offered.

### **Health Education (HE)**

Health education courses are taught by the faculty of the School of Public Health.

HE 100 Concepts of Health and Wellness (1) Examines the role of physical activity and personal fitness for healthy daily living in our society. Lecture, discussion, and self-evaluation laboratory sessions are used to assess personal fitness. This course satisfies University's health and wellness graduation requirement.

HE 160 First Aid with CPR (2) Provides basic American Red Cross first aid and cardiopulmonary resuscitation certification for adult, child, and infant.

HE 260 Personal and Community Health (2) Provides an overview of the major health issues influencing quality of human life. Topics include individual and social planning for optimal health.

### **Health Sciences (HS)**

Health sciences courses are taught by the faculty of the Dunigan Family School of Nursing. Courses are open to all University students.

HS 101 Adult Health and Wellness (1) This course focuses on a holistic approach to a healthy lifestyle. Assessment, management, and individual responsibility in promoting personal health are emphasized. This course meets the criteria for the Enduring Foundations General Education Outcome 10: Knowledge and responsibility in relation to health and wellness.

HS 205 Pharmacology (3) This course provides a foundation in basic principles of pharmacology with emphasis on knowledge, interventions needed to maximize therapeutic effects, and to prevent or minimize adverse effects of medications. This survey course builds on the student's knowledge of anatomy, physiology, and chemistry to understand actions of drugs in the human body using a nursing process approach. Prototype medications are used to teach basic principles of neuropharmacology, antimicrobial chemotherapy, and drug action on other biologic systems. Nursing implications are integrated in each module to reinforce the relationship between pharmacologic knowledge and nursing practice. Evidence-based clinical guidelines are discussed to highlight the importance of medication management. This course meets the Enduring Foundations General Education Outcome 8: Scientific Literacy. Prerequisites: Exercise and Sports Science 112 and 113, Chemistry 108 or 118.

### **Health Services Administration (HSA)**

Health services administration courses are taught by the faculty of the School of Public Health.

HSA 405 Health Care Systems: Issues and Trends (3) Overview of the health care system. Reviews the history and current status of various segments of health care. Includes an analysis of the impact of socioeconomic, political, and current health care issues and trends.

HSA 406 Jurisprudence and Ethics in Health Care (3) Emphasizes the legal and ethical processes and their application to the health care organization, administrator, staff, employees, and patients. Includes ethical dimensions of the decision-making process and current ethical issues in health care.

HSA 414 Health Care Management Theory and Human Resources (3) Management theory and practice as applied by managers of health services. Emphasizes analysis of the manager's roles, interactions with people, the organization, and the environment. Special emphasis on human resource issues.

HSA 420 Health Care Planning and Marketing (3) Integrates long-range goal planning with dimensions of marketing for health care services. Concepts, techniques, and theories used in the planning and management of marketing in the health care industry.

HSA 467 Statistics for Appraisal and Evaluation (3) Provides an introduction to data commonly used in health care. Emphasis is on determining when and how research results may be applicable to a variety of health care settings. Includes data descriptions, elements of probability, variables, levels of measurement, sampling, central tendency, hypothesis testing, difference tests, relationship tests, regression analysis, ANOVA, and Chi Square. Prerequisite: Junior standing.

HSA 490 Decision Making in Health Care (3) Examines decision making in health services administration by extensive use of case

studies. Integrates material from other HSA courses into the study of decisions facing all types of health care organizations.

HSA 495 Independent Study (1-3) Independent research in health care management conducted under faculty supervision. Prerequisite: Permission of the instructor.

HSA 498 Internship in Health Services Administration (1-6) A structured assignment which allows student to gain practical experience in a health care management position relating to an area of career interest. Student is directed by the internship director and supervised by a member of the cooperating organization. Repeatable course. Content changes each time course is offered. Prerequisite: Permission of health services administration program director.

HSA 499 Special Topics in Health Services Administration (1-3) Lectures and discussion of topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in health services administration. Repeatable course. Content changes each time course is offered.

## **Hebrew (HEB)**

Hebrew courses are taught by the faculty of the Department of Philosophy and Religion and the Department of Archaeology and Art History.

HEB 111, 112 Elementary Hebrew (3 each) Emphasizes basic grammar, syntax, and vocabulary of classical Hebrew in order to prepare students to begin to read and study the Hebrew Bible/Old Testament. Fall (111), spring (112) in alternate years.

HEB 211, 212 Intermediate Hebrew (3 each) Continues to develop skills in grammar, syntax, and vocabulary of biblical Hebrew. Emphasizes reading of extended passages from the Hebrew Bible/Old Testament. Attention is also given to some non-biblical material such as ancient Hebrew inscriptions and the Dead Sea Scrolls.

## **History (HIST)**

History courses are taught by the faculty of the Department of History.

HIST 111 World History to 1500 (3) Examines major political, religious, and cultural developments in Asia, Africa, the Mediterranean basin, Europe, and the Americas from ca. 3000 BC to 1500 AD. Through a combination of lectures, class discussion, and close reading of primary sources, course focuses on how geography, climate, social structures, and cultural values combine to shape political systems, religion, and gender relations in diverse societies.

HIST 112 World History since 1500 (3) Guides students through the key forces shaping the modern world, and adopts a broad global approach to the period, paying appropriate attention to Asia, Africa, and the Middle East as well as to Europe and the Americas. Includes the struggle for democracy, the emergence of capitalism and socialism, the experience of imperialism and racism, and related developments in science, culture, and gender relations.

HIST 141 American History to 1865 (3) Surveys political, economic, social, and military developments in the United States from the time of exploration and the founding of the colonies to the end of the Civil War. Pays particular attention to slavery, the frontier, the rise of democracy, the roots of secession, and issues of class, ethnicity, and gender.

HIST 142 American History since 1865 (3) Surveys political, social, economic, and cultural developments in the United States from the end of the Civil War to the present day. Special attention to the impact of industrialization, the crisis of the Great Depression, race relations, gender, and foreign policy.

HIST 290 Approaches to History (3) Examines the evolution of the field of history. Explores questions concerning the nature of the discipline and studies the principles of historical methodology and historiography. Focuses on questions of how historians gather and evaluate evidence and considers directions the discipline is currently taking. Intended for history freshmen and other beginning history majors.

HIST 311 The Greeks and the East (3) Examines the historical relationship between the Ancient Greeks and their contemporaries in the Near East. Prerequisite: Sophomore standing or History 111 or 312 or permission of instructor.

HIST 312 The Evolution of Rome (3) Examines the history of Rome from the early republic to the end of the imperial era. Focuses on internal sources of stability and Rome's success in integrating the empire. Prerequisite: Sophomore standing or History 111 or 311 or permission of instructor.

HIST 313 Medieval Europe, 410-1350 (3) Introduces students to the history and culture of Western Europe and the Mediterranean between 410 and ca. 1350. Traces the collapse of the western Roman Empire in the mid 5th century, the evolution of civilizations of Byzantium, Islam and western Christendom, and the fusion of Roman, Christian, and Germanic elements that create medieval Europe. Prerequisite: Sophomore standing or History 111 or 312 or permission of instructor.

HIST 314 Birth of the Modern West: Europe, 1350-1648 (3) Examines underlying causes of new modes of artistic and intellectual expression, expansion into the New World, and the aggressive pursuit of scientific knowledge in Europe during this period. Also explores why the promise of the Renaissance and "liberty" of the Reformation co-existed with a Europe racked by vicious religious wars, peasant revolts, and aggressive attempts to control or eliminate "the other" (e.g., witches, heretics, homosexuals, Jews).



Prerequisite: Sophomore standing, or History 111 or 313, or permission of instructor.

HIST 317 Europe 1800-1890 (3) Studies the social, political, and cultural changes that took place in Europe over the course of the nineteenth century. Special attention to various French revolutions and their impact, and to the Industrial Revolution and responses to it. Prerequisite: Sophomore standing or permission of the instructor.

HIST 318 The First World War (3) Examines the causes, course, and consequences of the First World War. Traces the roots of the war to the European power politics of the 1870s, and follows the consequences up to the rise of fascism. In studying the war itself, focuses on the experience of individuals involved, women and men, combatants and non-combatants. Includes extensive discussion of painting, poetry, sculpture, photography, and the novel. Prerequisite: Sophomore standing or History 112 or 317 or 381 or permission of instructor.

HIST 319 The Second World War (3) Examines the origins, courses, and results of the Second World War, with focus on the experience of the individual caught up in one of the most horrific experiences of the 20th century. Studies the rise of Nazism and fascism throughout Europe as the key to understanding the origins of the war. Includes discussion of painting, poetry, sculpture, photography, and the novel. Prerequisite: Sophomore standing or History 112 or 318 or permission of instructor.

HIST 320 Women's Lives in the Pre-Modern World (3) Studies the lives of women primarily in western society prior to 1800; some segments focus on women in eastern and Islamic societies as well. Pays close attention to factors shaping gender relations, the role of religion in determining the status and treatment of women, how the expansion and contraction of economic space for women affects how they are viewed and how women are able to interact in formal and informal networks and communities. Prerequisite: Sophomore standing or permission of instructor.

HIST 321 The West and the Islamic World in the Middle Ages (3) Examines the relationship between the Christian and Islamic civilizations from the 7th through the 14th centuries from the perspectives of the Islamic Empire. Examines the evolution of Islamic religion, political, cultural, intellectual, and scientific exchanges and their long-term impact on both societies. Pays special attention to the rise and collapse of various Muslim empires, the Crusades, and the political and religious legacies of both. Prerequisite: Sophomore standing or History 111 or 313 or permission of instructor.

HIST 322 The French Revolution: Origins, Course, and Impact (3) Examines the economic, social, political, and cultural history of Europe in the 18th century, with particular emphasis on economic and social changes in both town and country. Considers the role such changes played in the origins, course, and continent-wide impact of the French Revolution. Prerequisite: History 112 or 314 or permission of instructor.

HIST 323 The United States and the Middle East, 1919-Present (3) Examines the legacy of Wilson's policy for the Middle East and how it shaped United States decolonization policy following World War II. Considers the emergence of independent states, including Israel, and the conflicts between nations and non-state actors since 1945. Studies the United States' role in the Middle East and considers how this has helped shape the current state of affairs in the area. Prerequisite: Sophomore standing.

HIST 324 The Emergence of Modern China and Japan since 1600 (3) Examines the distinct historical developments and modernization of both China and Japan as well as the intersection of their cultures, economies, and political institutions. Outlines the development and eventual decline of the Qing dynasty and the Tokugawa shogunate in the face of western imperialism. Traces the divergent paths taken by the two countries in their efforts to challenge Western domination, assert national independence, and establish regional strength. Prerequisite: Sophomore standing.

HIST 340 Crime, Punishment, and the Law in Early America, 1607-1861 (3) Introduces students to the legal history of early America from the colonial period until 1861. Analyzes crime and punishment, the unwritten law, intersections of the law and economics, and laws affecting marginalized peoples. Pays particular attention to court cases as indicators of larger legal trends. Prerequisite: Sophomore standing or History 141 or 342 or permission of instructor.

HIST 343 The Civil War and Reconstruction (3) Studies the events leading to the Civil War. Examines the economic, political, social, and military aspects of the war and considers the post-war period of Reconstruction. Prerequisite: Sophomore standing or History 141 or 142 or 341 or permission of instructor.

HIST 344 The American Revolution (3) Examines the social, cultural, political, and military developments in America's revolutionary period from 1754 through the ratification of the Constitution in the late 1780s. Particular emphasis will be placed upon the causes and consequences of the American Revolution, including the ideological origins of the conflict. Prerequisite: Sophomore standing or History 141 or 340 or permission of instructor.

HIST 345 United States Foreign Policy since 1776 (3) Broad understanding of the main developments in American diplomatic history. Students engage several major themes in United States foreign policy and learn how these interact by studying specific events throughout the history of America's involvement in the world. Discusses United States interaction with nations on every continent and throughout the centuries, looking for inconsistencies in these interactions and their impact on current global issues. Prerequisite: Sophomore standing or History 141 or 142.

HIST 348 The Great Crash and Great Depression: US, 1919-1941 (3) Examines the causes of the Great Depression, compares it to previous economic crises, compares the responses of Hoover and Roosevelt to the depression, and discusses the origins, development,

and impact of the New Deal. Prerequisite: Sophomore standing or History 142 or 319 or permission of instructor.

HIST 349 Cold War America: 1945-1990 (3) The Cold War shaped American society, politics, foreign policy, economics, and culture in profound ways that must be reviewed in the context of the American struggle with the Soviet Union. Important international conflicts such as the Korean War and the Vietnam War will be examined. Significant events such as the civil rights and women's rights movements will be investigated along with cultural and political transformations that shaped the period. Prerequisite: Sophomore standing or History 142 or 348 or permission of instructor.

HIST 351 The Atlantic World since 1492 (3) Examines how the peoples of Europe, Africa, North America, and South America forged a unique Atlantic community between 1492 and 1800. Pays special attention to the exploration and colonization of the Americas, including the development of slave systems and imperial governance. Prerequisite: Sophomore standing or History 112 or 354 or permission of instructor.

HIST 354 A History of the Caribbean to 1900 (3) Explores the development of Caribbean societies from the late eighteenth century to the late nineteenth century. Analyzes the gradual disintegration of the plantation system as a result of internal and external forces. Uses a comparative approach to study internal migrations, creolization, plantation economies, natural disasters, crime, and emancipation. Prerequisite: Sophomore standing or History 112 or 351 or permission of instructor.

HIST H378 Britain and the Middle East to 1922 (3) Explores the role played by Britain in shaping the modern Middle East by focusing on British attempts to solve the "Eastern Question" – namely, deciding the fate of the Ottoman Empire. Examines the extent to which this effort provoked the rise of Arab nationalism and Islamic fundamentalism. Prerequisite: History 112 or permission of instructor.

HIST H379 Africa and British Imperialism, 1815-1919 (3) Explores the role Britain played in shaping modern Africa and the reactions of Africans to this foreign intervention. Prerequisite: History 112 or permission of instructor.

HIST 380 Topics in History (3) Explores specialized topics in history in a lecture-discussion format. Repeatable course. Content changes each time course is offered. Prerequisite: Sophomore standing or permission of instructor.

HIST 381 Modern Britain: Challenge, Continuity, and Change, 1815-Present (3) Studies British politics and society during a period of remarkable change, as Britain acquired the biggest empire in human history and then lost it, while progressing from being a country that fought wars with its European neighbors to one that was close to the heart of the European Union. Covers religion, gender, politics, race, sport, art, and literature. Prerequisites: Sophomore standing or History 112 or 317 or permission of instructor.

HIST 383 Modern Scotland: Politics, Culture, and Identity, 1707-Present (3) Studies the development of Scotland over 300 years from the political union with England, through the Enlightenment and the Industrial Revolution, to the two world wars and modern political devolution. Includes study of culture, religion, society, and literature. Prerequisite: Sophomore standing or History 112 or 381 or permission of instructor.

HIST 385 Ireland and the Irish Diaspora (3) Studies the history of Ireland and Irish emigrant communities from the Middle Ages to the present day. Focus primarily on the years since 1700 and pays particular attention to political and social history, including the struggle for independence, emigration and its causes, and the changing fortunes of Irish communities overseas, especially in North America. Prerequisite: History 112 or permission of instructor.

HIST 418 War, Politics, and Gender, 1050-1330 (3) Examines various aspects of warfare in the Middle Ages, including weapons and tactics, the circumstances in which warfare was resorted to, the role of the church in shaping the intellectual and ethical framework of warfare, and the involvement of women in war as both armed and unarmed participants. Prerequisite: History 313 or 321 or permission of instructor. This course also counts toward the Gender and Women's Studies Minor.

HIST 428 Family Conflict in Nineteenth Century America (3) Presents a historical overview of families in crisis in nineteenth-century America. Focusing on cruelty and violence expressed by husbands, wives, and children, the course explores the complex development of marriage, gender roles, and the family. Pays particular attention to marital ideals, divorce, reform, and regional influences. Prerequisite: Junior standing or History 141 or 340 or permission of instructor.

HIST 429 Voices from the Land: Rural Life in Europe and North America, 1780-1900 (3) Comparative study of select rural societies during the age of industrialization. Pays special attention to the themes of social class, folk culture, and rural politicization; considers the various struggles for land reform stimulated by the radical politics of the age. Incorporates original accounts of life on the land in an age of change from both Europe and North America. Prerequisite: History 112 or 141 or 317 or permission of instructor.

HIST 438 War, Death, and Memory, 1914-1939 (3) Investigates the impact of the First World War's enormous death toll on European society, and in particular its impact on Christianity. Examines how societies responded to death both formally and informally. Studies the evolution, meaning, and impact of war memorials, as national, civic, and individual loci for grieving. Prerequisite: History 112 or 142 or 317 or 318.

HIST 450 The Decolonization of Africa, 1919-Present (3) Examines the various paths that African peoples have taken to attain

independence from European colonial powers. Takes an in-depth look at the writings, political activities, and violent struggles of several African societies as they challenged their colonial masters. Assesses the relative success or failure of these independence movements. Prerequisite: Junior standing or History 112 or permission of instructor.

HIST 480 Special Topics in History (3) Explores specialized topics in history, using the seminar format. Repeatable course. Content changes each time course is offered. Prerequisite: Junior or senior standing; at least three history courses completed, in addition to permission of department chair.

HIST 490 Senior Seminar in History (3) Enables history majors to apply the principles of historical methodology learned in History 290, in the preparation of a major research paper. Required for history majors. Prerequisite: Senior standing or permission of instructor.

HIST 491 Independent Study in History (1-3) Research and/or focused reading for history majors and minors on topics not sufficiently covered in the regular course offerings. Repeatable course. Content changes each time course is offered. Prerequisites: Junior standing; permission of instructor.

HIST 492 History Internship (1-3) Supervised field experience in agencies such as archives, historic preservation agencies, historical museums, or similar locations of direct relevance to a history major. Prerequisites: Sophomore standing; permission of department internship coordinator.

### **Honors (HON)**

Honors courses are taught by faculty members from all the University's colleges and schools.

Honors 110, 210, 310, 410 Special Topics in Honors (1-3) Varied topics of special interest. May be repeated. Prerequisite: Must be enrolled in the University Honors Program. Junior or senior standing required for enrollment in Honors 310, 410. If students elect to take Honors 410 as "Honors Project", it will not count toward the 15 required Honors credits for program completion.

### **Interdisciplinary (ID)**

Interdisciplinary courses provide instruction in topics requiring understanding from the perspectives of several disciplines.

ID 105 Science and Math in Real Life (3) This hands-on, interdisciplinary course is designed to introduce students to important skills in biology, chemistry, physics, and mathematics. It will emphasize real-life scientific problems and applications and the use of critical analysis and mathematics to solve these problems. The course will be arranged into several modules, each focused on a different topic. These modules will emphasize active learning through laboratories, discussions, and critical thinking exercises. Students will present their findings in oral presentations and written lab reports and begin to develop the important communication skills that are emphasized throughout the curriculum in their majors.

ID 111 Structures and Materials of World Cultures (3) An overview of structural behavior and material science as related to structural types and building materials of historical interest. Three hours lecture. Prerequisite: Mathematics 105 or higher. Spring.

ID 150 The American Corporation (3) Examines the constitution and functions of American corporations and how they interact in a global society. Studies the corporation as an instrument in the creative process of innovation throughout the world. Social and ethical responsibilities of business entities and responsibility of society toward corporations explored in relation to the role of the corporation as a source of national prosperity and wealth. Involves formal readings as well as an experiential component in which students interact with participating corporate executives.

ID 200 International Cinema (3) Overview of international (non-American) cinema from the 1890s to the present. Focuses on the masterpieces of the art form. Studies the major filmmakers and movements including German Expressionism, Soviet Realism, Parisian Avantgarde, Renoir, Italian Neo-realism, Buñuel, Kurosawa, Bergman, Fellini, French New Wave, and others.

ID 205 American Cinema (3) Overview of American cinema from the 1890s to the present. Focuses on the masterpieces of the art form. Studies the major filmmakers including Edison, Porter, Griffith, Seastrom, von Sternberg, Flaherty, Ford, Hitchcock, Welles, Curtiz, Lean, Kazan, Ritt, Coppola, Scorsese, Spielberg, Beresford, and others.

ID 220 The Holocaust Revisited (3) Explores various responses to the Holocaust. Examines historical insights and contemporary perspectives. Focus of discussion on works by Elie Wiesel, Phillip Hailie, Primo Levi, Ethy Hillesum, Richard Rubenstein, and John Roth along with selected films.

ID 235 Sacred Architecture and its Liturgy (3) Introduction to the major art forms which have developed in British Cathedrals: architecture, choral and organ literature, hymnody, liturgy, sculpture, and stained glass. Includes a two-week research trip to UE's Harlaxton College in England with visits to numerous cathedrals.

ID 250 Myths of the Greeks (3) Centers on the stories of the Greeks that have survived through the art, architecture, and literature of ancient times.

ID 255 Women Mystery Writers and the Rise of Feminism (3) Concerning women's mystery and detective fiction and the rise of feminism in the western world since 1920. Focuses on the writing of seven authors: Agatha Christie, Dorothy L. Sayers, Ngaio Marsh, P.D. James, Sue Grafton, Sara Paretsky, Patricia Cornwell. At least one mystery novel from each author included in the

readings. Also follows the rise of the women's movement in the West during the past eighty years and specifically examines the changing image of western women as portrayed in popular media.

ID H282/H382/H382H The British Experience from the Celts to the Present Day (6) Interdisciplinary introduction to the broad cultural and historical developments within British society from the earliest times to the present. Taught only at Harlaxton College and required of all students attending. Interdisciplinary H282 is the basic model for British Studies consisting of 28 lectures and seminars and three course-related field trips. Interdisciplinary H382 is appropriate for students who wish to earn 300-level credit. In addition to the Interdisciplinary H282 program of lectures, seminars, and course-related field trips, students who enroll in Interdisciplinary H382 will attend four additional seminars and write a brief research paper on each of these. Interdisciplinary H382H is appropriate for students who wish to earn honors credit. In addition to the Interdisciplinary H282 program of lecture, seminars, and course-related field trips, students who enroll in Interdisciplinary H382H will attend an additional one-hour honors seminar each week. In place of the term paper written in Interdisciplinary H282 and Interdisciplinary H382, students in the honors section will complete three research essays.

ID H290 Britain and Europe: Special Topics (1-3) A research based exploration of a topic in the development of British culture: e.g., the Age of Chivalry, Causes of World War I, From Byrd to the Beatles. Close working relationship with a British faculty mentor in a small-class environment. Prerequisite: Permission of instructor.

ID 325 Alexander the Great and the Hellenistic World (3) Interdisciplinary study of the rise of the Macedonian state in the fourth century bc, focuses first on the careers of Philip II and Alexander the Great, then examines the Hellenistic kingdoms created by their successors in Greece, the Near East, and Egypt. Besides historical events and material culture, surveys Hellenistic literature, philosophy, and science. Prerequisite: History 111 or 311 or 312 or permission of instructor. Alternate years.

ID 350H Honors Seminar/Special Topics (3) A thoughtful exploration of an interdisciplinary topic with readings and student participation and presentations. May be repeated.

ID 356 Functional Anatomy and Biomechanics (3) The study of human movement utilizing principles of anatomy, physiology, physics, and other related sciences. Emphasizes basic biomechanics and musculoskeletal structure and function. Students learn to analyze human motion anatomically, kinematically, and kinetically. Spring. Two hours lecture, two hours lab.

ID 380 Applied Product/Process Development (3) This course provides an immersion into an actual product or process development competition in the context of a two-week intensive course. Students from at least two disciplines will participate in two or more interdisciplinary teams that will pursue the development of a new product or process for a regional client. The teams will compete to develop the product or process that best meets the client's needs. The selected winning team of the competition may be eligible for a prize provided by the client.

ID 433 Human Growth and Development (3) Presents typical human development from conception to death including functional changes in posture and movement. Presents processes of growth, maturation, adaptation, motor control, and motor learning. Discusses concepts of critical period, health risk, physiologic reserve, and senescence. The relationship of physical, cognitive, and social theories of human development and age-related system changes given. Views motor behavior across life span within a social and psychological context. Prerequisite: Sophomore standing. Fall.

ID 480 Origins and Effects of Modern Technology (3) Studies the development, the current place in society and the observed and potential benefits and threats of several 20th century technological innovations. Involves individual presentations and seminar discussions. Open to all majors in the University. Satisfies senior seminar requirement. Prerequisites: Completion of at least one science course; senior standing.

## **Latin (LATN)**

Latin courses are taught by the faculty of the Department of Archaeology and Art History.

LATN 111, 112 Elementary Latin (3 each) Introduction to the basic elements of Latin grammar and syntax. Emphasis on reading and simple composition.

LATN 211, 212 Intermediate Latin (3 each) Develops understanding of advanced Latin syntax and emphasizes reading of extended passages from selected Latin prose authors. Poetry is introduced in 212.

LATN 315 Latin Prose Historians: Caesar and Sallust (3) Reading of selections from Caesar's Gallic War and Civil War and Sallust's War with Catiline or Jugurthine War. Develops students' command of Latin vocabulary and understanding of advanced Latin syntax and grammar. Students will consider common historical themes and approaches employed by the authors. Prerequisite: Latin 212 or permission of instructor.

LATN 316 Cicero (3) Reading of unedited Latin selections from Cicero's Philippics and De natura deorum. Beyond continuing development of vocabulary skills, introduces the formal study of rhetoric using Cicero's orations and philosophical works. Prerequisite: Latin 212 or permission of instructor.

LATN 321 Vergil (3) Reading of selections from Books 1, 2, 4, 6 of Vergil's Aeneid. Develops understanding of Latin poetic form, teaches principles of scansion and reinforces knowledge of important literary devices in Latin. Prerequisite: Latin 212 or permission

of instructor.

LATN 329 Medieval Latin (3) Reading of selected medieval Latin texts from the 4th century ad up to the Renaissance. Introduces students to the changes in Latin grammar and vocabulary occurring in Late Antiquity and the Middle Ages. Prerequisite: Latin 212 or permission of instructor.

LATN 330 Individual Readings in Latin Literature (1-6) Topics and credit hours must be prearranged with instructor. Repeatable course. Content changes each time course is offered.

### **Law (LAW)**

Law courses are taught by the faculty of the Department of Law, Politics, and Society and the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

LAW 201 Legal Environment of Business (3) Introduces principles of law and mechanics of the legal system. Provides a broad introduction to legal concepts and statutes that affect businesses and managerial decision making.

LAW 302 Business Law (3) In-depth coverage of the concepts of partnership, agency, corporations, commercial paper, sales, and secured transactions. Prerequisite: Law 201.

### **Legal Studies (LS)**

Legal studies courses are taught by the faculty of the Department of Law, Politics, and Society.

LS 125 Law in Society (3) Overview of major principles and functioning of our legal system. Introduces students to jurisprudential analysis and to the role of professionals within the justice system. Legal aspects of current topics discussed to assist students in acquiring an appreciation for the dynamic role law plays in our changing society.

LS 300 Legal Research (3) Examines the law library, surveys the various reference sources available to lawyers in determining applicable law, and studies the processes of legal research and writing of memoranda presenting results of that legal research. Includes numerous practice problems requiring legal research and memoranda writing, utilizing statutes, case reports, encyclopedias, treatises, computerized legal research systems, and other legal research sources. Prerequisite: Legal Studies 125.

LS 301 Legal Drafting (3) Uses basic skills learned in Legal Studies 300, in which accent was on learning the law library and how to use the various finding tools in uncovering the law. Advanced legal research and writing deals primarily with what to do once one finds the law, the techniques of reading and analyzing case law, and the fundamentals of legal writing including the use of forms, memoranda, and briefs. Prerequisite: Legal Studies 300.

LS 310 Real Estate (3) Covers basic laws relating to real property and common types of real estate transactions and conveyances. Studies various instruments such as deeds, contracts, leases and deeds of trust with emphasis on how these instruments are drafted. Study activities include research projects relating to the subject matter and practice in retrieving and recording information. Prerequisite: Legal Studies 125.

LS 320 Evidence, Litigation, and Trial Practice (3) Includes analysis and discussion of common types of litigation, promises of litigation, sources of law, the court systems, attorneys, types of lawsuits, usual defenses. Examines Indiana civil procedures, discovery procedures, court procedures, trial, post-trial motion procedures, appeal, enforcement of judgment, and various types of litigation. Particular attention given to the role of the paralegal in assisting the attorney in these matters. Prerequisite: Legal Studies 125.

LS 340 Federal Taxation (3) Studies current federal income tax law concepts of income and deductions for all entities. Prerequisite: Legal Studies 125. Same as Accounting 329.

LS 343 Criminal Law (3) Studies both substantive and procedural criminal law including specific topics in each. Prerequisite: Legal Studies 125. Same as Criminal Justice 342.

LS 345 Constitutional Law: The American Constitution (3) Reviews judicial decisions and interpretations which have contributed to the growth and development of the United States Constitution in such areas as the federal system, intergovernmental relations, presidential powers, government functions, and civil rights. Prerequisite: Legal Studies 125. Same as Political Science 345.

LS 350 Business Organization (3) Studies the legal organization of business entities. Emphasis on the role of the lawyer and the legal assistant in the formation of various business organizations. Includes a survey of the fundamental principles of law applicable to each type of business organization and preparation of the related documents. Prerequisite: Legal Studies 125.

LS 370 Family Law (3) Acquaints the legal studies student with the legal problems involved in the area of domestic relations. Covers the legal problems involved in separation, divorce, child custody, adoption, and non-support. Students draft pleadings in domestic relations cases as well as study the law regarding the particular area in which they are working. Prerequisite: Legal Studies 125.

LS 380 Administrative Law (3) Overview of the functions and procedures of federal administrative agencies, including analysis of

their underlying statutory authority as embodied in the Administrative Procedure Act and the subsequent case law development of this authority. Topics include the rule-making function, administrative adjudication and due process, judicial review of administrative action, use and control of discretion in the administrative process, and disclosure of information by administrative agencies. Prerequisite: Legal Studies 125.

LS 420 Women and Law (3) Introduces students to legal issues that have had a profound impact on the legal standing and rights of women. Examines the historical context that created the present legal status of women in the United States. Prerequisite: Legal Studies 125 or permission of instructor.

LS 480 Special Topics in Law (3) Covers selected topics in more depth and explores current law-related issues. Repeatable course. Content changes each time course is offered. Prerequisite: Legal Studies 125 or permission of instructor.

LS 491/492 Internship (3 each) The internship requirement for the legal studies program combines the student's academic training with practical experiences within a law firm, corporation, bank, or governmental agency. Prerequisite: Senior standing.

LS 497 Contemporary Legal Issues (3) Considers contemporary legal issues and their impact on our culture. Research and writing about those issues required. Prerequisite: Senior standing, completion of legal studies core requirements, or permission of the instructor. Senior seminar course for legal studies majors.

### **Management (MGT)**

Management courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

MGT H250 Seminar in Contemporary Leadership (3) Explores various theories of leadership and ethical behavior through the use of cases based on classic and modern firms. Covers topics including conflict resolution, situational leadership, diversity, authority, power, and organizational culture. Harlaxton summer course only. Offered periodically.

MGT 280 Special Topics in Management (3) Covers topics not included in other courses, gives greater depth in certain areas, and explores current management topics. Repeatable course. Content changes each time course is offered.

MGT 306 Human Resources (3) Covers the basic components of the human resource management (HRM) function in organizations, including hiring employees, assessing performance, and administering pay and benefits. All these activities must be performed in compliance with the law, so course also addresses Equal Employment Opportunity laws and other federal legislation and agencies that impact HRM. Prerequisite: Satisfaction of leveling policy. Fall.

MGT 310 Production/Operations Management (3) Survey of the management problems found in the manufacturing of goods and the delivery of services. Various issues considered with emphasis on quantitative models available for solving selected problems. Total quality management and other current management concepts discussed. Prerequisite: Mathematics 222 or Quantitative Methods 227, or equivalent statistics course.

MGT 311 Management Information Systems (3) A study of various types of computer-based information systems including their design, acquisition, and operation from the perspective of the manager/end-user. Prerequisite: satisfaction of the leveling policy.

MGT 331 International Business Strategy (3) Examination of the challenges of conducting business outside the firm's country of origin. Explores the unique aspects of international business, the international environment, and foreign environmental forces from a strategic perspective. Prerequisite: Economics 101 or 102.

MGT 377 Organizational Behavior (3) Focuses on developing an understanding of the individual and group level factors that influence employee attitudes and behavior at work. Emphasis placed on learning organizational behavior theories, their empirical validity, and their practical implications. Topics include personality and emotions, motivation, work teams, and leadership. Prerequisite: Satisfaction of leveling policy. Credit not given for both Management 377 and Management 300.

MGT 380 Special Topics in Management (3) Covers topics not included in other courses, gives greater depth in certain areas and explores current management topics. Repeatable course. Content changes each time course is offered. Prerequisite: Permission of instructor and satisfaction of leveling policy. Offered periodically.

MGT 392 Managing Global Relationships (3) Focuses on the impact of culture on business relationships. Emphasis is placed on the ways in which culture impacts managerial relationship with employees, with other businesses, and negotiations. Applications to the international management context, intercultural negotiations, and recommendations for improving expatriate success are highlighted. Prerequisites: MGT 377.

MGT 395 Independent Study (1-3) Independent research in management conducted under faculty supervision. Prerequisite: Permission of the instructor and satisfaction of leveling policy.

MGT 402 Compensation and Benefits (3) Examines human resources management practices that compensate employees and provide benefits. Covers job evaluation, pay structures, federal laws affecting compensation practices, incentive pay plans, and benefit plans. Prerequisite: Management 306. Spring.

MGT 412 Leadership (3) Surveys historical and contemporary perspectives on leadership. Includes a heavy experiential emphasis through skill-building modules related to leadership tasks, for example, making oral presentations, empowering and delegating, and motivating others. Provides a comprehensive understanding of the leadership subject from the management literature as well as a personalized, practical application experience. Prerequisite: Satisfaction of leveling policy.

MGT 430 Decision Making (3) Develops a theoretical and practical understanding of individual and multiparty decision-making processes. Emphasis placed on learning about the systematic ways in which people's judgments deviate from what a rational model would predict. Coverage of multiparty decision making includes an extensive treatment of negotiation strategies. Applications to the management context and recommendations for improving decision making are highlighted. Prerequisite: satisfaction of the leveling policy.

MGT 455 Global Supply Chain (3) Offers key issues and approaches to global supply chain management, including product and supply chain design, customer value management, inventory management, supply chain integration, strategic alliances, and information technology. Prerequisite: Management 310. Offered alternate years.

MGT 475 Competitive Dynamics (3) Examines the interplay between functional areas of the firm as well as the importance of competitive analysis. Through the use of a simulation, the integration of principles and techniques learned in accounting, finance, marketing, and management are highlighted. Prerequisites: Accounting 211; Finance 361; Management 377; Marketing 325.

MGT 497 Global Strategic Management (3) Uses a strategic planning model to integrate principles and techniques learned in accounting, economics, finance, marketing, management, and quantitative methods. Examines strategies used to attain and maintain a global competitive advantage. Prerequisites: Finance 361; Management 377; Marketing 325; senior standing. Senior seminar course.

## **Marketing (MKT)**

Marketing courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the "Schroeder Family School of Business Administration" section of this catalog for the complete leveling policy.

MKT 325 Principles of Marketing (3) Introduction to basic marketing principles from the perspective of a marketing manager. Topics covered include the marketing concept, product analysis, consumer behavior, channels of distribution, pricing, promotion, international marketing, and the role of marketing in society. Prerequisite: Satisfaction of leveling policy.

MKT 330 Consumer Behavior (3) Consumer behavior studied from socio-economic, psychological, and cultural perspectives as it relates to marketing management. Prerequisite: Marketing 325.

MKT 373 Personal Selling (3) Studies the responsibilities, activities, and psychology of a sales representative with a focus on long-term relationship building. Successful selling practices are introduced including prospecting, establishing rapport, generating curiosity, being persuasive, creating desire, handling objections, and closing. Prerequisite: Marketing 325.

MKT 374 Integrated Marketing Communication (3) Provides an examination of all elements of the marketing promotion mix – advertising, sales promotions, point-of-purchase communication, direct marketing communication, public relations and sponsorship marketing, and personal selling. Overview of market segmentation, appeals, budgets, evaluation, and management of the promotion mix. Prerequisite: Marketing 325.

MKT 380 Special Topics in Marketing (3) Covers topics not included in other courses. Gives greater depth in certain areas and explores current marketing topics. Repeatable course. Content changes each time course is offered. Prerequisite: Marketing 325. Offered periodically.

MKT 385 Digital Marketing (3) This course examines timely concerns at the intersection of marketing and technology. Topics include Internet technology for marketers, online privacy and security issues, buyer behavior online, and digital marketing techniques, such as banner advertising, advertising and participating in social media, search engine optimization, and mobile and e-mail marketing. Prerequisite: Marketing 325.

MKT 395 Independent Study (1-3) Independent research in marketing conducted under faculty supervision. Prerequisites: Marketing 325; permission of the instructor.

MKT 473 International Sales and Logistics (3) This hands-on course is designed to prepare students for international trade. By exporting and importing products to and from an international education partner, with the assistance of a business partner, students will obtain a working knowledge of the logistical and sales challenges associated with international trade. Prerequisite: Marketing 325.

MKT 477 International Marketing (3) Examines the impact of culture, economics, and legal and regulatory influences on marketing strategy in more than one nation. Prerequisite: Marketing 325.

MKT 490 Marketing Research (3) Introduces applications, methods, techniques, and functions of market research and information systems. Prerequisite: Marketing 325; Quantitative Methods 227 or equivalent statistics course.

MKT 492 Strategic Marketing Management (3) Provides an examination of marketing strategy selection and implementation with a focus on decision making and problem solving. Prerequisites: Marketing 325; senior standing.

## **Mathematics (MATH)**

Mathematics courses are taught by the faculty of the Department of Mathematics.

MATH 101 Mathematical Ideas (3) Explores a variety of topics, including numeration systems, logic, geometry, probability, and statistics. Includes historical and cultural perspective and contemporary applications. Background should include two semesters of high school algebra. Fall, spring.

MATH 105 College Algebra (3) Treats properties of linear, quadratic, polynomial, exponential and logarithmic functions, inequalities, and systems of equations. Develops critical thinking and emphasizes real-world applications in the sciences and topical issues. Background should include three semesters of high school algebra. Fall, spring, summer.

MATH 106 Precalculus Trigonometry (1) Provides trigonometric tools necessary for success in Math 221. Develops trigonometric functions using both right triangles and the unit circle approach. Covers graphing, verification of identities, and inverse trigonometric functions. Requires no prior knowledge of trigonometry. Prerequisite: Grade of C or better in Mathematics 105 or an acceptable score on a placement exam.

MATH 134 Survey of Calculus (3) Treats polynomial, exponential, and logarithmic functions, their derivatives and integrals. An introduction to the calculus of several variables and applications to the natural and social sciences. Recommended for students who plan to take only one semester of calculus not requiring trigonometry. Not open to mathematics majors or minors. Background should include four semesters of high school algebra and two semesters of geometry. Prerequisite: Grade of C or better in Mathematics 105 or an acceptable score on a placement exam. Does not satisfy the prerequisite for Mathematics 222. Credit not given for both Mathematics 134 and 221. Fall, spring.

MATH 191 Special Topics in Finite Mathematics (0.5-3) Study of topics of special interest in finite (non-calculus based) mathematics. Treats material not covered in other courses. Topics will be announced. Repeatable course. Content changes each time course is offered. Background should include two semesters of high school algebra.

MATH 202 Mathematics for Elementary Teachers (3) Treats problem solving, the real number system, elementary number theory, geometry, and other topics. For elementary education majors only. Prerequisite: Mathematics 101. Spring.

MATH 221 Calculus I (4) Covers parametric and polar equations; limits and continuity; differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions; and applications of differentiation. Background should include eight semesters of high school mathematics, including four semesters of algebra, two semesters of geometry, and at least 12 weeks of trigonometry. Prerequisite: Grade of C or better in Mathematics 105 and permission of Department of Mathematics, or an acceptable score on a placement exam. Credit not given for both Mathematics 134 and 221. Fall, Spring, Summer.

MATH 222 Calculus II (4) Covers integration techniques and applications of integration. Introduces vectors and matrices, functions of several variables and their derivatives, differential equations, and multiple integrals. Prerequisite: Grade of C- or better in Mathematics 221. Fall, spring, summer.

MATH 291 Special Topics in Calculus (0.5-3) Study of aspects or applications of calculus not covered in the standard calculus sequences. Topics will be announced. Repeatable course. Content changes each time course is offered. Prerequisite: Mathematics 221.

MATH 310 History of Mathematics (3) Surveys the development of mathematics from the Ishango Bone to Newton, and Leibniz. Emphasizes major mathematical concepts, the cultural contexts in which they were discovered, and the solving of related mathematical problems. Prerequisite: Grade of C- or better in Mathematics 222.

MATH 323 Calculus III (4) Covers infinite series, vector-valued functions, multiple integration, line and surface integrals, and analysis of vector fields. Prerequisite: Grade of C- or better in Mathematics 222. Fall, spring, summer.

MATH 324 Differential Equations (3) Includes standard first- and second-order methods, systems, difference equations, power series, Laplace transforms, and numerical and nonlinear methods, with applications for all of these. Prerequisite: Grade of C- or better in Mathematics 222. Fall, spring, summer.

MATH 330 Theory of Interest (3) Covers compound interest formulas, annuities, perpetuities, amortization schedules, bonds, and other securities. Provides preparation for the Society of Actuaries Exam FM. Prerequisite: Grade of C- or better in Mathematics 222. Fall 2017.

MATH 341 Linear Algebra (3) Covers systems of linear equations, matrices, determinants, vector spaces, linear transformations, and eigenvalues and eigenvectors. Prerequisite: Grade of C- or better in Mathematics 222. Spring.

MATH 355 Foundations of Geometry (3) Develops from axioms various notions, including point, line, incidence, betweenness, congruence, parallelism, perpendicularity, distance, similarity, and perspective. Geometries include finite, Euclidean and hyperbolic, with emphasis on Euclidean constructions, proofs, transformations, and dynamic geometry using computer software.



Prerequisite: Grade of C- or better in Mathematics 222 or consent of instructor. Fall 2017.

MATH 365 Probability (3) Develops standard topics in calculus-based axiomatic probability theory and applications, including permutations, combinations, sample spaces, events, random variable, independence, conditional probability, distributions, density functions, expected value, and moment generating functions. Provides preparation for the Society of Actuaries Exam P. Prerequisite: Grade of C- or better in Mathematics 222. Fall.

MATH 370 Discrete and Combinatorial Mathematics (3) Covers such topics as enumeration, principles of logic, set theory, mathematical induction, generating functions, recurrence relations, and graph theory. Prerequisite: Grade of C- or better in Mathematics 222. Fall, spring.

MATH 373 Numerical Methods (3) Covers numerical computer-based methods for solving transcendental equations, systems of linear equations, interpolation, approximation, numerical integration and differentiation, and numerical solutions of ordinary differential equations. Prerequisite: Computer Science 205 or 210 or equivalent; Grade of C- or better in Mathematics 222. Mathematics 341 is suggested but not required. Spring 2019.

MATH 391 Special Topics in Intermediate Mathematics (0.5-3) Covers topics not included in other courses to give greater depth in certain areas and to explore current mathematics topics. Topics vary; may include foundations and set theory, graph theory, and number theory. Repeatable course. Content changes each time course is offered. Prerequisite: Mathematics 222; any additional prerequisites will be announced when scheduled.

MATH 420 Introduction to Real Analysis (3) Provides more formal treatment of topics in calculus, including limits, continuity, derivatives, integrals, and infinite series. Emphasis on precise definitions and proofs of theorems. Prerequisite: Mathematics 323. Fall.

MATH 425 Complex Variables (3) Introduction to complex numbers and the calculus of functions of a complex variable. Topics include the algebra and geometry of complex numbers, limits and derivatives of functions of a complex variable, contour integrals, Taylor and Laurent series, and residues. Prerequisite: Mathematics 323.

MATH 431 Theory of Life Contingencies (3) Covers the theory and application of contingency mathematics in the areas of life and health insurance, annuities and pensions, using both stochastic and deterministic approaches. Includes material covered on the Society of Actuaries Exam MLC. Prerequisite: Mathematics 330, 365. Spring 2018.

MATH 445 Abstract Algebra (3) Introduces algebraic structures and their applications. Covers set theory, number theory, modular arithmetic, groups, rings and fields. Prerequisite: Mathematics 341. Spring 2019.

MATH 466 Statistics (3) Develops standard topics in mathematical statistics, including sampling distributions, estimation, hypothesis testing, analysis of variance, regression, and correlation. Prerequisite: Grade of C- or better in MATH 365. Spring.

MATH 490 Seminar/Workshop/Independent Study in Mathematics (0.5-3) Seminar/workshop topics announced when scheduled. Independent study topics selected by students in consultation with the mathematics professor who supervises the work. Repeatable course. Content changes each time course is offered. Prerequisite: Permission of instructor.

MATH 491 Special Topics in Advanced Mathematics (0.5-3) In-depth exploration of a topic not covered in other courses as preparation for graduate level mathematics. Topics vary, but may include algebraic topology, analytical number theory, coding theory, differential geometry, functional analysis, Lie theory, partial differential equations, real analysis, ring theory, and topology. Repeatable course. Content changes each time course is offered. Prerequisites: Mathematics 323; any additional prerequisites will be announced when scheduled.

MATH 495 Senior Seminar: Mathematical Modeling (3) Focuses on the formulation, analysis, and interpretation of mathematical models related to contemporary problems drawn from the natural sciences, social sciences, and management science. Involves team projects and a seminar format. Prerequisites: Senior standing; at least two courses chosen from Mathematics 323, 324, 365, 341, or 373; at least one computer programming class. Fall.

MATH 499 Internship in Mathematics (1-6) A structured assignment which allows the student to gain practical experience in a mathematics-related field relating to a career interest. The student is directed by a faculty member of the Department of Mathematics and supervised by a member of the cooperating organization. Repeatable course. Content changes each time course is offered. Prerequisite: Permission of Department of Mathematics.

## **Mechanical Engineering (ME)**

Mechanical engineering courses are taught by the faculty of the Department of Mechanical and Civil Engineering. Pre-engineering students and students not admitted to the College of Engineering and Computer Science may not enroll in any mechanical engineering (ME) course numbered 200 or above without specific permission of the instructor, chair, or dean.

ME 101 Introduction to Mechanical Engineering (3) A hands-on introduction to mechanical engineering. Topics include the use of the computer in engineering, 3D modeling, applied physics, proposal preparation, teaming, and an introduction to the mechanical engineering design process of design, build, and test. Student teams complete a design project. Prerequisite: Admission to Mechanical Engineering Lower Division. Credit not given for both ME 101 and ME 102. Fall.

ME 102 Introduction to Mechanical Engineering for International Students (3) A hands-on introduction to mechanical engineering. Topics include the use of the computer in engineering, 3D modeling, applied physics, proposal preparation, teaming, and an introduction to the mechanical engineering design process of design, build, and test. Student teams complete a design project. Specific attention is given to proper use of the English language in engineering education and practice. Enrollment limited to students for whom English is a second language. Prerequisite: Admission to Mechanical Engineering Lower Division. Credit not given for both ME 101 and ME 102. Offered as needed.

ME 197 Integrated Design I (1-2) Introduces engineering design as a disciplined, creative, problem-solving process using requirements analysis, functional decomposition, system architecture, and test plans. Students work on team-based project. Students learn basic sketching and machine shop techniques. Prerequisite: Mechanical Engineering 101 or 102 with a grade of C- or better or permission of the instructor. Spring.

ME 224 Numerical Methods for Engineers (3) Fundamental mathematical principles and techniques of numerical methods and how to apply them, using high level computer languages, to solve engineering problems. Develops skills in mathematical computer modeling and analysis of engineering problems. Prerequisites: Engineering 213 and Mathematics 324 or permission of instructor.

ME 297 Integrated Design II (1-2) Introduces computer aided manufacturing. Students are provided the opportunity to work on a large scale project in a team environment. Prerequisite: Mechanical Engineering 197 with a grade of C- or better or permission of instructor. Spring.

ME 318 Manufacturing Methods (3) Considers manufacturing processes for metals and non-metals. Included are casting, forming, machining, welding, and techniques for manufacturing plastics. Includes tours of manufacturing facilities. Corequisites: Engineering 230, 232. Spring.

ME 330 Materials Laboratory (1) An integrated series of experiments on the physical and mechanical behavior of materials including the effects of various types of loads, time, temperature, and environment. Materials studied include ferrous, plastics, and other nonferrous materials. Corequisites: Engineering 230, 232. Fall.

ME 342 Machine Analysis (3) Graphical, analytical, and computer-aided methods of analyzing displacement, velocity, acceleration, and dynamic forces and couples found in mechanisms. Synthesis/design of simple mechanisms. Prerequisite: Engineering 213 with a grade of C- or better. Fall.

ME 344 Design of Machine Elements (3) Theories of failure. Design using factor of safety and reliability. Steady and variable loading, straight and curved sections. Design of gears, shafts, and bearings. Prerequisites: Engineering 232 with a grade of C- or higher.

ME 360 Thermo/Fluid Dynamics Laboratory (2) Fundamental principles and experiments in thermal and fluid systems. Flow measurement, calorimetry, thermodynamic cycles, and engine performance. Experimental projects in thermo/fluids engineering. Prerequisite: Mechanical Engineering 362. Corequisite: Engineering 366. Spring.

ME 362 Thermodynamics (4) An introduction to thermodynamic principles and the fundamentals of energy analysis. Properties of pure substances. First and second laws of thermodynamics. Gas mixtures and psychometrics. Simple gas and vapor cycles. Prerequisite: Chemistry 118. Fall.

ME 368 Heat Transfer (3) One- and two-dimensional steady and transient conduction in isotropic solids. Numerical methods in conduction. Forced and free convection in single phase fluids. Thermal radiation and radiation heat transfer. Prerequisite: Mechanical Engineering 362. Corequisite: Engineering 366. Fall.

ME 397 Integrated Design III (1-3) Includes the statistical analysis of experimental data, error analysis, and uncertainty analysis. Basic electrical and mechanical sensing devices will be covered as part of the complete data acquisition and processing system. Included is measurement of displacement, velocity, acceleration, pressure, flow, temperature, force, torque, strain vibration, and other physical phenomena. Corequisites: Electrical Engineering 215; Engineering 366 or permission of instructor. Spring.

ME 424 Engineering Biomechanics (3) This course is designed to give students the abilities to quantitatively analyze kinematics and kinetics of human movement and to evaluate data collection instrumentation options. Students will develop three-dimensional models of human body segments for purposes of evaluating human motion with respect to specific applications. Students will develop programs of their own to compute human kinetic and kinematic parameters from biomechanical data sets. Prerequisites: Engineering 213, Biology 112 or EXSS 112, and Mathematics 323; or permission of instructor.

ME 428 Special Topics in Biomedical Engineering (3) An advanced course in biomedical engineering topics. Example topics include mechanics of biomaterials, dynamics of blood flow, cardiovascular physiology, orthopaedics, and variable current topics based on student interest. Prerequisite: Engineering 232 and 366. Repeatable course. Content changes each time course is offered.

ME 432 Advanced Mechanics of Materials (3) Relations between loads, deformations, stresses, and strains; curved beams; beams on elastic supports; thick-walled cylinders; unsymmetrical bending; failure theories; energy methods for statically indeterminate members. Prerequisite: Engineering 232.

ME 434 Fracture Mechanics (3) Elements of dislocation theory; properties of mono-crystalline, poly-crystalline, amorphous, and polymeric materials; relations between solid state defects and mechanical properties; fatigue, creep, and fracture of materials.

Prerequisite: Engineering 232.

ME 444 Computer Aided Mechanical Design (3) Design of fasteners, springs, brakes, clutches, chains, and belts. Computer optimization. Principles of concurrent engineering. Parametric modeling software for analysis and design. Prerequisite: Mechanical Engineering 344.

ME 446 Finite Elements (3) Introduces the finite element method for the solution of problems encountered in stress analysis, heat transfer, and fluid mechanics. Theoretical concepts are covered as well as the application of popular computer software packages. Prerequisites: Mechanical Engineering 344; Engineering 366.

ME 448 Mechanical Vibrations (3) Kinematics of vibratory motion, study of single and multi-degree of freedom systems. Dynamic forces in vibrating systems. Computer applications in vibration analysis. Prerequisites: Mathematics 324; Engineering 213.

ME 452 System Modeling and Control (3) Mathematical and computer modeling of dynamic lumped parameter mechanical, electrical, hydraulic, and pneumatic systems. Response of first and second order systems. Introduction to feedback control of linear systems. Prerequisites: Mathematics 324; Engineering 213.

ME 453 Mechatronics (3) Hands-on use of actuators and sensors in the design of electro-mechanical systems. Systems may include electric motors, shape memory alloys, pneumatic and hydraulic actuators, solenoids, position and proximity sensors. Students learn a synergistic design approach incorporating mechanics, electronics, computer programming, and controls. Prerequisites: Mechanical Engineering 397, 452.

ME 462 Advanced Thermodynamics (3) Real gases and gas mixtures, thermodynamics of state relationships. Combustion and thermochemistry. Concepts of statistical thermodynamics. Prerequisite: Mechanical Engineering 362.

ME 463 Principles of Turbomachinery (3) Turbomachine classification. Performance characteristics of centrifugal and axial pumps, fans, compressors, and radial and axial flow turbines. Basic fluid and thermodynamic analysis of turbomachine flow processes. Rudiments of design. Prerequisites: Mechanical Engineering 362; Engineering 366; or permission of instructor.

ME 465 Internal Combustion Engines (3) Theoretical and actual cycles, production of torque and combustion modeling. Mechanical design of engines, fuel injection and emission systems. Prerequisites: Mechanical Engineering 342, 362.

ME 466 Introduction to Computational Fluid Dynamics (3) Development of the Navier-Stokes equations for laminar and turbulent flow. Methods for discretizing and solving the equations. Turbulent flow and turbulence modeling. Applications using commercial CFD software. Prerequisites: Engineering 366; Mathematics 324.

ME 468 Advanced Heat Transfer (3) Multidimensional heat conduction. Boiling and condensation heat transfer. Computer-assisted analysis of conduction, convection, and radiation. Analysis and design of heat exchangers and other heat transfer systems. Prerequisites: Mathematics 324; Mechanical Engineering 368.

ME 470 Combustion (3) Covers fundamental concepts of non-reactive ideal gas mixtures, thermochemistry, chemical equilibrium, chemical kinetics, and combustion applications, combustion pollutants, combustion hazards, and reactive gas dynamics (deflagrations and detonations). Prerequisite: Mechanical Engineering 362.

ME 472 Energy Systems (3) Energy sources and energy conversion. Principles of heat pump systems, solar energy, wind power, fuel cells, and introduction to nuclear engineering. Prerequisites: Mechanical Engineering 362, 368.

ME 473 Heating, Ventilating, and Air Conditioning (3) Methods of controlling temperature and humidity in buildings. Calculation of heating and cooling loads. Mechanical systems for heating and air conditioning. Prerequisites: Engineering 366, Mechanical Engineering 362. Corequisite: Mechanical Engineering 368.

ME 476 Power Plant Engineering (3) Modern central station power generating systems. Turbine cycles and performance. Fuels and combustion equipment. Steam generator design and performance. Rudiments of heat transfer equipment and turbomachinery design. Prerequisites: Engineering 366; Mechanical Engineering 362.

ME 495 Professional Practice I (3) Students develop a proposal for an engineering project, complete the engineering design, and begin fabrication. Students are introduced to professional skills, such as project and time management, teaming, and ethics. Prerequisites: Engineering 366; Mechanical Engineering 344; or permission of instructor. Corequisite: Mechanical Engineering 368 or permission of instructor. Fall.

ME 497 Professional Practice II (3) Complete the semester-long project proposed in Mechanical Engineering 495. All design aspects and testing documented in a formal written report and defended through an oral presentation of the results to peers, faculty, and industrial customers. Prerequisite: Mechanical Engineering 495. Spring.

ME 498 Independent Study in Mechanical Engineering (variable credit) Independent study of a topic of interest to the student. Requires faculty sponsor and approved detailed study plan.

ME 499 Special Topics in Mechanical Engineering (1-3) Formal lecture/laboratory study of topics of special interest. Topics announced. Repeatable course. Content changes each time course is offered. Prerequisites announced when scheduled.

## **Military Science Leadership (MSL)**

MSL 101 Leadership and Personal Development (1) Introduces cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

MSL 102 Introduction to Tactical Leadership (1) Provides an overview of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Continued emphasis is placed on recruitment and retention of cadets. Cadre role models and the building of stronger relationships among the cadets through common experience and practical interaction are critical aspects of the experience this course will offer.

MSL 201 Innovative Team Leadership (2) Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties and basic aspects of land navigation and squad tactics. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment.

MSL 202 Foundations of Tactical Leadership (2) Examines the challenges of leading tactical teams in the contemporary operating environment. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. This course provides a smooth transition into Military Science Leadership 301. Cadets develop greater self-awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real world scenarios.

MSL 241 US History 1740-1900 (3) This course will use eighteenth and nineteenth century US military history to explore the developments in the US military, as well as to explore the evolution of warfare at large during the time period. Emphasis will be on using campaign analysis as a vehicle to examine the evolution of military doctrine, technological developments, the changing nature of warfare, and other relevant topics.

MSL 242 US Military History 1900-2000 (3) This course will use twentieth century US military history to explore the emergence of the US military as a world power, as well as to explore the evolution of warfare at large during the time period. Emphasis will be on using campaign analysis as a vehicle to examine the evolution of military doctrine, technological developments, the changing nature of warfare, and other relevant topics.

MSL 301 Adaptive Team Leadership (3) Challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, cadets continue to develop their leadership and critical thinking abilities. The focus is developing cadets' tactical leadership abilities to enable them to succeed at ROTC's summer Leadership Development and Assessment Course (LDAC).

MSL 302 Leadership under Fire (3) Uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading small units. Skills in decision-making, persuading, and motivating team members when "under fire" are explored, evaluated, and developed. Aspects of military operations are reviewed as a means of preparing for the ROTC Leader Development and Assessment Course (LDAC). Cadets are expected to apply basic principles of the Law of Land Warfare, army training, and motivation to troop leading procedures. Emphasis is also placed on conducting military briefings and developing proficiency in Garrison operation orders. Cadets in this course are evaluated on what they know and do as leaders.

MSL 401 Developing Adaptive Leaders (3) Develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to army officers. Cadets will analyze, evaluate, and instruct cadets at lower levels. Both their classroom and battalion leadership experiences are designed to prepare cadets for their first unit of assignment. They identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates.

MSL 402 Leadership in a Complex World (3) Explores the dynamics of leading in the complex situations of current military operations in the contemporary operating environment. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with nongovernmental organizations, civilians on the battlefield, and host nation support. The course places significant emphasis on preparing cadets for their first unit of assignment. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare cadets to face the complex ethical and practical demands of leading as commissioned officers in the United States Army.

## Music (MUS)

Music courses are taught by the faculty of the Department of Music.

### Applied Music

Applied music lessons offered in piano, organ, harpsichord, harp, guitar, lute, voice, and all band and orchestral instruments. Students registering for one credit hour of applied music will receive one 30-minute private lesson per week. Students registering for two credit hours will receive one 60-minute private lesson per week. Lessons available to non-majors as studio space is available. Repeatable courses. Content changes each time course is offered. Prerequisite: Music major or minor or permission of the instructor.

APM 101, 201, 301, 401 Baritone, Euphonium (1-3 each)

APM 102, 202, 302, 402 Bassoon (1-3 each)

APM 103, 203, 303, 403 Cello (1-3 each)

APM 104, 204, 304, 404 Clarinet (1-3 each)

APM 106, 206, 306, 406 Flute (1-3 each)

APM 107, 207, 307, 407 French Horn (1-3 each)

APM 108, 208, 308, 408 Guitar (1-3 each)

APM 109, 209, 309, 409 Harp (1-3 each)

APM 110, 210, 310, 410 Harpsichord (1-3 each)

APM 111, 211, 311, 411 Lute (1-3 each)

APM 112, 212, 312, 412 Oboe (1-3 each)

APM 113, 213, 313, 413 Organ (1-3 each)

APM 114, 214, 314, 414 Percussion (1-3 each)

APM 115, 215, 315, 415 Piano (1-3 each)

APM 116, 216, 316, 416 Saxophone (1-3 each)

APM 117, 217, 317, 417 String Bass (1-3 each)

APM 118, 218, 318, 418 Trombone (1-3 each)

APM 119, 219, 319, 419 Trumpet (1-3 each)

APM 120, 220, 320, 420 Tuba (1-3 each)

APM 121, 221, 321, 421 Viola (1-3 each)

APM 122, 222, 322, 422 Violin (1-3 each)

APM 123, 223, 323, 423 Voice (1-3 each)

APM 124, 224, 324, 424 Voice – Musical Theatre 1-2 each)

APM 125, 225, 325, 425 Jazz Guitar (1-2 each)

MUS 100, 101, 200, 201, 300, 301, 400, 401 Recital Attendance (0) This course exposes students to a variety of musical styles and artistic interpretations through attendance at concerts and recitals. Students will attend a minimum of 15 performances each semester according to guidelines established in the Music Student Handbook and complete attendance verification for each. No prerequisite. Pass/fail.

MUS 102, 103 Diction I, II (1 each) Presents the International Phonetic Alphabet and the diction rules for correct singing pronunciation of English, Italian, German, and French. Combines lecture, oral readings, and skills in use of IPA. Prerequisite: Music major or permission of instructor.

MUS 104, 105 Basic Piano I, II (1 each) Group instruction in piano with simple literature and the development of skills in technique, sight-reading, harmonization, transposition, memorization, and improvisation. Designed to prepare for the Piano Proficiency I exam. Prerequisite: Music major or minor or permission of instructor.

MUS 110, 210, 310, 410 Bands: Wind Ensemble (Section 01) (1 each) Includes the finest wind and percussion students within and outside the Department of Music. Presents several concerts each semester featuring advanced level music and serves as one of the touring ensembles. Audition required each semester for entrance and seating placement. Repeatable course. Content changes each time course is offered.

MUS 110, 210, 310, 410 Bands: University Band and Aces Brass (Section 02) (1 each) Presents a concert each semester. Smaller groups from within University Band make up Aces Brass, which performs at home basketball games and MVC and NCAA tournaments. Open to music majors and non-majors. No audition required; seating at discretion of director. Repeatable course. Content changes each time course is offered.

MUS 113, 213, 313, 413 Jazz Ensemble (Section 01: Big Band) ( $\frac{1}{2}$  each) Full size band, performs on campus each semester. Other activities include performances with guest artists, jazz festivals, and regional tours. Audition required. Repeatable course. Content changes each time course is offered.

MUS 113, 213, 313, 413 Jazz Ensemble (Section 02: Lab Band) ( $\frac{1}{2}$  each) Full size band, performs on campus each semester. Audition not required. Repeatable course. Content changes each time course is offered.

MUS 114, 214, 314, 414 Saxophone Ensemble ( $\frac{1}{2}$  each)

MUS 115, 215, 315, 415 Clarinet Ensemble ( $\frac{1}{2}$  each)

MUS 116, 216, 316, 416 Woodwind Chamber Ensemble ( $\frac{1}{2}$  each)

MUS 117, 217, 317, 417 Flute Ensemble ( $\frac{1}{2}$  each)

MUS 118, 218, 318, 418 Small Jazz Ensemble ( $\frac{1}{2}$  each)

MUS 119, 219, 319, 419 Guitar Ensemble ( $\frac{1}{2}$  each)

MUS 120, 220, 320, 420 University Symphony Orchestra (1 each) Select 60 member ensemble that presents several concerts each semester featuring symphonic orchestral repertoire of varied genres. Open to both music majors and non-majors from across the University community. Audition required. Repeatable course. Content changes each time course is offered.

MUS 122, 222, 322, 422 String Ensemble ( $\frac{1}{2}$  each)

MUS 125, 225, 325, 425 Brass Ensemble ( $\frac{1}{2}$  each)

MUS 127, 227, 327, 427 Percussion Ensemble ( $\frac{1}{2}$  each)

MUS 130, 230, 330, 430 University Choir (Section 01) (1 each) Composed of the finest vocal talent on campus, this choir has built a reputation for performances of major choral-orchestral masterworks, a cappella music, part songs, and spirituals. Audition required. Repeatable course. Content changes each time course is offered.

MUS 130, 230, 330, 430 Women's Chorus (Section 02) (1 each) Presents a choral concert each semester and participates in the annual Holiday Pops concert. Some musical/choral background and a brief audition to assess pitch-matching ability is required. Repeatable course. Content changes each time course is offered.

MUS 130, 230, 330, 430 Men's Chorus (Section 03) (1 each) Provides UE men the tradition of all-male chorus singing. In addition to performing independently, performs with the Women's Chorus and the University Choir, covering repertoire ranging from classical choral works for men's voices and mixed choir to popular glee club favorites. No audition required. Repeatable course. Content changes each time course is offered.

MUS 132, 232, 332, 432 Kantorei ( $\frac{1}{2}$  each) Explores vocal chamber repertoire with specific emphasis on sixteenth and early seventeenth century madrigals and motets. Audition and concurrent enrollment in MUS 130-430 sec. 01 (University Choir) required. Repeatable course. Content changes each time course is offered.

MUS 138, 238, 338, 438 Opera Main Stage (1 each) Emphasis on broadening knowledge and skills through studies and performances of extended opera scenes, full-length opera productions, or other public performances of repertoire. Repeatable course. Content changes each time course is offered.

MUS 139, 239, 339, 439 Keyboard Accompanying ( $\frac{1}{2}$  each) Instruction in the technique and art of musical collaboration on the keyboard. Repeatable course. Content changes each time course is offered.

MUS 140 Fundamentals of Diatonic Harmony (5) Intensive instruction in basic musical notational and aural materials, followed by study and analysis of diatonic harmony (intervals, triad and seventh chords, harmonic progression and voice leading). Integrated approach includes aural skills and sight singing training. Credit not given for both Music 140 and 141. Prerequisite: Theory Assessment Test or permission of instructor.

MUS 141 Diatonic Harmony (3) Study and analysis of diatonic harmony including intervals, triad and seventh chord structure, harmonic progression, and voice leading. Integrated approach that includes aural skills and sight singing training. Credit not given for both Music 140 and 141. Prerequisite: Successful completion of Music Theory Assessment Test or permission of the instructor.

MUS 142 Chromatic Harmony (3) Continued study and analysis to include chromatic harmony (secondary dominants, Neapolitan chords, augmented sixth chords, mode mixture, and modulation) with integration of aural skills and sight singing training. Prerequisite: Music 140 or 141.

MUS 154 Introduction to Music (3) Non-technical approach to the history of music as an art in Western society from its beginnings

to the present day, with a focus on the music and composers of the last 300 years. Not open to music majors.

MUS 155 Music and Film (3) Survey of the union of music and film from its earliest inception to the present with a focus on the American motion picture industry and its musical traditions.

MUS 156 Music in America (3) Survey of music in the United States from colonial times to the present with a focus on the development of an American musical style and language in the art, folk, and popular realms.

MUS 158 Jazz History (3) Survey of the history of jazz, development of major stylistic trends, and principal contributors to the medium. Includes aural stylistic analysis.

MUS 171 Foundations of Music Education (3) This course is a survey of the music education profession in the United States. It includes an overview of professional qualifications and responsibilities, history of music education in the United States and its influences, philosophical and theoretical positions in music education, an introduction to developmental and psychological concepts of learning and cognition in the context of the music classroom, and the importance of music in schools. Includes fundamentals of music education curriculum, state and national standards, standards-based lesson planning, and assessment. Includes development of essential professional skills such as writing, communication, and using appropriate technology. Some field experiences included.

MUS 184 Orientation to Music Therapy (3) Examines music therapy treatment principles and strategies with various populations, the history of the use of music in therapy, the role of the music therapist on the interdisciplinary team, music therapy literature.

MUS 188, 287, 288, 387, 388, 487, 488 Music Therapy Practicum (1 each) Clinical training at various treatment facilities throughout the city. All training conducted under the supervision of a music therapist or music specialist. Minimum of six credit hours must be accumulated before student is eligible to begin full-time internship. Not open to first-semester freshmen. Open to music therapy majors only.

MUS 204, 205 Basic Piano III, IV (1 each) Group instruction with more advanced solo and ensemble work and emphasis on technique, sight-reading, harmonization, improvisation, transposition, memorization, and accompanying. Designed to prepare for the Piano Proficiency II exam. Prerequisites: Music 105; completion of Piano Proficiency I; permission of instructor.

MUS 236 Guitar and Voice Techniques I (1) Develops proficiency for playing a variety of songs on guitar and explores techniques for teaching guitar. The course also develops vocal techniques and proficiency in properly using the speaking and singing voice. Students will learn to sing and accompany a basic repertoire of traditional, folk, and popular songs. Prerequisite: Music major or minor or permission of instructor.

MUS 237 Guitar and Voice Techniques II (1) Develops proficiency for playing on guitar and singing a variety of songs. Students will develop their singing voices and learn to sing and accompany a repertoire of folk and popular songs representing various eras and styles. Prerequisite: Music 236 or permission of instructor.

MUS 241 Introduction to Form (3) Introduces fundamental designs, processes, and structures of music of the eighteenth and nineteenth centuries. Continues aural skills and sight singing training. Prerequisite: Music 142.

MUS 242 Post-Tonal Theory (3) Covers elements of post-tonal musical language including scales, chords, melody, rhythm, timbre, notation, and form. Introduces a variety of analytical techniques with special emphasis on set theory. Continues aural skills and sight singing training. Prerequisite: Music 142.

MUS 243 Jazz Theory (2) Introduces specialized terminology of jazz theory and relates it to traditional harmony through the study and analysis of jazz music. Topics include chord construction and the II-V-I progression through scale theory, the blues, chord changes, slash chords, the bebop and pentatonic scales, how to read a lead sheet, basic tune memorization, and re-harmonization. Prerequisite: Music 142 and Music 105 or permission of instructor.

MUS 245 Jazz Improvisation (2) Introduction to jazz improvisation with concepts and usage of jazz harmony. Experience with use of scale-chord relationships, jazz notation, ear training, rhythmic concepts, jazz style, and articulation. Students required to improvise on their declared major instrument. Development of instructional strategies for use in teaching improvisation also addressed. Prerequisite: Music 105, 142, and 243, or permission of instructor.

MUS 255, 256 Music Literature I, II (3 each) A general overview of the principal styles, genres, personalities, and works of Western art music. Music 255 discusses vocal genres, while Music 256 focuses on the development of instrumental music.

MUS 260, 261 Suzuki Pedagogy I, II (2 each) In-depth study of the philosophy and pedagogy of the Suzuki Talent Education violin method founded by Shinichi Suzuki. Includes the repertoire contained in the foundation units outlined in the Suzuki Association of the Americas' Teacher Development Document. Emphasis on both pedagogical understanding and performance skills of the repertoire. Must be taken in order unless special permission obtained from the instructor. Open to violinists and violists only. Prerequisite: Ability to meet Suzuki Association requirements for beginning level training and permission of instructor.

MUS 262 Woodwind Techniques and Pedagogy I (1) Develops practical and pedagogical knowledge of clarinet and saxophone. Covers understanding and application of various facets of woodwind playing. Prerequisite: Music major or minor or permission of instructor.

MUS 263 Brass Techniques and Pedagogy I (1) Develops practical and pedagogical knowledge of trumpet and horn. Covers understanding and application of various facets of brass playing. Prerequisite: Music major or minor or permission of instructor.

MUS 264 Percussion Techniques (1) Develops practical and pedagogical concepts of the major orchestral and world percussion instruments through performance and listening activities. Prerequisite: Music major or minor or permission of instructor.

MUS 265 String Techniques and Pedagogy I (1) Develops proficiency in one stringed instrument with emphasis on teaching beginning string techniques in a heterogeneous string class setting. Prerequisite: Music major or minor or permission of instructor.

MUS 270 Teaching Music in the Elementary School (3) Presents non-music educators with information and skills for integrating music fundamentals into the regular elementary classroom. Emphasizes pedagogical and musical performance within the study and practice of music education as well as the importance of music for developmental improvement in other academic areas. Prerequisite: Education 100 or 150.

MUS 271 Practicum in School Music Experiences (2) Classroom and field experience/practicum in P-12 school music, which includes substantial observation and reflection, and some teaching activities. Discussion topics include professional skills, traits, and competencies. Implementing standards-based lesson plans, designing music curricula, authentic assessment in a performance-based environment, and using assessment to drive instruction (emphasis on appropriate use of formative assessment versus summative assessment). Includes significant field placement in area schools. Prerequisite: Music 171 with a grade of C+ or higher.

MUS 272 Woodwind Techniques and Pedagogy II (1) Develops practical and pedagogical knowledge of flute, oboe, and bassoon. Covers understanding and application of various facets of woodwind playing. Prerequisite: Music major or minor or permission of instructor.

MUS 273 Brass Techniques and Pedagogy II (1) Develops practical and pedagogical knowledge of trombone, euphonium, and tuba. Covers understanding and application of various facets of brass playing. Prerequisite: Music major or minor or permission of instructor.

MUS 275 String Techniques and Pedagogy II (1) Develops proficiency in a second stringed instrument with emphasis on teaching more advanced string students in an orchestra setting. Prerequisite: Music 265 or permission of instructor.

MUS 286 Approaches and Materials in Music Therapy Practice (3) Examines the American Music Therapy Association Standards of Practice and the implementation of various treatment strategies in music therapy. Develops ability to write treatment plans implement structured music therapy sessions, and document progress. Prerequisite: Music 184 or permission of instructor.

MUS 336 Introduction to Improvisational Methods (2) Introduces students to proper playing technique on selected orchestral percussion instruments, hand-held percussion, and ethnic instruments. During the course of the semester students will develop proper playing skills and techniques. Facilitation abilities used in clinical music therapy improvisation will be explored and developed using percussion, keyboard, or other media improvisation exercises. Prerequisite: Music therapy major, Music 184, or permission of instructor.

MUS 340 Counterpoint (3) Composition in strict sixteenth and eighteenth century contrapuntal style in two, three, and four voices; analysis and composition of representative examples. Prerequisite: Music 241 or permission of instructor.

MUS 341 Jazz Arranging (2) Covers rudimentary techniques associated with the art of arranging jazz music. Introduces two- and three-part writing techniques for the traditional jazz combo and fundamentals of range, transposition, low interval limits, and performance variants. Prerequisite: Music 105, 142, and 243 or permission of instructor.

MUS 343 Form and Analysis (3) A detailed analytical study of a wide variety of musical compositions and forms, ranging from sixteenth to twenty-first century music. Includes an introduction to additional analytical techniques especially Schenkerian analysis. Prerequisite: Music 241 or permission of instructor.

MUS 346 Orchestration (2) Covers the instruments of the symphony orchestra, their ranges and transpositions, and technical capabilities. Includes transcription from other media to orchestral combinations. Prerequisite: Music 241 or permission of instructor.

MUS 350 Conducting I (3) Fundamentals of conducting technique, score reading, and score study. Students will conduct excerpts from traditional wind, choral, and orchestral repertoire. Prerequisite: Music 241 or permission of instructor.

MUS 351 Conducting II (2) Advanced conducting experiences focusing on conducting, score preparation, rehearsal techniques, and error detection in choral, orchestral, and band literature. Focuses include changing meters, expressive gestures, and other advanced conducting techniques derived from ensemble literature. Includes conducting and playing in lab ensembles during class and may involve conducting university ensembles that meet outside of class time. Prerequisite: Music 350 with a grade of C+ or higher.

MUS 355, 356 History of Music I, II (3 each) A detailed study of the history of music in Western civilization. Focuses on development of musical style and language, resources and technology used by musicians, changing role that music and musicians played in Western culture, and ways in which music and musical life reflected social and political developments during different



historical eras. Prerequisite: Music major or permission of instructor.

MUS 360, 361 Suzuki Pedagogy III, IV (2 each) Continuation of the Suzuki Talent Education violin method units begun in Music 260 and 261. Violinists only after volume four. Prerequisite: Music 261 or permission of instructor.

MUS 370 Elementary Methods and Materials in General Music (3) Focuses on procedures and instructional materials used in teaching general music in the elementary school. Develops pedagogical skills in singing, playing, movement, and creative exploration. Applies the teaching methods of Dalcroze, Gordon, Kodaly, Orff, and other approaches. Prerequisite: Music 142 or permission of instructor.

MUS 372 Methods and Materials in Choral Music (3) Focuses on directing, organizing, and maintaining a quality choral program at the secondary level. Addresses necessary principles, skills, and issues conducive to successful teaching and administrating. Provides opportunities to develop teaching and directing skills, to review and synthesize relevant literature, and to further personal growth and professional preparation. Prerequisites: Music 142, 350; Piano Proficiency II exam; or permission of instructor.

MUS 373 Methods and Materials in Instrumental Music (3) Focuses on directing, organizing, and maintaining a quality band and string program at the secondary level. Addresses necessary principles, skills, and issues conducive to successful teaching and administrating. Provides opportunities to develop teaching and directing skills, to review and synthesize relevant literature, and to further personal growth and professional preparation. Prerequisites: Music 142, 350; or permission of instructor.

MUS 384 Receptive and Compositional Methods in Music Therapy (3) Introduces receptive and compositional methods used in music therapy clinical practice, including song discussion, song writing, movement to music, and music and imagery. Verbal facilitation skills and guidelines for ethical clinical practice will be included. Prerequisite: Music 286 or permission from the instructor.

MUS 386 Psychology of Music (3) Examines the psychoacoustical parameters of music; the perception of melody, harmony, rhythm, and form; the effect of music on physical, emotional, and spiritual dimensions of health; music preference and ability; neurophysiology and musical behavior; and measurement and evaluation of musical behavior. Prerequisite: Music 286 or permission of the instructor.

MUS 390 Music Management Internship (1-5) Practical experience in music management internship position. Prerequisite: Junior standing, music management major or permission of the instructor.

MUS 391 Music Business Opportunities (2) Overview of professions in the music management business. Includes guest lectures from professionals in different fields of music management. Projects include research papers/presentation in selected areas of the music business field. Résumé preparation and interview skills also addressed. Prerequisites: Sophomore standing; music management major; Economics 101, 102; Music 142; Software Application 110; or permission of instructor.

MUS 392 Introduction to Music Business and Technology (3) Overview of current trends relating to music business and music technology. Requires hands-on training of computer software application programs including, but not limited to, sequencing, music notation, digital editing, and interactive applications. Four presentations regarding music technology are required. Prerequisites: Music 142; Software Application 110; or permission of instructor.

MUS 398 Independent Study (1-3) Individual research and study in special areas. Project and amount of credit to be earned must have approval of the faculty member supervising the project and the chair of the Department of Music.

MUS 451 Literature of the Applied Major (2) Survey of instrumental or vocal literature. Offered for piano, organ, harpsichord, harp, guitar, voice, and all orchestral instruments. Prerequisite: Permission of instructor.

MUS 460, 461 Suzuki Pedagogy V, VI (2 each) Study of advanced techniques and literature of Suzuki violin method and supervised teaching in the University of Evansville Suzuki Talent Education Violin Program. Prerequisites: Music 361.

MUS 474 Pedagogy of the Applied Major (2) Survey of pedagogical literature and techniques. Offered for voice and all instruments. Prerequisite: Permission of instructor.

MUS 476 Marching Band Techniques (2) Examines characteristics, techniques, and fundamentals of a secondary level marching band program. Emphasizes drill design, arranging, and adjudication of marching bands. Observation and participation activities required with local high school marching bands. Prerequisite: Music 373 or permission of instructor.

MUS 478 Student Teaching in Music (4<sup>1/2</sup>) Observing and teaching daily under supervision of the critic teacher and University supervisor for a period of eight weeks. This teaching experience is to be taken in conjunction with Music 479 (6 hours) for students who desire to student teach at a developmental level different than Music 479. It may be in a different area of music education.

MUS 479 Student Teaching in Music (4<sup>1/2</sup> or 9) Observing and teaching daily under supervision of the critic teacher and the University supervisor for length of semester.

MUS 486 Music Therapy Research (4) Presents an overview of quantitative and qualitative research methods used in music therapy. Includes methods to critically review music therapy research and incorporate research findings into clinical practice. Culminates with the creation of an individual research project proposal. Prerequisite: Music 286 or permission of the instructor.

MUS 498 Seminar in World Music (3) Senior capstone course. Concentrates on music beyond that of the Western art music tradition. Discussion centers on music and musical cultures of diverse regions of the world and each student focuses on one specific region for class presentation and a seminar paper. Prerequisites: First-Year Seminar 111; First-Year Seminar 112.

MUS 499 Music Workshop (1-3) Presents special topics workshops in various specific areas of music. Instruction by University faculty may be augmented by outstanding authorities in the field. Prerequisite: Permission of instructor.

### **Neuroscience (NEUR)**

Neuroscience courses are taught by faculty in the Departments of Biology, Chemistry, or Psychology that have advanced training and study in neuroscience.

NEUR 125 Introduction to Behavioral Neuroscience (3) Surveys development, organization, and function of the human brain and nervous system – how we sense, move, feel, and think. Introduces neural bases of mood, emotion, sleep, learning, memory, language, and attention. Assumes minimal prior knowledge of biology, physics, and chemistry. Fall, spring.

NEUR 355 Sensation and Perception (3) Examines perceptual processing of sensory information in vision, hearing, touch, taste, and smell. Examines psychophysics and the influence of personality and environmental factors in human perception. Examines neuropsychology and perceptual abnormalities resulting from brain damage. Prerequisites: Psychology 121, Neuroscience 125 or 357, 245. Spring.

NEUR 357 Neuropsychology (3) Examines the function and organization of the nervous system and the role of the nervous system in controlling behavior. Topics include nervous system structure and functions as it relates to sensory processing, movement, sleep, reproductive behavior, emotional behavior, learning and memory, stress and health, neurological disorders, and select psychiatric disorders. Current research methodology and experimental findings emphasized. Prerequisites: Biology 100 or higher; Psychology 121. Fall.

NEUR 358 Neuropsychology Laboratory (1) Laboratory course introduces techniques and paradigms of physiological psychology and behavioral neuroscience. Scientific report writing, problems of research design, and data analysis emphasized. Two-hour laboratory. prerequisites: Biology 100 or higher; Psychology 121. Co-requisite or prerequisite: Neuroscience 357. Fall.

NEUR 457 Advanced Neuroscience (3) Detailed study of the human brain and nervous system. Topics cover cellular and molecular neuroscience, neural integration, pharmacology, neuroendocrinology, nervous system development, and plasticity of the central nervous system. Involves the advanced study of neuroscience topics with focus on a current review of the literature. Prerequisites: Biology 119, Chemistry 240, Psychology 121, 357 with a grade of C or better; or equivalent course and grade received taken at the college level. Spring, alternate years.

NEUR 479 Research in Neuroscience 1-2 credit hours may be assigned to each course, depending on the amount of hours it takes to perform the research. This course may be taken more than once and up to 6 credit hours towards the student's degree. Only 2 credit hours can count toward the student's neuroscience major.

NEUR 489 Internship in Neuroscience 1-2 credit hours may be assigned to each course, depending on the amount of hours it takes to perform the internship. This course may be taken more than once and up to 6 credit hours towards the student's degree. Only 2 credit hours can count toward the student's neuroscience major.

NEUR 499 Special Topics in Neuroscience (1-3) Lectures, seminars, or discussions of topics not covered in regular course offerings. Provides an opportunity to engage in topics of special interests within the broad field of neuroscience. Course is repeatable up to 6 credit hours. Content changes each time the course is offered. This course may be taken more than once and up to 6 credit hours towards the student's degree. Only 3 credit hours can count toward the student's neuroscience major. Prerequisite: Psychology 121 or permission of instructor.

### **Nursing (NURS)**

Nursing courses are taught by the faculty of the Dunigan Family School of Nursing.

NURS 160 Nursing Modalities: Therapeutic Relationship (3) Provides beginning knowledge of nursing modalities used to facilitate health. Specific modalities include supportive counseling, teaching, social support, and alternative care. Opportunities to use nursing modalities may include simulations and interviews with healthy people (3 clock hours).

NURS 165 Dynamic Integration: A Model for Nursing (3) Introduction to the role of the nurse within the framework of the Dungan nursing model of Dynamic Integration. Explores historical, social, legal, ethical, and research components of professional nursing practice (3 clock hours). This course meets the criteria for the general education Overlay A: Global Diversity: International component.

NURS 261 Dynamic Integration: Healthy and Vulnerable Adults (3) Focuses on the promotion of healthy physiological responses and the provision of a safe environment for healthy and vulnerable individuals (3 clock hours).

Prerequisites: Exercise and Sport Science 112, 113; Chemistry 108 or 118. Nursing 165 may be taken concurrently. Corequisite: Nursing 262. Fall.

NURS 262 Nursing Modalities: Healthy and Vulnerable Adults (3) Clinical laboratory includes instruction and practice in modalities to provide a safe environment and promote healthy physiological responses for healthy and vulnerable adults. Focus is on the modality of direct care (9 clock hours). Prerequisites: Exercise and Sport Science 112, 113; Chemistry 108 or 118. Nursing 165 may be taken concurrently. Corequisite: Nursing 261. Fall.

NURS 264 Dynamic Integration: Physical Assessment (3) Introduces the assessment of health within the Dungan Model of Dynamic Integration (developmental, cultural, physiological, cognitive, psychological, behavioral, spiritual, and social support). Focus is on assessment of individuals and families across the life span. Practice component provided (3 lab hours, 5 clock hours). Prerequisites: Exercise and Sport Science 112, 113; Chemistry 108 or 118 or admission to the RN to BSN option.

NURS 271 Dynamic Integration: The Healthy Family (3) Focuses on the life cycle of a healthy family beginning at conception. Addresses family development, maternity care, transitions, and common problems of healthy families (3 clock hours). Prerequisites: Nursing 160 and 165 (may be taken concurrently), 261, 262, 264; Biology 110; Nutrition 304. Corequisite: Nursing 272. Spring.

NURS 272 Nursing Modalities: Healthy Family (3) Clinical laboratory includes instruction and practice in the modalities of direct care, teaching, counseling, alternative care, and social support in healthy families. Focus on clients and families of all ages, especially childbearing, child rearing, and aging family (9 clock hours). Prerequisites: Nursing 160 and 165 (may be taken concurrently), 261, 262, 264; Biology 110; Nutrition 304. Corequisite: Nursing 271. Spring.

NURS 351 Dynamic Integration: Transition to Professional Nursing (6) Provides overview of the philosophy of baccalaureate nursing education and role of the nurse within the framework of the Dungan Nursing Model of Dynamic Integration. Guides the RN student with unique life and work experiences to conceptualize changes in professional nursing roles. Topics include caring interaction in nursing, nursing process, health promotion and maintenance, health care delivery system, nursing theory, learning theories, and contemporary nursing. Provides forum for discussion of changing perceptions and dimensions of professional nursing (6 clock hours). Prerequisite: Admission to RN to BSN option. This course meets the criteria for Overlay Outcome E: Writing Across the Curriculum.

NURS 361 Dynamic Integration: Transition Related to Common Illness Phenomena (3) Focuses on vulnerable individuals and families across the life span who are in transition due to their responses to common illness-related phenomena such as pain, inflammation, infection, neoplasia, altered immunity, surgical intervention, or fluid/electrolyte imbalances, accidents and poisoning, congenital and developmental disorders (3 clock hours). Prerequisites: All 100- and 200-level nursing courses; Health Sciences 205. Corequisite: Nursing 362. Fall.

NURS 362 Nursing Modalities: Transition Related to Common Illness Phenomena (2) Clinical laboratory includes instruction and practice with the modalities of direct care, teaching, counseling, alternative care, social support in persons or families in transition related to their responses to common illness-related phenomena. Primary focus is on pediatric and surgical clients including their families (6 clock hours). Prerequisites: All 100- and 200-level nursing courses; Health Sciences 205. Corequisite: Nursing 361. Fall.

NURS 363 Dynamic Integration: Mental Health (3) Focuses on individuals and their families who are vulnerable or in transition due to acute or chronic mental health problems such as mood and thought disorders, anxiety disorders, substance abuse, and manipulative or angry behavior (3 clock hours). Placement: Junior. Prerequisites: All 100- and 200-level nursing courses; Health Sciences 205. Corequisite: Nursing 364. Fall.

NURS 364 Nursing Modalities in Mental Health (2) Clinical laboratory includes instruction and practice with the modalities of counseling, teaching, and social support with individuals and groups. Focuses on the client and family with acute or chronic problems in mental health (6 clock hours). Placement: Junior. Prerequisites: All 100- and 200-level nursing courses; Health Sciences 205. Corequisite: Nursing 363. Fall.

NURS 371 Illness Response I: Disruption in Energy (3) Focuses on vulnerable individuals and families across the life span who are in transition related to common illnesses causing alterations in fluid and gas transport, metabolism, digestion, and bowel elimination (3 clock hours). Prerequisites: Nursing 361, 362, 363, 364. Corequisites: Nursing 373, 374. Spring.

NURS 373 Illness Response II: Disruption in Protection (3) Focuses on vulnerable individuals and families across the life span who are in transition related to common illnesses causing alterations in reproduction and sexuality, cognition, sensation and motion, and immunity (3 clock hours). Prerequisites: Nursing 361, 362, 363, 364. Corequisites: Nursing 371, 374. Spring.

NURS 374 Nursing Modalities Related to Disruptions in Energy and Protection (4) Clinical laboratory includes instruction and practice with modalities of direct care, teaching, counseling, alternative care, social support in persons or families in transition related to disruptions of energy and protection (12 clock hours). Prerequisites: Nursing 361, 362, 363, 364. Corequisites: Nursing 371, 373. Spring.

NURS 385 Research in Nursing (3) Extends focus on evidence-based practice by examining the specific role of research in the development of the body of nursing knowledge. Primary emphasis on the nurse as a consumer of research findings (3 clock hours). Prerequisite: Statistics. This course meets the criteria for the general education Overlay E: Writing Across the Curriculum.

NURS 395 Special Topics in Health Care and Nursing (2-6) Specific health care and nursing topics. Classroom and experiential

learning experiences appropriate. Repeatable course. Content changes each time course is offered.

NURS 463 Professional Leadership (3) Focuses on the principles of leadership and management as they are practiced in nursing. Concepts of organizational behavior and transformational and transactional leadership are emphasized along with client advocacy, change agency, power, and politics. (3 clock hours) Prerequisite: Completion of all junior level courses or admission to the RN to BSN option.

NURS 467 Dynamic Integration: Health Promotion within the Community (3) Focuses on individuals, families, and groups within the community. Emphasis on vulnerable populations, their health, and the provision of health care. Examines health of the community including communicable disease, environmental health hazards, mortality and morbidity, and epidemiology (3 clock hours). Placement: Senior. Prerequisites: All 300-level nursing courses or admission to the RN to BSN option Corequisite: Nursing 468.

NURS 468 Nursing Modalities for the Community (4) Clinical laboratory includes instruction and practice with the modalities of teaching, counseling, alternative care, and social support. Focuses on vulnerable groups within the community who require health promotion and/or suffer chronicity. Primary emphasis on teaching and social support (12 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN option. Corequisite: Nursing 467.

NURS 469 Strategies for Successful Professional Nursing Practice (2) Prepares the student for the NCLEX Examination by reviewing test taking skills, test question formats, and essential knowledge for professional nursing practice. (2 clock hours). Corequisite: Nursing 477, 478.

NURS 474 Nursing Modalities: Community and Public Health (1 1/2) This clinical laboratory course includes instruction and practice with modalities of teaching, counseling, alternative health, and social support. The focus is on vulnerable groups within the community who require health promotion and/or suffer chronicity. Primary emphasis is on teaching and social support in a community setting. (4 1/2 clock hours). Required of senior students who take Nursing 477 and Nursing 478 at Harlaxto.

NURS 477 Dynamic Integration: Transitions Associated with Complex Illness Problems (3) Focuses on individuals and families who are in transition due to complex acute or chronic illness problems which increase susceptibility to multi-system failure (3 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN option Corequisite: Nursing 478.

NURS 478 Nursing Modalities: Health Promotion in Complex Problems (4) Clinical laboratory includes instruction and practice with modalities necessary to promote reintegration in individuals and families with complex acute or chronic illness problems. Clinical experiences include opportunities for practice in direct care and leadership roles (12 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN option. Corequisite: Nursing 477.

NURS 484 Dynamic Integration: Health Issues (3) Societal and global health issues critically examined with emphasis on the impact on individual consumers, health care providers, and society as a whole. Focuses on refining problem solving skills, using the student's liberal and professional education. Scholarly writing and presentation required (3 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN option. This course meets the criteria for the general education Overlay E: Writing Across the Curriculum and Outcome 11: Ability to think critically and communicate effectively, orally, and in writing: Capstone.

## **Nutrition (NUTR)**

Nutrition is taught by the faculty of the Dunigan Family School of Nursing.

NUTR 304 Nutrition in Health and Life Transitions (3) This course provides a fundamental understanding of nutrition for application to one's own lifestyle by focusing on basic nutrient requirements and how they are used by the human body throughout life transitions. A holistic approach is taken with emphasis on factors influencing eating habits (physiological, social, economic, cultural, and psychological). Variations in dietary needs, such as in relationship to growth and development and various illnesses, are discussed. Class activities are coordinated to stimulate thought and discussion on selected topics. This course meets the criteria for the Enduring Foundations General Education Outcome 10: Knowledge and responsibility. Spring and Fall.

## **Organizational Leadership (OL)**

Organizational leadership courses are taught by instructors in affiliation with the Center for Adult Education staff. Course credits apply only to the organizational leadership degree program. Enrollment is limited to students admitted to the Organizational Leadership degree program.

OL 300 Adult Learner (3) Introduction of characteristics, theories, and practices of adult development and learning. Examines basic assumptions about producing competent, flexible adults able to apply knowledge in a changing environment.

OL 310 Applied Leadership (3) Introduction to fundamental concepts of leadership. Emphasizes supervisor's roles, fostering relationships, and motivating and empowering others.

OL 311 Quantitative Skills for Leadership (3) Emphasizes critical thinking about numerical data: percentages, ratios, solving equations, computing and interpreting means, medians, modes, and standard deviations.

OL 312 Human Behavior in Organizations (3) Study of social and psychological factors that influence the supervision of groups and individuals in work settings.

OL 320 Persuasive Written and Oral Communication (3) Emphasis on developing and refining practical written and oral presentation skills.

OL 321 Principles and Issues of Human Resources (3) Study of theories, principles, and practices involved in organizing, supervising, and leading others. Emphasis on communication, motivation, leadership, evaluation, and compensation of human capital.

OL 322 Leadership Ethics (3) Survey of controversial issues, dilemmas, and quandaries encountered in contemporary society. Emphasizes fundamental norms of conduct in organization and ethical issues that affect them, including employee-employer relations, consumer advertising, and the environment.

OL 330 Supervision (3) Development of essential supervisory skills by increasing the students' thinking and knowledge to application. Considers the unique challenges of the 21st century.

OL 350 Leadership Practicum (4) Emphasizes practical application of concepts, theories, and practices of leaders. Students design and implement a problem-solving research project through integration with prior and concurrent course work. Includes class presentations, simulations that combine knowledge and skill.

OL 360 Leadership Practicum (4) Emphasizes practical application of concepts, theories, and practices of leaders. Students design and implement a problem-solving research project through integration with prior and concurrent course work. Includes class presentations, simulations that combine knowledge and skill.

OL 370 Leadership Practicum (4) Emphasizes practical application of concepts, theories, and practices of leaders. Students design and implement a problem-solving research project through integration with prior and concurrent course work. Includes class presentations, simulations that combine knowledge and skill.

OL 410 Leadership: Conflicts and Change (3) Examines impact of conflict, stress, and change in organizations. Emphasizes ability of an organization to monitor itself to determine need for change in appropriate areas. Participants examine effective change strategies.

OL 411 Leadership: Strategic Decision-Making (3) Study of best practices in decision-making. Approaches to leadership such as power-influence, situational factors, individual traits, and behaviors are explored as models of decision-making theory. Students required to apply decision-making strategies throughout course.

OL 412 Customer Development and Leadership (3) Fundamentals of developing a strong customer base. Emphasis on methods, tools, skills, and techniques required to develop, manage, and market to customers. Considers both external and internal customers.

OL 420 Global Issues Seminar (3) Studies issues involved in living and working in a global environment. Explores topics such as ethics, social responsibility, law, and technology in the international arena.

OL 421 Organizations: A Strategic Approach (3) Principles of planning, organizing, directing, and controlling the management process. Models, simulations, and case studies used to develop skills in setting goals.

OL 422 Leadership: Individual and Team Processes (3) Examines team process and leadership including team development, the importance and challenge of team member diversity, maximizing team creativity, problem-solving, handling team conflict, and revitalizing a passive or complacent team. Also emphasis on leading and managing virtual teams and the unique differences.

OL 450 Leadership Practicum (4) Emphasizes practical application of concepts, theories, and practices of leaders. Students design and implement a problem-solving research project through integration with prior and concurrent course work. Includes class presentations, simulations that combine knowledge and skill.

OL 460 Leadership Practicum (4) Emphasizes practical application of concepts, theories, and practices of leaders. Students design and implement a problem-solving research project through integration with prior and concurrent course work. Includes class presentations, simulations that combine knowledge and skill.

## **Philosophy (PHIL)**

Philosophy courses are taught by the faculty of the Department of Philosophy and Religion.

PHIL 111 Introduction to Western Philosophy (3) Examines key questions and issues raised in the history of Western philosophy to help students 1) develop critical and analytical skills; 2) become aware of their own fundamental beliefs about themselves, others, and the world; and 3) recognize the complexity that underlies the apparently simple, particularly with regard to human identity, value, and our place in the world. Develops and enhances critical thinking skills through the analysis and discussion of perennial philosophical problems. Prerequisite: Freshman or sophomore standing (closed to junior and senior students).

PHIL 121 Introductory Ethics (3) Presents a systematic and historical discussion of moral and social values through classical and

contemporary readings. Emphasis on applying moral theories to concrete moral problems.

PHIL 211 Ancient Greek Philosophy (3) Develops and analyzes philosophical theories from the pre-Socrates through the Hellenistic periods. Emphasis primarily on the thought of Plato and Aristotle.

PHIL 221 Modern European Philosophy (3) Develops and analyzes philosophical theories from the 16th through the 18th centuries. Primary focus will be on the period from Descartes to Kant.

PHIL 231 Symbolic Logic (3) Introduces fundamental principles and techniques of modern symbolic or mathematical logic including truth functional logic, quantification theory, and the logic of relations. Especially suited for students with interests in mathematics and computing science.

PHIL 240 Philosophy and Religion (3) Examines mutually intersecting themes and influences between Western philosophy and religion from antiquity to the present day. Sample topics include the nature of religious experience, claims to religious knowledge, the relationship between faith and reason, etc.

PHIL 241 Science, Technology, and Society (3) Examines the current state of science and technology along with their effects on social change. Also explores the future prospects and perils of science and technology in light of global problems and the extent to which human beings can address them responsibly.

PHIL 301 Selected Topics in Philosophy (3) Studies selected reflect topics of current interest. Specific topic may vary each time the course is taught. May be repeated for credit as the selection of topics changes. Prerequisite: One course in philosophy or religion, or permission of instructor.

PHIL 316 Environmental Ethics (3) Presents a systematic discussion of environmental ethics and key issues therein. Emphasis on applying moral theories to concrete moral problems.

PHIL 317 Bioethics (3) Considers selected problems in bioethics. Topics may include abortion, euthanasia, and genetic engineering. Prerequisite: Junior or senior standing, or permission of instructor.

PHIL 321 Social and Political Philosophy (3) Explores various social and political philosophies regarding how to ideally construct society.

PHIL 322 Kant and the Nineteenth Century (3) Develops and analyzes philosophical theories from Kant through Nietzsche. Primary focus will be on Kant and thinkers selected from among Hegel, Schopenhauer, Kierkegaard, Marx, and Nietzsche.

PHIL 412 Contemporary Philosophy (3) Examines philosophical movements in the 19th through the 21st centuries. Topics may vary from semester to semester and may emphasize major movements or schools of thought in this period, such as existentialism, phenomenology, logical positivism, linguistic philosophy, and/or pragmatism as well as individual philosophers. Prerequisite: One course in philosophy, preferably 221.

PHIL 445 History and Philosophy of Science (3) Studies methodological problems of the natural and social sciences from a historical point of view. Also examines the logic of explanation and theory construction. Prerequisite: One course in philosophy or permission of instructor.

PHIL 447 Philosophy of Mind (3) Analyzes the relationship between mental and bodily phenomena and the nature of cognitive activity. Explores whether a strictly physicalist approach to mind is feasible. Prerequisite: One course in philosophy or permission of instructor.

PHIL 450 Feminist Philosophy (3) Explores how key components of feminist thought developed with special attention to how intersectional oppression overlaps in experience (e.g., due to race, class, etc.).

PHIL 451 Philosophy of Agency (3) Examines the concept of agency from philosophical, psychological, and biological perspectives. Topics include intentional action, free will, autonomy, selfhood, guidance, control, and the phenomenology of action. Prerequisite: One course in philosophy or permission of instructor.

PHIL 459 Philosophical Classics (3) In a seminar setting, studies selected philosophical classics or texts destined to become classics. Repeatable course. Content changes each time course is offered. Prerequisite: One course in philosophy or religion, or permission of instructor.

PHIL 491 Directed Study in Philosophy (1-3) Offers research in special problems or persons under the direction of a member of the philosophy faculty. Repeatable course. Content changes each time course is offered. Repeatable up to nine hours. Prerequisite: Permission of instructor.

PHIL 492 Internship in Philosophy (1-3) Offers students the opportunity for supervised field experience in teaching or research either on campus or at some other facility appropriate to the student's field of study. Prerequisite: Completion of at least two courses in philosophy.

PHIL 499 Senior Exercise in Philosophy (1) Required of all senior philosophy majors. Affords students the opportunity to analyze how their work meets the learning outcomes of the philosophy program. Prerequisite: Senior standing.

## Physical Therapy (PT)

Physical therapy courses are taught by the faculty of the Departments of Physical Therapy and the School of Public Health.

PT 100 Medical Terminology (1) Utilizes guided independent student learning activities to teach the basic prefixes, suffixes, and roots of medical terms, prepares student for utilizing medical terminology appropriately in both written and verbal forms.

PT 101 Patient Care Skills and Interventions (3) The course includes the principles and techniques of various modalities. Students explore the principles and physiologic responses of the following physical agents: general massage, heat, cold, water, ultrasound, electrical stimulation, electromagnetic agents (i.e., diathermy, LASER, etc.) biofeedback, mechanical traction, intermittent compression, and pressure garments, as well as indications and contraindications to the use of these modalities. Students will learn appropriate communication between a PT and PTA with regard to the use of these agents. Students experience and demonstrate application of each physical agent in a laboratory setting. Prerequisite: Admission to PTA program. Fall.

PT 102 Musculoskeletal Rehabilitation (4) This course emphasizes the physical therapy management of musculoskeletal impairments and appropriate therapeutic intervention. Students will learn treatment progressions for common orthopaedic impairments and surgical procedures. The lab portion of this course includes relaxation, exercise principles and progression, extremity PNF techniques, manual therapy, and gait training. Assignments reinforce communication between PT and PTA and documentation. Lecture/lab. Prerequisites: Exercise and Sport Science 112; Physical Therapy 101. Corequisite: Exercise and Sport Science 113 if not already taken. Spring.

PT 103 Fundamentals of Client Care (3) Introduction to physical therapy. Emphasizes the role of the physical therapist assistant, professional core values, professional development, and ethical/legal issues. Introduction to basic concepts of cultural competence and professional communication. Includes principles of infection control, vital signs, and wound management. Prerequisite: Admission to PTA program. Fall.

PT 106 Functional Anatomy Lab (2) This course is taught in conjunction with Interdisciplinary 356 for students who are enrolled in the PTA program. Students will learn proper techniques for musculoskeletal system palpation, goniometry, and manual muscle testing. A regional approach will be taken where students learn pertinent muscle/joint structure and function as it applies to muscle testing and clinically applied biomechanics. Students will be exposed to key functional anatomical concepts as they relate to contemporary clinical practice. Additionally, students will gain experience in the assessment of posture and gait. Prerequisite: Exercise and Sport Science 112. Corequisites: Exercise and Sport Science 113 (if not already taken); Interdisciplinary 356 (if not already taken). Spring.

PT 110 Field Experience for the PTA (1) The course is primarily intended to introduce the student to physical therapy through field experience at clinical facilities and by reading appropriate articles. The student will accompany a physical therapist or physical therapist assistant at an assigned local facility to develop an understanding of the various roles and duties of the personnel and an appreciation of the variety of patients and their interventions. The student may assist in simple procedures selected by the clinical supervisor and will have an opportunity to improve communication skills. Prior to the start of the clinical component of the class, HIPAA regulations will be discussed. The course will also give an introduction to other health care professionals and the role of the administrator of physical therapy services. Prerequisite: PT 103. Spring.

PT 111 Clinical I (4) Introduction to clinical facilities as an active participant in the health care team. Orientation to clinical setting and procedures provided by the clinical instructor. Students use basic physical therapy procedures, administer modalities, as well as carry out basic exercise programs and gait training. All treatment supervised by a licensed physical therapist. Students will complete 240 hours over six weeks. Prerequisites: Exercise and Sport Science 112, 113; Interdisciplinary 356; Physical Therapy 101, 102, 106, 200. Summer.

PT 200 Pathophysiology (3) Covers basic pathologic conditions and principles. Emphasizes disorders of the musculoskeletal, nervous, cardiopulmonary, and immune systems. Focuses on the etiology, signs, symptoms, clinical course, and primary medical interventions of disorders presented. Understanding of how different disease processes affect the patient's ability to participate in physical therapy and achieve an optimal functional outcome is also addressed. Prerequisites: Exercise and Sport Science 112 and 113; Interdisciplinary 356; Physical Therapy 102. Summer.

PT 210 Multiple Systems Rehabilitation (4) This course addresses the physical therapy management of patients/clients who have amputations, burns, cardiac and pulmonary conditions, obstetric and pelvic floor disorders, peripheral vascular disorders, traumatic brain injuries, and wounds. Students will also be introduced to basic adaptive seating and wheelchair prescription procedures and proprioceptive neuromuscular facilitation trunk patterns and their application during the developmental sequence. Students will demonstrate, physically and in writing, treatment and documentation activities pertinent to the physical therapy management of these patients/clients. Students may also participate in preparing and presenting an educational in-service to persons in the community.

PT 249 Clinical II (5) Student is placed in the clinical setting for 240 hours to become an active participant in the health care team. They will be actively involved in the care of patients under the supervision of a licensed physical therapist. Experience develops therapeutic interventions and patient care skills. Prerequisites: Physical Therapy 111, 210, 251. Spring

PT 250 Clinical III (5) Final six-week (240 hours) clinical experience continues to develop interventions, techniques, and patient care skills. Patient care supervised by a licensed physical therapist. Upon completion of this course, students are expected to be able to practice as entry-level physical therapist assistants. Corequisite: Physical Therapy 249. Spring.

PT 251 Neurological Rehabilitation for the PTA (4) Lecture-lab. Basic knowledge of physical therapy interventions is expanded to include the treatment of adults and children with neuromuscular conditions including stroke, spinal cord injuries, multiple progressive conditions, and developmental disabilities. Emphasizes student's development of psychomotor skills to facilitate functional patient movement. Students demonstrate various physical therapy interventions and discuss patient progression as outlined in the plan of care. Students expected to accurately assess patient status and document patient findings. Experiential opportunities, clinical simulations, role playing, and small group learning activities reinforce mastery of content. Prerequisites: Physical Therapy 111, 200. Corequisite: Physical Therapy 210. Fall.

PT 252 Professional Issues for the PTA II: Transition to Practice (1) This lecture/seminar course discusses current professional issues that affect the practice of physical therapy and the role of the physical therapist assistant. Students examine various ways in which a PTA functions as a member of the health care delivery team that include the role of the assistant in department activities, specialized areas of practice, and the American Physical Therapy Association. Students also engage in a two-day review course that will prepare them for their licensure exam. Prerequisites: Physical Therapy 210, 251. Spring.

PT 370 Special Topics in Physical Therapy (1-3) Allows students to pursue areas of special interest within health care or physical therapy. Areas may include research, clinical education, administration, and classroom or community teaching. Students responsible for contacting the designated faculty member to discuss and plan the experience. Experience culminates in a formal written document, product, or reflection paper.

PT 410 Foundations of Physical Therapy (2) This course introduces the foundational proficiencies necessary for practice in the profession of physical therapy. Topics include body mechanics, elements of documentation (initial encounter, daily note, re-examination, discharge summary), effects of inactivity, foundations of therapeutic exercise, infection control, mobility training, patient/client equipment, patient/client stress, positioning and turning, posture preparation for patient/client care, proprioceptive neuromuscular facilitation trunk and extremity patterns, range of motion exercise, stretching exercise, transfer training, vital signs, wheelchairs, and wound management. Principles from the *Guide to Physical Therapist Practice* are incorporated into the course and written documentation, as suggested by the guide, is utilized for specific lab activities. Students participate in initial field experiences in an acute care, inpatient rehabilitation, and pediatric facility. Prerequisite: Physical Therapy 431.

PT 412 Physical Interventions (2) This lecture/lab course provides the student with an introduction to the therapeutic modality skills necessary for practice in the profession of physical therapy, which includes electrical stimulation, hydrotherapy, massage, cryotherapy, thermal modalities, electromagnetic modalities, and ultrasound. Principles from the *Guide to Physical Therapist Practice* are incorporated into these skills and written documentation, as suggested by the guide, is utilized for specific lab activities. Prerequisite: Physical Therapy 431.

PT 414 Foundations of Therapeutic Exercise (2) This course provides the student with an introduction to commonly performed therapeutic exercise interventions. An emphasis will be placed on understanding therapeutic exercise from a motor control perspective and how pain affects motor control and exercise. Through lecture and laboratory experiences common exercise progressions as they relate to high volume conditions encountered in outpatient physical therapy practice will be covered. Students will learn therapeutic exercise techniques, which will be utilized in future patient management courses emphasizing the current best evidence. Prerequisite: Physical Therapy 431.

PT 417 Tests and Measurements (2) Introduces basic procedures for objective assessment of the musculoskeletal system through measurement of joint range of motion (ROM) and muscle strength. Laboratory sessions allow practice in the techniques of goniometry and manual muscle testing (MMT). Inclometers, hand-held dynamometers, and isokinetic testing are introduced. Prerequisites: Biology 436; Physical Therapy 410, 412, 414, 432, 434, 442, 451. Spring.

PT 421 Patient Management I: Musculoskeletal (8) Initiates patient management sequence. Expands upon the anatomical, kinesiological, and therapeutic exercise principles presented in previous courses. Emphasis on examination and assessment of the musculoskeletal system. Common conditions and impairments are presented and reinforced through use of case examples. Appropriate interventions are addressed conceptually and performed in the laboratory. Medical documentation integrated into laboratory activities and assignments. Experiential opportunities included. Prerequisites: Biology 436; Physical Therapy 410, 412, 414, 432, 434, 442, 451. Corequisite: Physical Therapy 417. Spring.

PT 422 Patient Management II: Cardiovascular and Pulmonary (3) Applies all aspects of patient management (examination, evaluation diagnosis, prognosis, and intervention) and rehabilitation science to patients with disorders of the cardiovascular and pulmonary systems. Topics include pathophysiology, patient assessment, medical and surgical management of disease, and safety aspects. Acute, intermediate and long-term treatment, as well principles of prevention are presented. A team approach is emphasized. Prerequisites: Biology 436, Physical Therapy 410, 412, 414, 434, 442 and 451. Spring.

PT 423 Wellness in Physical Therapy (2) This course addresses issues related to wellness, health promotion, health maintenance,



and fitness from the perspective of the physical therapist. Areas of learning will include terminology associated with the fields of health promotion and disease prevention, epidemiologic factors, the effects of fitness and nutrition on wellness, principles and theory of motivation and behavior change related to health promotion, screening and assessment techniques, identification of local resources, and integration into physical therapy practice. This course, when completed in addition to Physical Therapy 451 and 452, meets the criteria for the Enduring Foundations General Education capstone outcome. Prerequisites: Biology 436, Physical Therapy 410, 412, 414, 432, 434, 442, and 451. Spring.

PT 431 Gross Anatomy (5) For students in the Doctor of Physical Therapy program. Emphasis on gross anatomy of the human skeleton, muscular, vascular, and nervous systems. Knowledge of gross anatomy provides students with a sound foundation upon which other courses in the physical therapy curriculum can directly or indirectly be related. Content presented in a regional approach, and includes anatomical concepts such as proper terminology, surface anatomy, and joint function. Gross anatomy is best learned in the laboratory through dissection of the human body. Course is primarily a laboratory experience. Prerequisite: Admission to the DPT program. Summer.

PT 432 Kinesiology (2) Kinesiology is the study of human movement. It combines the disciplines of biomechanics, physiology, and anatomy to analyze functional movements, balance, and gait. Prerequisites: Physical Therapy 431, and 435. Fall.

PT 434 Medical Pathology (3) Explores consequences of disruption in normal physiological and developmental processes. Common diseases and disorders involving all major body systems addressed, as well as selected systemic diseases. Topics include diseases of infectious, immunological, traumatic, degenerative, and congenital origin. Focuses on pathogenesis, clinical presentation, laboratory findings, prognosis, medical intervention including pharmacological agents, and implications related to physical therapy practice. Prerequisites: Physical Therapy 431, 435, 441. Fall.

PT 435 Foundations in Biomechanics (1) Biomechanics is the analysis of motion and forces that cause motion. It applies principles of physics, mechanics, trigonometry, geometry, physiology, and anatomy to the analysis of human motion and the practice of physical therapy. This course covers the topics of joint mechanics and tissue mechanics needed for the foundational knowledge of first-year DPT courses. Prerequisite: Admission to the DPT program. Summer.

PT 441 Clinical and Professional Issues I: Introduction (2) This course is the first in series of clinical and professional issues courses. It provides orientation to and strategies for success in the professional program and professional practice expectations. Students explore the practice of physical therapy, communication required for professional relationships, the core values of the profession, and professional ethics. Students are introduced to the American Physical Therapy Association and the *Guide to Physical Therapist Practice*. Prerequisite: Admission to the DPT program. Summer.

PT 442 Clinical and Professional Issues II: Cultural Competence (2) Second in series of four clinical and professional issues courses. Focuses on the physical therapist's role as an educator and developing one's own cultural competence. Provides introduction to federal programs, including Medicare and Medicaid. Prerequisites: Physical Therapy 431, 435, 441. Fall.

PT 451 Scientific Inquiry I: Introduction to Statistics and Research Methods (2) This is the first in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include fundamentals of clinical rehabilitation research (introduction to clinical rehabilitation research, theory in clinical rehabilitation research, evidence-based practice, finding research literature, research ethics), fundamentals of clinical rehabilitation research design (research paradigms, variables, research validity, selection and assignment of participants), and measurement (measurement theory and reliability, responsiveness, and validity of measurements). This course, when completed in addition to PT 452 and PT 423, meets the criteria for the general education capstone outcome as well as one writing-intensive course. Prerequisites: Admission to the DPT program or permission of the instructor. Fall.

PT 452 Scientific Inquiry II: Principals of Critical Appraisal (2) This is the second in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include the diagnostic process and critical appraisal of research related to diagnosis, intervention, and harm or risk factors. Student complete critical appraisals of published research in a written format and present their appraisals orally. This course, when completed in addition to Physical Therapy 451 and 423, meets the criteria for the Enduring Foundations General Education capstone outcome as well as one writing-intensive course. Prerequisites: Admission to the DPT program and Physical Therapy 451 or permission of the instructor. Spring.

For graduate courses (500 and 600 level), please refer to the graduate course descriptions in this catalog.

## Physics (PHYS)

Physics courses are taught by the faculty of the Department of Physics. See also Astronomy (ASTR).

PHYS 100 Conceptual Physics (3) Presents basic principles of physics through descriptive and demonstrative techniques. For non-science majors. (Credit may not be counted toward graduation for physics or engineering majors.) Prerequisite: One year of high school algebra.

PHYS 121 Algebra Physics I (4) Presents basic principles of mechanics, fluid statics, fluid dynamics, heat, and sound. Three hours lecture, two hours lab. Prerequisite: Mathematics 105 or two years high school algebra. Recommended: One year high school

physics.

PHYS 122 Algebra Physics II (4) Continues Physics 121. Presents basic principles of electricity, magnetism, light, relativity, atomic, and nuclear physics. Three hours lecture, two hours lab. Prerequisite: Physics 121.

PHYS 190 Physics Today ( $\frac{1}{2}$ ) Presents the nature of the work of a physicist and opportunities in the field of physics. An individualized course where topics of interest to each student are pursued through projects or selected readings. Recommended for all freshmen contemplating a major in physics.

PHYS 195 Special Topics in Physics or Technology (1-3) Introduction to special topics in physics or technology that are not included in regular course offerings. Offered depending on interest or demand. Repeatable course. Content changes each time course is offered. Prerequisite: One year high school algebra.

PHYS 200 Physics of Music (3) Designed primarily for students of music. Includes basic principles of acoustics, response of the ear to sound, musical tuning scales, auditorium acoustics, and the production and analysis of instrumental and vocal sounds.

PHYS 210 Calculus Physics I (4) Calculus-based treatment of mechanics, waves, and thermodynamics. Three hours lecture, two hours lab. Prerequisite: Mathematics 221. Recommended: One year high school physics.

PHYS 211 Calculus Physics II (4) Calculus-based treatment of electricity, magnetism, and light. Three hours lecture, two hours lab. Prerequisites: Mathematics 222; Physics 210.

PHYS 213 Introduction to Modern Physics (3) Introduction to the quantum nature of matter and radiation. Examines the developments in physics since the late 19th century, primarily in the areas of relativity, atomic, nuclear, and particle physics. Three hours lecture. Prerequisites: Mathematics 323; Physics 211.

PHYS 214 Modern Physics Laboratory (1) Complements Physics 213 by providing laboratory experience in relativity, atomic, nuclear, and particle physics. Two hours lab. Corequisite: Physics 213.

PHYS 305 Mathematical Physics (3) Examines a variety of mathematical methods and their application in the solution of physics problems. Topics include vector and function spaces, special functions such as Bessel functions and Legendre polynomials, curvilinear coordinates, Fourier transforms, ordinary and partial differential equations. Three hours lecture. Prerequisites: Mathematics 323; Physics 211.

PHYS 312 Classical Mechanics (4) Emphasizes Newton's Second Law in differential form. Covers driven damped harmonic motion, central fields, rigid bodies, Lagrange and Hamilton equations, and accelerated reference frames. Four hours lecture. Prerequisites: Physics 121 or 210, 305.

PHYS 320 Astrophysics (3) Detailed study of the physical processes that drive a variety of astrophysical phenomena. Topics include radiation production and interaction with matter, accreting systems, and observational techniques from radio to gamma-rays. Specific applications may include (depending on student interest) stellar structure and evolution, compact objects, galactic composition and dynamics, and the origin and structure of the universe. Three hours lecture. Prerequisites: Mathematics 323; Physics 213. Recommended: Astronomy 101. Same as Astronomy 320.

PHYS 322 Biological Physics (3) Introduces biophysical methods from a physics perspective and discusses the application of these methods toward research questions in biology. Topics include biomolecular structures, structure determination and simulation, and molecular motors. Three hours lecture. Prerequisites: Mathematics 221; Physics 210 or 121. Same as Biology 322.

PHYS 330 Nuclear Physics (2) Examines the following topics in nuclear physics: radioactivity, atomic masses, nuclear models, and nuclear fission and fusion. Two hours lecture. Prerequisites: Physics 213, 305.

PHYS 331 Condensed Matter (2) Examines the following topics in condensed matter physics: classical and quantum free electron models, crystal and reciprocal lattice vectors, lattice vibrations and phonons, energy bands in solids, metals, semiconductors and superconductors. Two hours lecture. Prerequisites: Physics 213, 305.

PHYS 340 Computational Physics (3) Provides physics majors with a functional understanding of how to apply modern programming languages to the solution of a wide variety of problems in physics. Topics include solutions to differential equations using a variety of techniques, cellular automata, Monte Carlo techniques, and high performance computing. Three hours lecture. Prerequisites: Mathematics 323; Physics 213.

PHYS 350 Electronics (4) Treats topics in both digital and analog electronics relevant to the study of physics. The study of analog electronics includes basic circuit analysis, filters, diodes, transistors, and operational amplifiers. Topics in digital electronics include logic systems and gates, analog to digital conversion, and digital to analog conversion. Three hours lecture, two hours lab. Prerequisites: Mathematics 221; Physics 122 or 211.

PHYS 401 Advanced Electromagnetics (4) Examines Maxwell's equations, electric and magnetic fields, vector and scalar potentials, gauge transformations, boundary value problems, electromagnetic radiation, and relativistic electrodynamics. Four hours lecture. Prerequisite: Physics 305.

PHYS 405 Advanced Mathematical Physics (2) Examines a variety of advanced mathematical methods and their application in the

solution of physics problems. Topics include functions of complex variables, complex analysis, Laplace transforms, introduction to group theory and Green's functions. Two hours lecture. Prerequisite: Physics 305.

PHYS 414 Advanced Laboratory (3) Introduces advanced measurement techniques employed in experimental physics research. Emphasis on the entire experimental process, including literature search, experiment construction, data acquisition, data and error analysis, and technical writing for publication. Six hours of laboratory per week. Prerequisite: Physics 214.

PHYS 416 Statistical Thermodynamics (3) Develops thermodynamics from a microscopic point of view and then relates this microscopic view to macroscopic parameters through statistical methods. Three hours lecture. Prerequisites: Physics 213, 305.

PHYS 421 Atomic Physics (2) Examines the Bohr model and wave mechanical approach to the hydrogen atom, magnetic dipole moments, spin-orbit interaction, energy states and transitions in multi-electron atoms, X-rays, and the Zeeman effect. Two hours lecture. Prerequisites: Physics 213, 305.

PHYS 422 Cosmology (2) Explores history and evolution of the universe with emphasis on theoretical models that may be tested by modern experimental and observational techniques. Topics include the Big Bang, cosmic microwave background radiation, dark energy, dark matter, the origins of structure in the universe, general relativity, and specific topics of interest to researchers in the field. Two hours lecture. Prerequisite: Physics 305. Recommended: Astronomy 101, 320. Same as Astronomy 422.

PHYS 423 Particle Physics (2) Introduction to the physics of elementary particles. Topics include relativistic particle dynamics, scattering processes, and Feynman diagrams, with applications to quantum electrodynamics (QED). Two hours lecture. Prerequisites: Physics 213, 305.

PHYS 427 Optics (3) Investigation of the interaction of light with matter, physical optics, Fourier optics, and lasers. Two and one-half hours lecture, two hours lab every other week. Prerequisite: Physics 305.

PHYS 471 Quantum Mechanics (3) Systematic introduction of formal aspects of quantum mechanics. Includes Schrodinger (wave representation) and Heisenberg (matrix representation) approaches. In-depth examination of the simple harmonic oscillator and hydrogen atom in terms of quantum mechanics, followed by additional applications and methods. Three hours lecture. Prerequisites: Physics 213, 305.

PHYS 493 Physics GRE Preparation ( $1\frac{1}{2}$ ) Prepares students for the physics Graduate Record Examination through review of physics concepts, practice tests, and evaluation of test taking strategies.

PHYS 494 Physics Seminar (1) Seminar presentation and written paper on research projects by students. Senior physics majors are required to complete the Major Field Test in physics. Repeatable course. Content changes each time course is offered.

PHYS 495 Special Topics in Physics and/or Technology (1-3) Advanced special topics in physics and/or technology that are not offered regularly. Offered depending on interest or demand. Repeatable course. Content changes each time course is offered. Prerequisite: Junior standing.

PHYS 498 Physics Internship (1-12) Provides off-campus research experience for physics majors. Prerequisites: Junior standing, permission of instructor and department chair.

PHYS 499 Research or Independent Study in Physics (1-4) Allows individuals laboratory research or independent study on a problem or topic of special interest. Subject and credit to be arranged with instructor and department chair. Prerequisite: Permission of instructor.

### **Political Science (PSCI)**

Political science courses are taught by the faculty of the Department of Law, Politics, and Society. Unless otherwise noted, there are no prerequisites for 100- or 200-level courses. All 300- or 400-level courses require a 100- or 200-level course or permission of the instructor. Political Science 493, 495, and 499 require permission of the department chair.

PSCI 100 World Politics (3) Introduction to theory and practice of comparative politics as well as political science. Focuses on political behavior, political system, political process, and world politics. Fall, spring.

PSCI 143 American National Government and Politics (3) Provides a broad overview of the institutional arrangement of the American political system, its constitutional and traditional underpinnings, and the ways in which various political actors operate within it. Encourages critical analysis of political information and active citizens participation in our democratic system. Fall, spring.

PSCI 160 Introduction to International Relations (3) Introduction to the theory and practice of international politics. Focuses on state sovereignty, conflict and cooperation, foreign policy, political economic relations, development, and international environmental issues. Fall, spring.

PSCI 190 Topics in Politics (3) Subjects offered because of unique relevance to events or developments in political science or in the world of politics. Specific topics announced in the annual schedule. Repeatable course. Content changes each time course is offered.

PSCI 212 Research Methods in Political Science (3) Introduction to research design and methods with some emphasis on statistical

analysis. Spring.

PSCI 290 Topics in Politics (3) Subjects offered because of unique relevance to events or developments in political science or in the world of politics. Specific topics announced in the annual schedule. Repeatable course. Content changes each time course is offered. Fall, spring.

PSCI 312 Political Parties and Elections (3) Study of institutional political parties, nominations, campaigns, elections, and their influence on policy making.

PSCI 313 Congress and the Legislative Process (3) Examines the organization and function of the United States Congress and the legislative process. Special attention paid to presidential and congressional interaction and its effect on policy.

PSCI 320 Comparative Politics Seminar (3) Examines the historical development and trends of comparative politics and explores major theories involving the political system, state and society, political culture, rational choice, institutionalism, political economy, development, democracy, and democratic transitions.

PSCI 326: Women and American Politics (3) Examines the expanding involvement and the distinctive contributions of women in contemporary American politics as voters, candidates, and officeholders. Includes an overview of the first and second waves of feminist activism in American political history, as well as an exploration of selected public policy issues of particular concern to women.

PSCI 343 Politics and the Media (3) Analysis of the media's impact upon the political process, institutions, and the individual. Exploration of the role played by communication, principally through the mass media, in the conduct of government and the making of public policy.

PSCI 344 Political Opinion and Political Behavior (3) Examines the formation and measure of public attitudes and opinions and their effect on contemporary American politics.

PSCI 345 Constitutional Law: The American Constitution (3) Reviews judicial decisions and interpretations which have contributed to the growth and development of the United States Constitution in such areas as the federal system, intergovernmental relations, presidential powers, government functions, and civil rights.

PSCI 349 State and Local Government (3) Study of the institutions, organization, and politics of state and local governments. Attention given to intergovernmental relations.

PSCI 360 Politics of the Middle East (3) Examines specific historical trends and contemporary issues facing the people and governments of the Middle East spanning from Libya to Iran and from Turkey to the Southern Arabian Peninsula.

PSCI 361 US Foreign Policy (3) Introduction to the US foreign policy making process that surveys areas of foreign affairs. Makes comparisons between United States and other developed as well as developing nations. Emphasis on economic, environmental, and security and defense policy. Institutional factors considered include the interaction between the presidency, congress, bureaucracy, and public opinion.

PSCI 362 International Security (3) What are the key international security challenges in the world today, and how can they be resolved? This course surveys the major actors in international security, why they threaten one another, and the strategies they use to alleviate those threats. It goes on to examine issues including war and peace, nuclear weapons, civil war, terrorism, and cyber warfare.

PSCI 363 International Law and Organization (3) Examination of international organizations on questions of military security, the environment, the global economy, economic development, and human rights. The United Nations, regional organizations, nongovernmental organizations, and multinational corporations will be addressed in the context of international law. Considers theoretical and political foundations of international law as well as contemporary application and enforcement.

PSCI 376 Historical and Contemporary Political Thought (3) Examines historical and contemporary political thought in terms of thematic continuities and discontinuities from classical Greek thought to contemporary theoretical works. Particular attention given to earlier works in terms of their relevance to current political problems.

PSCI 380 Latin American Politics (3) Examines concepts and theoretical arguments concerning civilizations, history, cultures, religions, social classes, economic development, and democratization in Latin America.

PSCI H385 Modern British Politics (3) The course describes the main features of government, the parliamentary system, political parties, and current events in Britain today. It enhances a student's ability to take a more informed stance on complex issues by considering such controversial topics as Europe, Northern Ireland, education, health, housing, race relations, and prisons.

PSCI 390 Topics in Politics (3) Subjects offered because of relevance to events or developments in political science or in the world of politics. Specific topics announced in the annual schedule. Repeatable course. Content changes each time course is offered.

PSCI 435 Human Rights Seminar (3) This course serves as a survey of the complexities of international human rights in an era of increasing globalization. Students will be exposed to theoretical foundations in various civilizations and cultures as well as the evolution of human rights, the legal instruments, and the global, regional, and national mechanisms that exist to promote and protect these rights.

PSCI 440 Environmental Law and Policy (3) Examines role of politics, economics, and culture in the formation of domestic and international environmental policies and laws. Focuses, in an era of increasing globalization, on ecosystems, population, energy, biodiversity, and the legal complexities of environmental regulatory and administrative systems.

PSCI 459 Asian Politics (3) Examines the impact of history, culture, government structures, and economic change on political processes in Asian countries. Primary attention paid to China, Japan, and Korea followed by other Asian countries.

PSCI 461 Politics of the Global Economy (3) Analysis of the political aspects of global economic relations. Areas of focus include globalization and interdependence, trade policy, international finance, development assistance, multinational corporations, energy and natural resources, and the role of international organizations.

PSCI 489 European Politics (3) Examines the historical patterns of social, economic, and religious conflict; structures of citizen representation in interest groups and political parties; electoral systems; constitutional relationships between executive, legislature, and judiciary; economic and foreign policies; and current problems of national identity in European countries.

PSCI 490 Topics in Politics (3) Subjects offered because of relevance to events or developments in political science or in the world of politics. Specific topics announced in the annual schedule. Repeatable course. Content changes each time course is offered. Fall, spring.

PSCI 493 Readings in Political Science (1-3) A planned program of reading and research under the direction of a member of the faculty. Repeatable course. Content changes each time course is offered. Fall, spring.

PSCI 495 Senior Seminar in Political Science (3) Capstone educational experience in political science offers students an opportunity to use their substantive and methodological training in preparing a significant paper and sharing the intellectual experience with other members of the seminar. Fall.

PSCI 499 Public Policy Internship (3-16) Supervised field experience or internship in a political campaign, the state legislature, the United States Congress, the courts or an agency of the criminal justice system, or in an administrative setting. Candidates maintain a diary or log of experiences and prepare a paper either reporting on some aspect of their experiential education or reporting a particular research project. Fall, spring.

## **Psychology (PSYC)**

Psychology courses are taught by the faculty of the Department of Psychology.

PSYC 121 Introduction to Psychology (3) Surveys major areas of psychology, including methodology, learning, memory, development, personality, psychopathology, and additional areas. Focuses on historical development, research findings, and applications in contemporary life. Fall, spring, summer.

PSYC 125 Introduction to Behavioral Neuroscience (3) Surveys development, organization, and function of the human brain and nervous system – how we sense, move, feel, and think. Introduces neural bases of mood, emotion, sleep, learning, memory, language, and attention. Assumes minimal prior knowledge of biology, physics, and chemistry. Fall, spring.

PSYC 201 Psychology: Fields of Application (1) This course provides psychology majors with an overview of (a) the various subdisciplines within psychology, (b) the different types of graduate school programs in psychology, and (c) the many career opportunities open to students majoring in psychology. This course is taken pass/fail only. Fall.

PSYC 205 Special Topics in Psychology (3) Examines specific topics in psychology through a seminar or workshop format. Prerequisite: Psychology 121 or permission of instructor.

PSYC 225 Lifespan Development (3) This course will focus on the development of individuals across the lifespan. Beginning with prenatal and early infancy development, the course will progress through adolescence, adulthood, and topics in death and dying. Material will include aspects of physical, cognitive, social, personality, and emotional development. This class will place an emphasis on theoretical models and experimental findings. The course adopts a discussion format with textbook, primary readings, reaction papers, and a term paper. Prerequisites: Psychology 121. Fall.

PSYC 226 Child and Adolescent Psychology (3) Examines developmental stages from conception through adolescence, giving special emphasis to physical, cognitive, social, and emotional aspects related to maturational as well as learning processes. Prerequisite: Psychology 121. Fall, spring.

PSYC 229 Social Psychology (3) Considers broad range effects of a social context on individual and group behavior. Examines interpersonal relations and actions, attitude developments and change, group dynamics, how we justify individual actions, advertising and news, prejudice and stereotyping, love and sex, leadership, and work environments as they relate to and affect behavior. Prerequisite: Psychology 121. Fall, spring.

PSYC 245 Statistics for Psychologists (4) Introduces descriptive statistics, probability, decision theory, and testing of hypotheses by both parametric and nonparametric tests. Emphasizes basic concepts, SPSS computer analysis, and APA-format presentation of results. Three hours lecture, two hours lab. Prerequisites: Nine hours of psychology, including Psychology 121; Mathematics 105 or higher. Fall, spring.

PSYC 246 Research Methods in Psychology (4) Emphasizes scientific basis of psychology. Explores research methods of modern psychology. Covers use of statistics in design of behavioral experiments. Example experiments are conducted to aid comprehension. Students gain skills necessary for management of simple research and interpretation of research reports. Three hours lecture, two hours lab. Prerequisites: Psychology 121, 245. Fall, spring.

PSYC 259 Abnormal Psychology (3) Examines abnormal behavior with emphasis on mood disorders, affective disorders, and schizophrenia. Examines the biological and psychological bases of psychopathology and those factors involved in diagnosis and treatment of mental disorder. Prerequisite: Psychology 121. Fall, spring.

PSYC 320 Psychology and the Law (3) Examines how psychological research contributes to understanding our legal system. Topics include the reliability of eyewitness testimony; factors that affect jury decision making; interrogation and confessions; psychological profiling; clinical determination of insanity, competence, and future dangerousness; sexual victimization; and race. Prerequisite: Psychology 121; Psychology 246 or Sociology 235. Spring.

PSYC 326 Language Development (3) Introduces the nature of language development in infancy and childhood. Examines cognitive, developmental, environmental, and physiological influences on language skills. Theories of language development and their influences on research and our understanding of children discussed. Topics include perception of sounds, acquisition of grammar, first and second language learning, and developmental language disorders. Relationship between language skills and overall development (social, cognitive, biological) also explored. Recommended prerequisites: Psychology 121, 225 or 226. Spring, alternate years.

PSYC 333 Psychopathology in Children and Adolescents (3) Studies behavioral characteristics, causes, diagnosis, and treatment of the psychopathological problems of childhood and adolescence including anxiety states, developmental disorders, attention deficit disorder, conduct disorder, and autistic disorder. Discusses assessment and treatment from biological and psychological perspectives. Prerequisite: Psychology 121. Recommended: Psychology 226. Fall.

PSYC 355 Sensation and Perception (3) Examines perceptual processing of sensory information in vision, hearing, touch, taste, and smell. Examines psychophysics and the influence of personality and environmental factors in human perception. Examines neuropsychology and perceptual abnormalities resulting from brain damage. Prerequisites: Psychology 121, 125 or 357, 245. Spring.

PSYC 356 Industrial Psychology (3) Examines personnel psychology, organizational psychology, and human factors psychology. Topics include job analysis, recruiting, testing, performance appraisal, leadership, motivation, person-machine systems, workspace design, and stress in the workplace. Prerequisites: Psychology 121; 229. Spring alternate years.

PSYC 357 Neuropsychology (3) Examines the function and organization of the nervous system and the role of the nervous system in controlling behavior. Topics include nervous system structure and functions as it relates to sensory processing, movement, sleep, reproductive behavior, emotional behavior, learning and memory, stress and health, neurological disorders, and select psychiatric disorders. Current research methodology and experimental findings emphasized. Prerequisites: Biology 100 or higher; Psychology 121. Fall.

PSYC 358 Neuropsychology Laboratory (1) Laboratory course introduces techniques and paradigms of physiological psychology and behavioral neuroscience. Scientific report writing, problems of research design, and data analysis emphasized. Two-hour laboratory. Prerequisites: Biology 100 or higher; Psychology 121. Corequisite or prerequisite: Psychology 357. Fall.

PSYC 366 Cognitive Psychology (3) The study of how we think. Examines the cognitive processes underlying attention, perception, memory, language, reasoning, and problem-solving. Emphasis on theoretical models and experimental findings. Explores areas of applied cognitive psychology. Prerequisites: Psychology 121, 125. Fall.

PSYC 367 Theories of Personality and Psychotherapy (3) Survey of major contemporary models of personality and individual psychotherapy. Includes biological, psychoanalytical, humanistic, behavioral, and cognitive models. Prerequisites: 12 hours of psychology, including Psychology 121, 259. Spring.

PSYC 370 Behavior Modification (3) Studies learning principles as a means for changing behavior in the home, school, health settings, and other social situations. Operant, respondent, and cognitive techniques are reviewed in terms of doing therapy, increasing self-control, and health. Focus is on modifying both child and adult behavior. Prerequisites: Psychology 121, 259. Fall.

PSYC 379 Child and Family Psychotherapy (3) Survey of theories and techniques of the most popular approaches to psychotherapy with children, adolescents, and their families. Covers individual therapies such as play, cognitive, and behavior therapies, as well as group and family therapies. Particular attention given to interviewing skills. Prerequisites: Psychology 121, 225 or 226. Spring.

PSYC 401 Independent Study in Psychology (1-3) Provides opportunities for study of subject areas in greater depth. The study is conducted with the guidance and supervision of a department faculty member. Proposed independent studies should be presented to the department at least six weeks before the beginning of the term and must be approved before registration for the course. May be repeated given substantially different content. Students cannot enroll in Psychology 401 for research into a topic that is offered as a standard course within the department. Prerequisites: 15 hours of psychology and sponsorship by the supervising faculty member. Fall, spring, summer.

PSYC 402 Undergraduate Research in Psychology (1-4) Provides opportunities for undergraduate research that involve data collection and formal reporting concerning a specific problem. This research is conducted with the guidance and supervision of a department faculty member. Proposed independent studies should be presented to the department chair at least six weeks before the beginning of the term, include a detailed prospectus of the problem and methodology, including documentation of IRB approval, and must be approved by the department before registration for course credit. Repeatable course. Content changes each time course is offered. Repeatable up to nine credit hours. Prerequisite: Psychology 121, 245, 246, and sponsorship by the supervising faculty member. Fall, spring, summer.

PSYC 405 Special Topics in Psychology (3) Examines specific topics in psychology through a seminar or workshop format. Repeatable course. Content changes each time course is offered. Prerequisite: Psychology 121 or permission of instructor.

PSYC 416 Human Sexuality (3) Covers topics related to human sexuality. Includes sexuality research, anatomy, sexual development, sexual identity and orientation, sexual activity, contraception, sexually transmitted infections, love and relationship, sex and the law, and cross-cultural differences. Exposes students to knowledge and attitudes about human sexuality and challenges them to make informed, ethical choices. Prerequisites: Psychology 121, 229; at least junior standing. Summer, offered periodically.

PSYC 420 Children, Psychology, and the Law (3) Introduces students to the major topics represented in the field of children, psychology, and law. Examines how psychological research (across sub-disciplines such as social, clinical, cognitive, and community psychology) can contribute to a better understanding of special issues that arise when children enter the legal system – a system designed for adults. Topics include the nature of and societal response to child maltreatment, the reliability of children's eyewitness testimony, jurors' perceptions of children's testimony, and juvenile justice. This course reviews how psychological research can contribute to a better understanding of the issues, how the legal system can be informed by the results of research, and how to design future research to address remaining questions. Prerequisite: Psychology 229, 246 or Sociology 235. Offered periodically.

PSYC 426 Advanced Child and Adolescent Development (3) Examines developmental stages from conception through adolescence, giving special emphasis to physical, cognitive, social, and emotional aspects related to maturational as well as learning processes. This course builds upon Psychology 226 (Child and Adolescent Psychology) but delves further into each topic so that each student gains a greater appreciation for and understanding of the concepts and processes involved in the development of children. Prerequisites: Psychology 226 or admission into a master's program or permission of the instructor. Summer, offered periodically.

PSYC 431 Stereotyping, Racism, and Prejudice (3) Introduces the student to psychological theory and research concerning stereotyping, prejudice, racism, and the effects of social stigma on self and society. Examines how stereotypes, prejudice, and racism are formed, maintained, and reduced. Analyzes prejudice toward different social groups, including those formed by racial and ethnic origins, gays and lesbians, women and men, and overweight and physically different individuals. Prerequisite: One of the following courses: Psychology 229, 245, 246, Sociology 235 or 344.

PSYC 445 Psychological Tests and Measurements (3) Studies the theory, construction, administration, and interpretation of standardized psychological tests used in educational, clinical, and industrial settings. Examines achievement, intelligence, aptitude, interest, and personality tests. Prerequisite: Psychology 121, 245, or permission of instructor. Offered periodically.

PSYC 450 Learning (3) Examines neurological, environmental, and cognitive factors that influence acquisition and retention of new information or new behaviors. Emphasis on historical theories of classical and instrumental conditioning and how they relate to stimulus control of behavior and animal cognition, including memory. Explores areas of applied learning. Learning concepts reinforced with interaction with a virtual reality program. Prerequisites: Psychology 121, 246. Spring, alternate years.

PSYC 457 Advanced Neuroscience (3) Detailed study of the human brain and nervous system. Topics cover cellular and molecular neuroscience, neural integration, pharmacology, neuroendocrinology, nervous system development, and plasticity of the central nervous system. Prerequisites: Psychology 121, 357. Spring, alternate years.

PSYC 464 Psycholinguistics (3) Introduction to psycholinguistics providing overview of language processes including speech perception, meaning representation, language processing, language production and comprehension, and language acquisition. Details theoretical linguistic concepts and their empirical support data. Examines language related to brain, thought, and reading. Prerequisite: Psychology 121. Recommended: Psychology 366. Summer, offered periodically.

PSYC 466 Cognitive Development (3) Examines development of cognitive skills from birth through adolescence with emphasis on memory, attention, perception, language, and problem solving skills. Discusses major theories of cognitive development with focus on experimental findings. The relationship between biological changes and cognitive abilities explored as is the influence of neurological and physiological impairments. Impact of cognitive skills on academic abilities and performance also discussed. Prerequisites: Psychology 121, 225 or 226. Recommended: Psychology 366. Spring, alternate years.

PSYC 489 Field Experience: Internship in Psychology (1-9) Provides work experience in a preferred field of psychology. Features work experience in area clinics, agencies, schools, and other institutions under guidance of professional personnel. Weekly class discussions focus on ongoing experiences and professional development issues. May be repeated for a maximum of nine hours.

Prerequisites: Senior psychology or neuroscience majors; must meet with the instructor at least one month before semester begins to arrange placement. Prerequisite: Permission of instructor; Minimum 3.0 Psychology GPA. Fall, spring.

PSYC 490 Senior Review and Senior Thesis (3) Reviews contemporary psychology through readings, student presentations, and discussions. Preparation for the comprehensive examination in psychology. Provides supervision of the senior thesis, which must include a thorough literature review of a topic relevant to personal goals. Thesis may include but does not require original research. Prerequisite: Senior psychology or neuroscience major. Fall.

## **Public Health (PH)**

Public Health courses are taught by the faculty of the School of Public Health.

PH 190 Introduction to Public Health (3) Introduces students to the concepts, principles, and outcomes of public health. Students will explore theories of health, illness behavior, and health education considering community health data sources, classical health intervention approaches. Course provides analysis of the US health care system. Additional topics such as infectious diseases, environmental health, chronic diseases, maternal and child health, and women's health, and health information technology are also covered. Fall

PH 195 Global Health Issues (3) This course will introduce students to the main concepts of the public health field and the critical links between global health and social and economic development. Students will get an overview of the determinants of health and how health status is measured. Students will also review the burden of disease, risk factors, and key measures to address the burden of disease in cost-effective ways. The course will cover key concepts and frameworks but be very practical in orientation. The course will be global in coverage but with a focus on low-and middle-income countries and on the health of the poor. Fall, Spring

PH 340 Public Health Nutrition (3) Focuses on food and nutrition problems in the setting of the general community. The course is designed to provide students with an understanding of theoretical and practical issues underpinning population-level assessment in nutrition and an appreciation of nutrition within the broader context of public health. Specific topics include the derivation and application of nutrient requirement estimates and nutrition recommendations, the measurement of food intake and food insecurity, current issues and controversies in food policy, and the development of individual vs. population-based intervention strategies. Prerequisite: Public Health 190. Spring

PH 400 Food Science (3) Knowledge of basic groups of foods in the food supply and their nutrient profiles, their harvesting, processing and storage procedures and policies. This course will provide students a broad overview of certain aspects of the food supply both locally and worldwide and will examine issues affecting food safety including some of the mechanisms by which food-borne pathogens that cause disease in humans, as well as the human consequences of infection by major food-borne pathogens. Prerequisites: Public Health 190. Fall

PH 401 Epidemiology (3) This course covers applications of epidemiologic methods and procedures and the study of the distribution and determinants of health and diseases, morbidity, injuries, disability, and mortality in populations. Epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries are discussed. Other topics include quantitative aspects of epidemiology, for example, data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. Prerequisite: Public Health 190. Spring

PH 488 Internship (2-12) Provides the public health major practical experience in a specialized career area. Fosters developmental of skills, competencies, and organizational and administrative techniques needed for successful entry into the work force, while working under direct supervision of selected professionals. Prerequisite: Public Health 190. This course is a repeatable course that can be taken up to three times.

PH 490 Integrative Experience (3) Examines decision making in health services administration by extensive use of case studies. Integrates material from other HSA courses into the study of decisions facing all types of health care organizations.

PH 499 Special Topics (1-3) Provides students the opportunity to study topics of special interest not covered in regular course offerings. Topics announced. Repeatable course. Content changes each time course is offered. Prerequisite: Public Health 190 or permission of instructor.

## **Quantitative Methods (QM)**

Quantitative methods courses are taught by the faculty of the Department of Accounting and Business Administration. All courses are subject to the leveling policy and prerequisite requirements of the Schroeder Family School of Business Administration. See the Schroeder Family School of Business Administration section of this catalog for the complete leveling policy.

QM 160 Introduction to Data Analytics (3) This course is an introduction to data analysis and management. It includes comprehensive introduction to Microsoft Excel and a brief treatment of Microsoft Access. Excel topics include formatting workbook text and data; implementation of designed functions; analysis and charting of financial data; application of tables, pivot tables, and table charts; managing multiple worksheets and workbooks; validation and development of macros; nested commands and other



advanced functions; financial tools and functions; scenario analysis; retrieval and importation of external data; and descriptive statistical analysis. Access topics include a brief introduction to database techniques.

QM 227 Introduction to Statistics (3) General purpose introduction to principles of analysis and inference under conditions of uncertainty. Focuses on the logic of statistical inference. Topics include probability, probability distributions, random variables, sampling and sampling distributions, estimation, hypothesis testing, and linear regression and correlation. Prerequisite: Proficiency in algebra at introductory level. Credit not given for both Quantitative Methods 227 and either Psychology 245 or Sociology 344.

QM 380 Special Topics in Quantitative Methods (3) Covers topics not included in other courses; gives greater depth in certain areas; explores current quantitative methods topics. Repeatable course. Content changes each time course is offered. Prerequisites: Quantitative Methods 227; Software Application 110. Offered periodically.

## **Religion (REL)**

Religion courses are taught by the faculty of the Department of Philosophy and Religion.

REL 120 Religion in America (3) Examines mutually intersecting themes and influences between religion and American culture. Sample topics include religious diversity in America, American religious history, the intersection of religion with American politics and cultural debates, etc. Open to first year students and sophomores only.

REL 130 Christian Thought (3) Introduces themes of Christian thought in historical and contemporary perspectives.

REL 140 Reading the Old Testament (3) Engages select passages from the Old Testament, examining their historical context, place in the Bible, textual features, and a wide variety of subsequent interpretations. Focus is on developing basic skills for reading the Old Testament.

REL 150 Introduction to the New Testament (3) Introduces the New Testament, its background, content, and major themes. Explores the ancient world and the life of the first Christian communities in order to illumine the New Testament texts. Emphasis on key topics of theology and interpretation and their contemporary relevance.

REL 201 Religious Ethics (3) Introduces religious moral thinking, paying attention to the basis, nature, content, and consequences of ethical thought and the religious traditions that address them. Includes a comparative study and discussion of various approaches to ethics as embedded in the world's most widespread religious traditions (particularly Christianity, Judaism, Islam, Buddhism, Hinduism, etc.) as well as an analysis of selected contemporary issues.

REL 210 Ancient Christianity (3) Traces the history of Christianity from the Apostolic Fathers at the close of the 1st century until the early medieval period. Emphasis on the life, theology, spirituality, and expansion of the early Church, with special attention to Christianity in ancient Roman and Saxon Britain.

REL 212 Living World Religions (3) Comparative study of the origin, development, literature, organization, and controlling ideas of major world religions. Prerequisite: First-year Seminar 112.

REL 220 Reformers and Revolutionaries in Christian History (3) Examines key issues in the history of Christian thought through study of significant figures in late medieval and modern Christian history. Examples of theologians covered include Anselm, Thomas Aquinas, Julian of Norwich, Martin Luther, John Calvin, Teresa of Avila, Anne Hutchinson, and Jonathan Edwards.

REL 240 Philosophy and Religion (3) Examines mutually intersecting themes and influences between Western philosophy and religion from antiquity to the present day. Sample topics include the nature of religious experience, claims to religious knowledge, the relationship between faith and reason, etc.

REL 250 John Wesley and the People Called Methodists (3) Traces the history and theology of John Wesley, the Methodist movement's founder, providing understanding of denominational traditions in Christianity. Emphasis on Wesley's commitments to social justice and personal piety, as well as issues of the church's ongoing mission.

REL 305 Bible and Justice (3) Explores the Bible's relationship to contemporary social justice issues. Topics include issues linked to social identity (race, class, gender, sexuality, etc.) as well as global diversity (poverty, globalization, human rights).

REL 310 Contemporary Theologies (3) Examines major Christian theologies of the 19th and 20th centuries, including neo-orthodoxy, liberalism, existentialism, process theology, global theology, and feminist, Latin American, African American, and Asian liberation theologies. Prerequisite: One course in religion or permission of instructor.

REL 314 Religions of East Asia (3) Studies the texts, thought, and practices of the religions of East Asia, specifically China and Japan, including Confucianism, Daoism, Shinto, and Buddhism. Prerequisite: sophomore standing.

REL 315 Jews, Christians, Muslims (3) Examines the three religious traditions that trace their heritage to Abraham: Judaism, Christianity, and Islam. Prerequisite: sophomore standing.

REL 320 Jesus and the Gospels (3) Studies the Gospel texts, explores issues and options of interpretation, and engages the key issues of modern scholarly debate concerning the Gospels. Emphasis on the use of contemporary methods of Biblical exegesis to

illumine the Gospel texts. Prerequisite: Junior or senior standing, or permission of instructor.

REL 330 Paul and His Letters (3) Explores Paul's letters to illumine Paul's thoughts, the life of the ancient Christian communities which he founded and the place of Paul within the history of early Christianity. Prerequisite: Junior or senior standing, or permission of instructor.

REL 335 Biblical Narratives (3) Examines theory and practice of biblical interpretation through in-depth study of select biblical narratives, including the Joseph Story, the Succession Narrative (King David), the books of Ruth, Jonah, Daniel, Esther, Tobit, and Judith. Special attention given to literary approaches and theological issues.

REL 340 Women and Religion (3) Examines women's religious thought in historical or contemporary settings. Explores how women's sense of self-identity and their social position shaped their unique theological perspectives.

REL 345 Theology and Story (3) Explores the role of story in human experience as a means of theological communication and seeks to read literature as a resource for theological reflection. Examines both fiction and autobiography as vehicles of theological discourse. Prerequisite: One course in religion or permission of instructor.

REL 350 God, Suffering, and Evil (3) Considers how women and men have thought about and lived in relation to evil and the experiences of suffering, especially with regard to the question of God's role in such situations. Focuses particularly on ways persons within religious traditions, mainly Christian and Jewish, have responded to evil and suffering, and how they have understood the relationship of God to such events. Prerequisite: One course in religion or permission of instructor.

REL 375 Bible, Gender, and Culture (3) Examines representative interpretative traditions of biblical women in literature and art from antiquity to the present through a study of the history of interpretation. Emphasis on informed analysis of how literary and artistic portraits of biblical women reflect social attitudes and beliefs concerning gender roles.

REL 380 Topics in Comparative and Cultural Studies (3) Repeatable course. Content changes each time course is offered. Prerequisite: One course in religion or permission of instructor.

REL 430 Topics in Biblical Studies (3) Repeatable course. Content changes each time course is offered. Prerequisite: One course in biblical studies or permission of instructor.

REL 431 Prophets (3) Examines Old Testament prophets in light of their historical, social, political, and religious backgrounds. Taught as a seminar. Prerequisite: One course in religion or permission of instructor.

REL 435 Biblical Languages Practicum (1) Provides opportunity to employ Greek or Hebrew skills and tools in biblical interpretation and exegetical research. Usually taken in conjunction with one of the following: Religion 320, 330, 335, or 431. Repeatable course. Content changes each time course is offered. Repeatable up to four credit hours. Prerequisite: Greek 211 or Hebrew 112.

REL 440 Topics in Theological and Ethical Studies (3) Repeatable course. Content changes each time course is offered. Prerequisite: One course in religion or permission of instructor.

REL 445 Religion, Peace, and Justice (3) Provides in-depth engagement with religious approaches to ethical concerns in the social sphere, especially related to questions of war and peace, violence and nonviolence, and economic and social justice. Predominantly focused on the Christian tradition, the course will also include engagement with significant figures in selected other religious traditions. Prerequisite: One course in religion (preferably Religion 201) or permission of instructor.

REL 481 Directed Study in Religion (1-3) Offers research in special problems or persons under the direction of a member of the religion faculty. Repeatable course. Content changes each time course is offered. Repeatable up to nine hours. Prerequisite: Permission of instructor.

REL 492 Religion Internship (1-3) Supervised field experience in church or other house of worship, nonprofit organization, or similar area of direct relevance to a religion major.

REL 495 Capstone Experience in Religion (1) Required of all senior religion majors. A one credit hour course that must be taken with an approved 300 or 400 level religion course in order to meet the general education capstone requirement. Prerequisite: Senior standing.

## **Russian (RUSS)**

Russian courses are taught by the faculty of the Department of Foreign Languages and Cultures.

RUSS 111, 112 Elementary Russian (3 each) Emphasizes practice in grammar, speaking, listening, writing, reading, and cultural awareness. Prerequisite for 112: C- or higher in 111 or the relevant placement exam score.

RUSS 211, 212 Intermediate Russian (3 each) Continues practice in grammar, speaking, listening, writing, reading, and cultural awareness. Prerequisite for 211 C- or higher in 112 or the relevant placement exam score. Prerequisite for 212: C- or higher in 211 or the relevant placement exam score.

RUSS 311, 312 Third-Year Russian (3 each) Continued study of Russian grammar with attention to participles and prefixed verbs of motion. Regular work on speaking, vocabulary, and reading comprehension. Prerequisite: C- in 212 or the relevant placement

exam score.

RUSS 330 Independent Study in Russian (1-6) Topics and credit hours must be prearranged with instructor. Repeatable course. Content changes each time course is offered.

RUSS 333 Russian Culture (3) Broad survey of Russian culture. Includes geography, history, folk culture, literature, art, religion, music, cinema, and contemporary post-Soviet society. Taught in English. Alternate years.

RUSS 334 Soviet and Post-Soviet Russian Civilization (3) This course is a continuation of Russian 333. As with Russian 333, this course covers a wide range of topics relating to Russia from the Bolshevik Revolution to the present day: a basic overview of history, various social issues, and culture – from literature, art, music, cinema, and architecture to everyday life and popular culture. Taught in English; no knowledge of Russian language required. Prerequisite: Russian 333 or permission of instructor.

RUSS 335 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content does not match closely any of the 300-level courses offered in the Department of Foreign Languages and Cultures. Meets the 300-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: Russian 212.

RUSS 435 Foreign Language Study Abroad (3) This course that is taught in the target language in a study abroad program. Its content does not match closely any of the 400-level courses offered in the Department of Foreign Languages and Cultures. Meets the 400-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: Russian 311 or 315.

### **Social Work (SW)**

Social work courses are taught by the faculty of the Department of Law, Politics, and Society.

SW 120 Introduction to Social Work (3) Introduces profession of social work. Focuses on the historical evolution of the profession and its role in modern society.

### **Sociology (SOC)**

Sociology courses are taught by the faculty of the Department of Law, Politics, and Society.

SOC 105 Introduction to Sociology (3) Introduces major concepts used by sociologists to understand and predict the behavior of individuals in group settings.

SOC 201 Professional Development in Sociology (1) The course is a professional orientation for sociology majors and provides an overview of various internship opportunities, career pathways, and graduate school options available in the discipline. In addition, the course serves as an introduction to academic writing, ethics, and research in sociology.

SOC 210 Deviance and Crime (3) Examines deviance and crime through a number of sociological, psychological, and criminological perspectives.

SOC 230 Social Problems in the Modern World (3) Focuses on major social, economic, political, and environmental issues confronting the modern world. Covers both global and U.S. issues.

SOC 235 Social Research Methods (4) Covers both quantitative and qualitative sociological research methods. Topics include the relationship between theory and research, conceptualization, operationalization, hypothesis, and model development and sampling. Specific data gathering techniques covered include survey designs, field studies, secondary analysis, unobtrusive measures, and experimental techniques. Discusses ethical issues and responsibilities in social science research and the limits of the scientific method in social science. Prerequisites: Sociology or criminal justice major or permission of instructor.

SOC 301 Special Topics in Sociology (3) Topics chosen on the basis of programmatic need or student interest. Repeatable course. Content changes each time course is offered. Prerequisite: Psychology 121 or Sociology 105 or permission of instructor.

SOC 327 Human Behavior in the Social Environment (3) A sociological social psychology course. Explores social interaction, selective perception, human symbolic behavior, language, social structure, emotions, perceptions and memory, sexuality, development of self, identity, aging, and deviance. Prerequisite: Sociology 105 or permission of instructor.

SOC 330 Community Organization (3) Explores the basics of community organization and development, with special attention to urbanized areas. Prerequisite: Political Science 143, Psychology 121, or Sociology 105.

SOC 335 Marriage and Family (3) Designed to give an in-depth look at changing courtship, marital, and family patterns in America over the course of the last century. Studies the history and importance of the family as a social institution, and the different forms and configurations of the family found in modern America. Prerequisite: Junior or senior standing and Sociology 105 or permission of instructor.

SOC 337 Social Aspects of Health and Health Care (3) Examines the nonbiological aspects of health and health care. Topics include social definitions of health, professionalization in the health industry, patient-practitioner relationships, and the organization of health care systems in the United States and other countries. Prerequisite: Junior or senior standing or permission of instructor.

SOC 344 Introduction to Behavioral Statistics (4) Recommended for students desiring an introductory statistics course which emphasizes application and interpretation. Covers basic statistical techniques used in behavioral research. Studies frequently used descriptive and inferential statistics with emphasis on the interpretation of quantitative data and statistical reasoning in behavioral research. Prerequisites: Sociology or criminal justice major; or permission of instructor.

SOC 350 Popular Culture (3) Examines the sociological impact of popular culture by exploring race, class, gender, sexuality, and family through the cultural lens of film, television, and music. Topics include the changing portrayals of race, class, gender, sexuality, and family across the last century in reflecting cultural values and ideals, and their reciprocal influence on culture and American identity. Prerequisite: Junior or senior standing and Sociology 105 or permission of instructor.

SOC 370 Intensive analysis of sociological topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores changing areas of sociological study. Repeatable course up to 3 credit hours; content changes each time course is offered. Prerequisites: SOC-105 and SOC-230; or permission of instructor.

SOC 371 Examines the theoretical frameworks and research findings on human social relationships, exploring the social norms, values, attitudes, and behaviors of love and attraction. Topics include: the social construction of love and attraction, cross-historical definitions of love, acceptable forms of love, problematic aspects of love and attraction, the development of interpersonal attraction, intimacy, and attachment styles. Prerequisites: SOC-105 and SOC-230; or permission of instructor.

SOC 372 Intensive methodological training in qualitative interviewing with a focus on skill development and experiential learning in interview techniques. Prerequisites: SOC-105, SOC-230 and junior or senior standing; or permission of instructor.

SOC 386 Death and Dying (3) Explores thanatology – the study of death – using a sociological lens. Examines how American society shapes attitudes and behaviors toward dying, death, and bereavement. Topics of study include: cultural traditions, rituals, practices, and attitudes toward death, self-awareness and value identification concerning death and dying, grief and bereavement, the impact of death and dying across the life span, and end-of-life planning. Prerequisites: Junior or senior standing and Sociology 105; or permission of instructor.

SOC 390 Principles of Sociological Theory (3) Examines classical and contemporary sociological theories, as well as micro- and macro-sociological approaches. General theoretical frameworks include constructionism, functionalism, conflict theory, feminism, symbolic interactionism, postmodernism, network analysis, and integrated theories. Prerequisites: Sociology 105; junior or senior standing; or permission of instructor.

SOC 415 Globalization and the Environment (3) Examines the changing demographics of our world and how they impact the social, economic, environmental, and political relationships between countries. Explores the transformation to a global society and the basic concepts of globalization, as well as how the relationships between human societies and the larger natural environment are affected by demographic pressures and global needs. Prerequisites: Junior or senior standing; or permission of instructor.

SOC 435 This course explores the social norms, values, and expectations that influence - and are influenced by - attitudes, beliefs, and behaviors regarding gender and sexuality. The course examines the different and changing cultural understandings of gender roles and sexuality, and the social construction of both.

SOC 438 Race and Ethnic Relations (3) Studies the sociology of United States and global race and ethnic relations. Examines class, ethnic, gender, and racial stratification, and power and inequality. Analyzes patterns of ethnic integration and multiculturalism. Details the social and psychological dimensions of discrimination and prejudice, as well as racial and ethnic conflict and accommodation. Prerequisite: Sociology 105 or permission of instructor.

SOC 450 Senior Seminar in Sociology (3) Capstone educational experience in sociology, offering students the opportunity to use their substantive and methodological training to complete and present an original research project. Prerequisites: Sociology 235, 344; senior standing; sociology or criminal justice major; or permission of instructor.

SOC 460 Aging and Society (3) Recommended for any student desiring a thorough introduction to gerontology. Examines the social response to aging in American society and in other countries. Emphasis on the roles of elders in the familial, religious, political, and economic institutions. Prerequisite: Sociology 105, junior or senior standing; or permission of instructor.

SOC 480 Undergraduate Research in Sociology (1-2) Provides opportunities for undergraduate research that involve literature review, data collection, analysis, and formal reporting. This research is conducted with the guidance and supervision of a department faculty member. May be repeated for a maximum of 2 hours. Prerequisites: Junior or senior standing; or permission of instructor; sponsorship by the supervising faculty member.

SOC 494 Directed Study (3) Provides opportunity for specialized advanced study. Prerequisite: Permission of instructor.

SOC 496 Internship (1-6) Internships available to majors of junior or senior standing who have completed core courses. GPA requirements must be met and student must file an internship application with advisor. Prerequisites: Sociology major; junior or senior standing, or permission of instructor.

SOC 497 Provides majors of junior or senior standing with a comprehensive, supervised field experience in teaching and sociological pedagogy. Designed for students who are preparing for graduate study in the social sciences. GPA requirements must be met and students must file a teaching internship application with advisor. Prerequisites: Sociology major, sponsorship by the supervising faculty member, junior or senior standing, or permission of instructor. (1-2 credits).

### **Spanish (SPAN)**

Spanish courses are taught by the faculty of the Department of Foreign Languages and Cultures. All courses are taught in the target language unless otherwise noted. Prerequisite: Completion of Spanish 311 and 316 for all 300-level courses or above.

SPAN 111, 112 Elementary Spanish (3 each) Emphasizes practice in speaking, listening, writing, reading, and cultural awareness. Prerequisite for 112: C- or higher in 111 or the relevant placement exam score.

SPAN 211, 212 Intermediate Spanish (3 each) Continues practice in speaking, listening, writing, reading and cultural awareness. Prerequisite for 211 C- or higher in 112 or the relevant placement exam score. Prerequisite for 212: C- or higher in 211 or the relevant placement exam score.

SPAN 311 Spanish Grammar and Composition (3) A systematic grammar review while focusing on process and development of effective writing skills and expression in Spanish. Prerequisite course for all 300- and 400-level courses. Prerequisite: C- in 212 or the relevant placement exam score.

SPAN 314 Business Spanish (3) This course provides specialized vocabulary, idiomatic expressions, communication patterns, and common practices in Hispanic societies and settings in the world of business and commerce. This course is recommended for those who wish to apply their knowledge of Spanish in business careers.

SPAN 316 Spanish Conversation (3) This course provides strategies and opportunities for students to improve their aural and oral proficiency in Spanish through participation in a variety of oral exercises in different settings. Students explore and evaluate cultural linguistic differences among Hispanic cultures and their own. Emphasis is placed on the activation of vocabulary and the reinforcement of specific grammar points to facilitate comprehension and expression of spoken speech.

SPAN 320 Social Issues in Hispanic Society (3) Introduces specific social, ideological, and philosophical issues pertinent to the Hispanic world in Spain, Latin America, and United States.

SPAN 321 Introduction to Hispanic Literature (3) This course focuses on reading and analyzing texts by Hispanic (Spain and Spanish America) authors of various literary genres. Students study basic literary terms, concepts, methods, techniques, and movements to analyze and interpret literary texts. Students will develop aural, oral, reading, and writing skills, and deepen understanding of Hispanic culture and society.

SPAN 325 Medical Spanish I (3) This course focuses on medical terminology. The course introduces situational vocabulary, anatomical structures and their basic functions, and medical and clerical terms used in clinical settings. Especially recommended for students considering careers in healthcare, health services, public health, and teaching professions.

SPAN 330 Independent Study (1-3) Course content and credit hours determined in consultation with the instructor. Repeatable course. Content changes each time course is offered. Prerequisite: Spanish 311 or permission of instructor. Department chair approval is required.

SPAN 333 Introduction to Hispanic Culture (3) Introduces the various Hispanic cultures found in Spain, Latin America, and United States.

SPAN 335 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content does not match closely any of the 300 level courses offered in the Department of Foreign Languages and Cultures. Meets the 300-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: Spanish 212.

SPAN 350 Medical Spanish II (3) This course covers medical terminology and focuses on concepts and practices to develop culturally responsive care by highlighting medical assessment and stressing aural/oral communication in clinical settings. This course includes Hispanic cultural elements and an introduction to medical interpretation to prepare students for potential careers in healthcare, health services, public health, and teaching professions. Taught in Spanish. Pre-requisite: SPAN 325 –Medical Spanish I

SPAN 410 Spanish Practical Phonetics: Pronunciation and Variation (3) Introduction to theory and practice of Spanish pronunciation, including dialectal and historical variation.

SPAN 411 Advanced Spanish Grammar (3) An advanced grammar course that will provide students with the background necessary for more advanced courses. The course will focus on continued mastery of the most difficult points of Spanish grammar. Prerequisite: Spanish 311 and 316 or permission of instructor.

SPAN 433 Hispanic Civilization (3) Studies history and culture of Spain and Latin America. Taught in Spanish.

SPAN 435 Foreign Language Study Abroad (3) This course is taught in the target language in a study abroad program. Its content

does not match closely any of the 400-level courses offered in the Department of Foreign Languages and Cultures. Meets the 400-level major requirement. Must be approved by department chair for equivalency prior to study abroad experience. Repeatable course. Content changes each time course is offered. Prerequisite: Spanish 311 or 315.

SPAN 438 Spanish Seminar (3) Topics vary. Generally covers outstanding Hispanic authors and literary works. Repeatable course. Content changes each time course is offered.

SPAN 450 Introduction to Spanish Linguistics (3) Studies the structure of the Spanish language as well as to the way in which language is used in different social situations by different speakers, and its dialectical, historical, social, and contact situations such as the situation of Spanish in the U.S.

SPAN 458 Introduction to Hispanic Pragmatics (3) Focuses on the way we convey meaning through communication. This meaning includes verbal and non-verbal elements and varies depending on the context, the relationship between people talking, and many other social factors. Explores the ways in which culture interrelates with and effects communication processes, and more specifically the dynamics that arise in social interactions in the Hispanic culture. Examines various elements related to pragmatics such as communicative acts, politeness, and the appropriate use of language in conducting speech acts such as apologizing, requesting, complimenting, refusing, and thanking in Spanish.

### **Statistics (STAT)**

Statistics courses are taught by the faculty of the Department of Mathematics.

STAT 266 Introductory Statistics with R (3) This course serves as an introduction to the foundations and applications of statistics in the framework of the field of Data Science. Covering key aspects of data exploration, visualization, and traditional topics in statistical inference, this course is approached through a project-based curriculum using open data sources from various areas of application and the open-source statistical software program R. Prerequisite: Math 221 co-requisite

STAT 267 Experimental Design (3) The thoughtful design of an experiment provides the best chance of producing meaningful, defensible evidence to answer questions of interest. This course will cover the process of planning a well---designed experiment to collect appropriate data such that an analysis using standard statistical procedures results in valid and objective conclusions. Design methods will be applied and analyzed using a standard statistical software program, such as R. Prerequisite: STAT 266

STAT 361 Linear Models (3) Provides an in-depth look at linear regression models by considering both the theory of the linear model and the skills needed to conduct relevant analyses using the statistical software program R. Topics include estimation, inference, diagnostics, transformations, variable selection, ANOVA, and a brief introduction to Generalized Linear Models. Prerequisite: STAT 266, Math 341 co-requisite

STAT 362 Machine Learning (3) Introduces Machine Learning and its core models and algorithms by examining techniques in both supervised and unsupervised learning. Algorithms under consideration are regression, decision trees, neural networks, support vector machines, and clustering algorithms. Concepts and algorithms will be implemented using the statistical software program R. Prerequisite: STAT 266

STAT 474 Techniques for Large Data Sets (3) This course treats methodologies and customized algorithms and tools for efficiently extracting, interpreting, and drawing inferences from very large datasets. It begins with an introduction of the Big Data problem and the limitations of applying standard statistical techniques to large datasets. It develops algorithms for Big Data analysis – including data compression, indexing, and summarization --- and provides experience in using Big Data---specific tools such as Map--Reduce and Hadoop in conjunction with the general purpose statistical software program R. Prerequisites: STAT 266, CS 210

STAT 493 Statistical Modeling (3) Encompasses the entire cycle of a data analysis project, including problem formulation, acquisition and cleaning of data, model selection and fitting, parameter estimation, interpretation, and reporting. Draws on multiple data analytic techniques developed across an array of statistics courses. Prerequisite: STAT 361, Co-requisites: STAT 362, MATH 466

### **Teaching English as a Second Language (TESL)**

TESL 200 Second Language Acquisition (3) Introduces students to the field of second language acquisition (SLA), which is a discipline focused on how humans learn additional languages after they have learned their first; factors that contribute to the variability observed in rates and outcomes; and what it takes to attain advanced academic language and literary competencies in a language other than the mother language.

TESL 301 English Teaching Grammar for ESL/EFL Students (2) Will provide a thorough grounding in the grammar of English and a variety of approaches and techniques for teaching English grammar. It will present English as both a set of rules and as a communicative resources that should be explored critically and applied in a context-specific manner. This course is a critical study of aspects of Modern English grammar important for the teaching of English as a Second of Foreign Language. Students will gain an understanding of the major syntactic and semantic phenomena important for teaching ESL/EFL, become familiar with the practical and theoretical literature on teaching English grammar, participate in practical exercises of grammar correction in writing with actual ESL students, and develop and compile classroom activities for teaching points of grammar.

TESL 302 Assessment in ESL/EFL Students (2) Addresses linguistic, sociocultural, psychological, and educational factors that affect academic development of English as an additional language. Grounded in theoretical and practical aspects of teaching second language (L2) as an academic language to children, adolescents, and adults in diverse communities, students learn to implement effective instructional strategies for measuring attainment of L2 skills, students learn to design and conduct authentic assessments and to administer standardized assessments.

TESL 325 Developmental Linguistics (4) This course introduces students to the nature of language development in infancy and childhood. It also examines cognitive, developmental, environmental, and physiological influences on language skills. Theories of language development, and their influences on research and our understanding of children, will be discussed. Topics include perception of sounds, acquisition of grammar, first and second language learning, and developmental language disorders. The relationship between language skills and overall development (social, cognitive, and biological) will also be explored.

TESL 326 Principles and Methods of Teaching TESL (3) This course provides a comprehensive overview of effective English-as-a-new-language techniques to the fundamentals of language acquisition. Designed for those who are either presently teaching or will be teaching English to international students, either in the United States or overseas. Prospective ENL teachers learn practical classroom applications and various teaching techniques. This course provides participants with guidelines for planning lessons involving specific, techniques, activities for enhancing textbook exercises, and effective methods for correcting student errors.

TESL 328 Foundations of Bilingual and ESL Education (2) This course provides a broad foundational basis for understanding the history and legal basis of bilingual education, dual language programs, and ESOL programs in the United States and in international contexts. Ethical, legal, historical, and linguistic aspects of second language education are explored.

TESL 417 Internship in Teaching English as a Second Language (3) Opportunities to integrate basic skills and knowledge in selected applied practice situations. Includes a field experience with observations, assessments, lesson presentation and planning in an English-as-a-new-language setting. Prerequisites: Admission to teacher education; Education 325, 326, 327; or permission of instructor.

TESL 433 Supervised Teaching and Observation in Teaching English as a Second Language (6) Teaching, observation, and participation activities under the supervision of a cooperating teacher and a University supervisor. A grade of C or better must be earned in student teaching to be recommended for a teaching license.

TESL 491 International Clinical Experience in TESL

## Theatre (THTR)

Theatre courses are taught by the faculty of the Department of Theatre.

THTR 110 Introduction to Theatre (3) Acquaints students with the process of creating theatre and enhances their ability to enjoy and appreciate performances. Requires observations of some evening rehearsals and performances in addition to attendance at lectures. Prerequisite: First Year Seminar 112. Fall, spring.

THTR 111, 112 Fundamentals of Acting (3 each) Introduces basic fundamentals of acting through scene study and related exercises and explores the voice process during two consecutive semesters. Fall, spring.

THTR 120 Production Techniques I (3) Introduces concepts and techniques in the areas of scenery construction, and theatre space use and organization. Students become familiar with management and organization behind the scenes. Special emphasis on safety and health backstage. Fall.

THTR 125 Introduction to Makeup and Costumes (3) Introduces essential techniques for makeup application and costume construction and maintenance. Covers tools and principles of basic corrective makeup and costume construction with practical application. Fall, spring.

THTR 130 Color and Design for the Theatre (3) Acquaints students with the basic principles of design that govern all forms of visual expression. Provides students with the means to communicate in visual terms. Fall, spring.

THTR 135 Graphic Communication for the Theatre (3) (with lab) Prepares students for design courses by examining methods and procedures for developing effective communication and realization of visual concepts. Places equal emphasis on mechanical hand drafting, drawing, and sketching. Includes introduction to lighting graphics and model making. Spring.

THTR 160 Survey and Analysis of Dramatic Literature (3) Examines the forms and conventions of dramatic literature to help students improve their play reading and analysis skills. First half focuses on traditional Aristotelian forms of drama; second half concentrates on approaches to dramatic literature that deviate from that tradition. Fall.

THTR 171, 172 Acting I and II: Process Awareness (3 each) Examines the fundamentals of the acting process through exercises

and scene study. Students explore the vocal and physical demands placed on an actor. Addresses American Stage Standard and developing a personal vocal and physical regimen. Voice and speech along with exercises designed to strengthen trust, relaxation, imagination, concentration, and observation assist the student in developing a method of working as an actor during two consecutive semesters. Prerequisite: Theatre majors only. Fall, spring.

THTR 190 Theatre Practicum (1) Introduces departmental procedures in all areas of theatre operation. Provides students with the knowledge of backstage safety, equipment, and methodology through formal presentation and hands-on experiences. Begins student involvement in practical participation in productions. Repeatable up to two credit hours. Content changes each time course is offered. Fall, spring.

THTR 220 Production Techniques II: Scenic Construction (3) Develops advanced theoretical and practical application of concepts begun in Theatre 120. Students investigate advanced scenic construction techniques in carpentry, metalworking, and rigging. Prerequisite: Theatre 120. Spring 2016 (offered alternate years).

THTR 221 Production Techniques III: Lighting and Sound (3) Explores lighting and sound from a technical point of view. Teaches the fundamentals of traditional lighting and sound equipment and begins to explore how they are used in theatrical production. Prerequisite: Theatre 120. Spring 2017 (offered alternate years).

THTR 225 Makeup (3) Refines the techniques of makeup introduced in Theatre 125. Provides a detailed study of the techniques for applying makeup emphasizing character and period research. Projects introduce prosthetics and the application of facial hair. Prerequisite: Theatre 125. Spring.

THTR 226 Costume Construction (1-3) Investigates the fundamentals of costume construction introduced in Theatre 125. Topics include pattern drafting, draping, cutting, fitting, and advanced stitching. Practical projects introduce fabric identification. Prerequisite: Theatre 125. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Fall, spring.

THTR 245, 246 Dance I (2 each) Develops the actor's physical movement and dance proficiency in a one-year studio. Fall, spring.

THTR 271, 272 Acting III and IV: Character Study (3 each) Investigates the basics of character development through scene study, mask work, text analysis, vocal, and physical exercises. Prerequisites: Theatre 112 or 172; permission of instructor. Fall, spring.

THTR 290 Theatre Practicum (1) Through practical experiences, involves students in the areas of technical theatre, costume construction, and ticket office. Prerequisite: Theatre 120 or 190. Repeatable up to two credit hours. Content changes each time course is offered. Fall, spring.

THTR 291 Theatre Practicum for Stage Managers (1) Through practical experiences, involves students in the area of stage management. Repeatable up to two credit hours. Content changes each time course is offered. Prerequisite: Theatre 190. Fall, spring.

THTR 331 CADD for Theatre I (3) Develops beginning-level techniques for using computer assisted drafting and design (CADD) for theatre. Emphasis on Vectorworks 2D drafting and theatre graphics. Prerequisites: Theatre 130, 135. Fall.

THTR 332 CADD for Theatre II (3) Develops advanced level techniques using VectorWorks and Google Sketchup for a variety of purposes in the theatre. Emphasis on 3D drafting and rendering to enhance skills for portfolios, presentations, and communication of design ideas. Prerequisite: Theatre 331. Offered on demand.

THTR 335 Scene Design (3) Examines the theory and practice of scenic design and manipulation of stage space. Special emphasis on the development of the "design concept" as related to all aspects of theatrical design. Prerequisites: Theatre 130, 135; or permission of instructor. Spring.

THTR 336 Lighting Design (3) Examines the theory and practice of lighting design. Emphasis on the role of the lighting designer as a creative member of a collaborative team. Students explore a variety of approaches to developing a successful lighting design. Prerequisites: Theatre 120, 130, 135; or permission of instructor. Fall.

THTR 337 Costume Design (3) Examines theory and practice of costume design. Emphasis on development of design concepts and visualization and articulation of ideas. Investigates various approaches and techniques for creating the costume design. Prerequisites: Theatre 125, 130, 135; or permission of instructor. Fall.

THTR 345, 346 Dance II (2 each) Expands the actor's physical movement and dance proficiency in a one-year studio. Prerequisites: Theatre 245, 246; or permission of instructor. Fall, spring.

THTR 350 Stage Management (3) Examines current topics and trends in stage management and explores techniques in the field. Seminar-style class involves students in independent research projects with written and oral sharing of information. Prerequisites: Theatre 120, 220 or 221. Spring 2017 (offered alternate years).

THTR 361, 362 Theatre History I, II (3 each) Explores the history of theatre around the world, relating it to key developments in human communication and other cultural forces. Covers performances that occur on the continuum between remote oral cultures and communities touched by globalization. Introduces students to multiple interpretive approaches that have impacted the study of



theatre history as a whole. Culminates with a final project in which students choose a play or topic and research its social, religious, political, and artistic context. Should be taken in sequence. Prerequisites: Theatre 160; junior or senior standing. Fall, spring.

THTR 363 Period Styles for the Theatre: Architecture and Decor (3) Connects cultural values with visual imagery representative of important historical periods through a survey of architecture, interior design, and decorative arts from the pre-historic to the modern eras. Emphasis on period research and its importance in the artistic process. Prerequisite: Theatre 110 or 160. Fall 2015 (offered alternate years).

THTR 364 Period Styles for the Theatre: Costume History(3) Connects cultural values with visual imagery representative of important historical periods through a survey of fashion and clothing from the prehistoric to the modern eras. Emphasis on period research and its importance in the artistic process. Prerequisite: Theatre 110 or 160. Spring 2016 (offered alternate years).

THTR 365 Playwriting (3) Proceeds from basic scene and character development to the writing of one-act plays. Prerequisite: Theatre 110 or 160. Fall.

THTR 371, 372 Acting V and VI: Classical Texts (3) Prepares the student actor to perform scenes from classical dramatic literature, including Shakespeare, Chekhov, and others. Scenes specifically selected to develop physical, sensorial, vocal, and emotional skills. Prerequisites: Theatre 271 or 272; permission of acting faculty. Fall, spring.

THTR 375 Acting in Dialect (3) Presents an in-depth study of performing in dialect. Students gain the necessary knowledge and skill required to create appropriate and credible dialects needed for roles in the theatre. The course teaches students to develop a dialect through vowel and consonant changes, sound placement, and mastering the differences in inflection, rhythm, and tempo. Prerequisite: Theatre 172. Spring.

THTR 390 Theatre Practicum (1) Continues student involvement begun in Theatre 290 with practical experiences in various aspects of theatre production. Prerequisites: Theatre 120 or 190. Repeatable up to two credit hours. Content changes each time course is offered. Fall, spring.

THTR 391 Theatre Practicum for Stage Managers (1) Continues student involvement begun in Theatre 291 with practical experiences in stage management. Prerequisite: Theatre 291. Repeatable up to two credit hours. Content changes each time course is offered. Fall, spring.

THTR 395 Special Topics (1-3) Permits the study and/or practice of auxiliary topics not covered in the regular curriculum in a seminar format. Topics might include musical theatre, regional theatre, or advanced stagecraft. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Offered on demand.

THTR 400 Theatre Management (3) Examines the history, theory, and practice of theatre management and arts administration. Covers basic components of organization, operations, and general management practices. Prerequisite: Junior or Senior standing. Spring 2019 (offered alternate years).

THTR 430 Advanced Design Projects (1-3) Provides design students an opportunity to explore concepts and skills on an advanced level through paper projects. Individualized course of study is theoretical in nature and is developed in conjunction with a member of the faculty to satisfy each student's needs. Prerequisite: Permission of design faculty. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Fall, spring.

THTR 435 Senior Portfolios and Career Preparation (3) Prepares students to interview for opportunities in the professional theatre, graduate programs, and internships. Acquaints students with the nature of postgraduate training and career options. Meets capstone general education requirement for theatre major. Prerequisite: Senior standing; permission of design faculty. Fall.

THTR 440 Director/Designer Collaboration Seminar (3) Explores the collaborative experience in design, through short-term and long-term projects. Focuses on the interaction of artistic teams and the creative process of conceptualizing a theatrical production. Prerequisite: Successful completion of one or more of the following: Theatre 335, 336, 337, 481, permission of instructor by formal application. Fall 2016 (offered alternate years).

THTR 450 Principles of Arts Management and Marketing (3) Overview of accounting procedures and budgeting for the theatre, in combination with an intensive study of audience development and marketing trends directly related to the efficient management and promotion of the arts. Prerequisite: Junior or Senior standing. Spring 2018 (offered alternate years).

THTR 465 Senior Seminar in Theatre (3) Encourages students to explore the connection between their undergraduate education in theatre and paths to a satisfying career. Emphasis on self-reflection, a thorough investigation of contemporary options, and strategies for career development. Meets capstone general education requirement for theatre major. Prerequisite: Senior standing. Spring.

THTR 471 Acting VII: Audition Techniques (3) Prepares students to audition for opportunities in the professional theatre, graduate programs, and internships. Acquaints students with the nature of postgraduate training and career options. Prerequisite: Theatre 372. Fall.

THTR 472 Acting VIII: Advanced Projects (3) Provides the student actor with an opportunity to create an original piece of theatre, utilizing a detailed process of exercises and research. Culminates in a final performance. Meets capstone general education

requirement for theatre major. Prerequisites: Theatre 372. Senior standing. Spring.

THTR 481 Directing I (3) Provides the beginning directing student with an initial experience in directorial analysis and the experience of mounting selected scenes in proscenium, arena, and thrust environments. Focuses on principals of directing, interpretation, composition, the actor, and realization of a directorial concept. To be taken in the junior year. Fall, spring.

THTR 482 Directing II (3) Provides a limited number of advanced directing students with an opportunity to expand their directing skills with more complex scene choices. Intensive analysis is expected as well as production exercises which illustrate a student's ability to deal with the concept-to-realization process. To be taken in the senior year. Permission of instructor by formal application. Fall, spring.

THTR 495 Independent Study (1-3) Permits advanced creative and scholarly work in any area of the theatre arts. The specific plan of study for each individual is determined in consultation with the faculty. Areas of study may include directing, design, playwriting, dramaturgy, theatre history, and pedagogy. Prerequisite: Permission of instructor. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Fall, spring.

THTR 497 Production Problems (1-3) Offers credit for significant technical projects undertaken. Individual student works with faculty supervision in conjunction with a specific production. Such areas as technical direction, stage management, costume construction, and property construction may be included. Prerequisite: Permission of instructor. Repeatable course. Content changes each time course is offered. Repeatable up to six credit hours. Fall, spring.

THTR 499 Internships in Theatre (0-12) Provides advanced students with the opportunity to work or study in a commercial or regional theatre or with a professional training program while earning college credit. Program developed in conjunction with faculty. Prerequisites: Junior or senior standing; completion of core requirements in field of study; minimum GPA of 3.0; permission of department chair. Fall, spring, summer.

## **Writing (WRTG)**

Writing courses are taught by the faculty of the Department of Creative Writing

WRTG 204 Copy Editing (3) Introduces the profession of writing and publishing, focusing on craft fundamentals (grammar and mechanics), publishing, copy-editing, resources for writers, literary analysis, and submission procedures.

WRTG 205 Introduction to Creative Writing (3) Introduces basic experience and techniques of description, characterization, poetry, and narration.

WRTG 206 Introduction to Poetry Writing (3) Teaches basic forms and structures of poetry. Concentrates on techniques as well as content. Prerequisite: Writing 205 or permission of instructor.

WRTG 207 Introduction to Short Story Writing (3) Teaches elements of short story writing. Concentrates on plot construction with attention to character, dialogue, and setting.

WRTG 306 Short Story Writing (3) Teaches techniques for creating characters and turning experiences into short stories. Prerequisite: Writing 207 or permission of instructor.

WRTG 307 Poetry Writing (3) Teaches techniques of great poets. Provides opportunity for students to write poems. Prerequisite: Writing 206 or permission of instructor.

WRTG 308 Creative Nonfiction (3) Teaches the techniques of great essayists and creative nonfiction writers. Provides opportunity for students to write essays and creative nonfiction. Prerequisite: Writing 207 or permission of instructor.

WRTG 309 Genre Fiction (3) Teaches tropes and techniques of selected genres such as science fiction, fantasy, mystery, and horror. Provides opportunity for students to write short genre fiction. Prerequisite: Writing 207 or permission of instructor.

WRTG 330 Special Topics in Writing (3) Topics vary and may include young-adult fiction writing, advanced copy editing, literary translation, technical writing, form and theory of poetry, and form and theory of fiction. Repeatable course. Content changes each time course is offered. Prerequisite: Writing 207 or permission of instructor.

WRTG 390 Screenwriting (3) Teaches the techniques of screenwriting. Allows students to create their own screenplays. Prerequisite: Writing 207 or permission of instructor. Repeatable course. Content changes each time course is offered. Repeatable up to 3 times.

WRTG 480 Senior Seminar in Creative Writing (3) Permits students to pursue an extended, independent writing project alongside close study of an element of craft or genre. To be taken senior year. Spring.

WRTG 490 Writing Workshop (3) Opportunity to write short stories, poems, essays, and plays with weekly discussion and criticism in a small group. Repeatable course. Content changes each time course is offered. May be taken three times. Prerequisite: One course in creative writing at the 300 level or permission of instructor.

WRTG 494 Writing Internship (1-6) Opportunity for on-site experience in various settings for writing experience. Repeatable course. Content changes each time course is offered. Repeatable up to 6 credit hours.

WRTG 495 Creative Writing: Independent Study (1-9) Opportunity for independent work on writing projects with criticism and assistance. May be taken three times. Repeatable course. Content changes each time course is offered. Repeatable up to 3 times and/or 9 credit hours.

WRTG 500 Graduate Writing Workshop (3) Opportunity for advanced work on short stories, poems, essays, and plays with intensive discussion and criticism in a small group. May be taken once. Prerequisite for undergraduates: Writing 490 and permission of instructor. Prerequisite for graduates: Permission of instructor.

# Graduate Programs

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The University of Evansville offers the following graduate programs: Master of Science in Athletic Training (MSAT), Master of Science (MS) in Public Service Administration, Master of Science in Athletic Training (MSAT), Master of Science in Health Services Administration (MSHA), Master of Physician Assistant Science (MPAS) and Doctor of Physical Therapy (DPT).

## Admission

Applicants must have a bachelor's degree from a regionally accredited institution. Please refer to each graduate program for specific admission requirements. An application for admission must be filed before course registration is approved.

## Special Students

Students holding baccalaureate or advanced degrees from regionally accredited institutions of higher education who do not intend to complete a program of study but who wish to take a graduate course for personal or professional enrichment must complete a special student application and receive special permission from the appropriate program director. A special student may earn no more than nine hours of graduate course credit. A special student application must be filed before course registration is approved.

## International Students

The University of Evansville welcomes international students to its campus. International graduate students should submit an international student application, official transcripts of high school university degrees and diplomas, official English proficiency exams (IELTS or TOEFL), GRE/GMAT exams (where required), and proof of financial support. For English proficiency requirements or other international admission requirements by program, please contact: Office of International Admission, University of Evansville, 1800 Lincoln Avenue, Evansville, Indiana 47722 USA, 812-488-1392, [international@evansville.edu](mailto:international@evansville.edu) or [evansville.edu](http://evansville.edu).

All students whose native language is not English must take the Michigan Test of English Language Proficiency in addition to the University's writing skills test as a part of registration for their first term. Placement in appropriate English language credit courses will be made to provide students with the skills necessary to demonstrate English proficiency.

## Academic Regulations

### Graduate Courses

Courses numbered at the 500 and 600 level may be taken for graduate credit.

### Academic Load

A full-time load for a graduate student is nine hours. The normal load should not exceed 12 hours, unless otherwise required by the program.

### Grades

Courses taken more than six years prior to the completion of the degree will be assessed by the appropriate program director to determine applicability to the student's degree requirements.

An overall grade point average of 3.0 on all graduate course work must be attained before a graduate degree is awarded. All graduate work is counted and none of it may be omitted in computing the overall grade point average. No more than nine hours of C grades are permissible, unless otherwise specified in the degree program. Courses in which a grade of D is earned do not apply to the requirements for the degree (unless otherwise specified in the degree program) but do count in the calculation of the overall grade point average. A grade of incomplete (I) must be removed within one calendar year after the end of the semester in which the I is assigned. After one year, all remaining incompletes are changed to F.

### Credit from Other Institutions

The University of Evansville evaluates and may accept credit earned at other regionally accredited educational institutions. A minimum grade of B is required for transfer credit. No more than nine semester hours of graduate credit may be transferred.

Students must have written approval on a transfer credit request form signed by the program director and the registrar.

## Graduation

Upon the recommendation of the faculty and the approval of the Board of Trustees, the University of Evansville confers its academic degrees. Only those candidates who have fulfilled all scholastic requirements for a degree and who have met their financial obligations to the University will be recommended for a degree.

## Degree Application

A candidate for a degree must file an application for the degree in the Office of the Registrar two semesters prior to the intended date of graduation. While the registrar conducts degree audits on behalf of the University, it is the student's responsibility to ensure that all graduation requirements are met. The University is responsible for including on the list of graduates only those students who have submitted the application for degree and have met all academic requirements and all financial obligations. Deficiencies in academic requirements, such as incomplete grades and course substitutions, must be cleared no later than two weeks prior to the expected date of graduation.

### Center for Adult Education

## Master of Science, Public Service Administration

Program Director, Lindsay Roberts

The public service administration program is designed for anyone in a field where service to the public is a core value. The Master of Science (MS) degree is useful in various career areas found in private sector companies and nonprofit organizations.

## Application Requirements

Applicants must have a bachelor's degree from a regionally accredited institution and at least three years of work experience. The following documents are required for admission:

- Official transcripts from all educational institutions attended
- Completed application
- Résumé showing a minimum of three to five years of work experience
- GRE or Miller Analogies Test scores for students with an overall undergraduate GPA of less than 3.0
- Two letters of recommendation

Send documentation to: Center for Adult Education, University of Evansville, 1800 Lincoln Avenue, Evansville, Indiana 47722. Call 812-488-2981 for program details or log on to [www.evansville.edu/adult-education](http://www.evansville.edu/adult-education).

## Curriculum and Academic Requirements

The curriculum is based on four core areas of study. Students are expected to develop a foundation in leadership, increase their understanding of market factors, apply appropriate management strategies, and increase professional skills through successful completion of the following blocks of study.

**Semester One – Foundation Block:** Public Service Administration 505, 506, 508

**Semester Two – Market Factors Block:** Public Service Administration 516, 520, 528

**Semester Three – Management Block:** Public Service Administration 512, 514, 590

**Semester Four – Professional Skills Block:** Public Service Administration 507, 534, 567

Course content and a syllabus are provided by the instructor at the beginning of each course. Course content is determined by the instructor. The student should expect to devote at least 24 hours each week to out-of-classroom preparation and study. The order in which courses are offered for each block is determined by instructor availability and scheduling.

## Block Semester Plan

Each course is offered in a five-week format. Three courses are taken each semester consecutively for four semesters. All classes meet on Tuesday evenings. Each newly admitted student will be provided with a calendar for his or her semester of classes at the beginning of the semester.

## Requirements (36 hours)

Public Service Administration 505, 506, 507, 508, 512, 514, 516, 520, 528, 534, 567, 590

### College of Education and Health Sciences

## Doctor of Physical Therapy

Kyle Kiesel, Department of Physical Therapy Chair

The University of Evansville offers a professional entry-level Doctor of Physical Therapy (DPT) degree, which is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). The curriculum involves three or four years of prerequisite and undergraduate course work followed by three years (nine semesters including summers) of professional study. The physical therapy faculty has designed a curriculum that reflects contemporary professional education and clinical practice modeling professional excellence. A strong liberal arts and sciences background, a diverse undergraduate experience, and innovative professional classroom and clinical course work define the DPT program at UE. Through classroom and clinical experiences, students acquire the requisite critical thinking and problem solving skills necessary to deliver quality patient care based on current best evidence. Students interested in the Doctor of Physical Therapy program follow normal University admission procedures.

## Fees and Assistance

In addition to regular University costs, certain additional expenses are incurred by physical therapy students. These include uniforms, laboratory fees, summer tuition, and costs associated with clinical courses (travel and housing, criminal background checks, CPR certification, etc.). Students should consult with the Office of Financial Aid for information about financial assistance. Additional scholarships may be available through health care facilities and professional organizations.

## Course Work and Clinical Facilities

All of the physical therapy didactic course work, as well as undergraduate courses, are taught on the University of Evansville campus. Throughout the physical therapy professional curriculum, students are exposed to integrated clinical activities at local off-campus health care facilities. Students admitted to the Doctor of Physical Therapy program begin professional course work in the summer after their third year (3+3 track) or fourth year (4+3 track). Students on the 3+3 track complete all remaining undergraduate degree requirements during the fourth year and graduate with a bachelor's degree in May of their senior year. The students' fifth and sixth years are devoted to DPT courses. Students on the 4+3 track will enroll in professional DPT course work in years 5, 6, and 7. A bachelor's degree must be completed prior to enrolling in Physical Therapy 561, Clinical I.

Students complete full-time clinical courses during the summer sessions of the professional program. Two clinical courses are completed during the spring semester of the final year. Various clinical facilities are utilized in the educational preparation of students. The Department of Physical Therapy affiliates with local, regional, and national health care facilities to provide a diverse range of quality clinical education experiences. While the Evansville community provides a number of clinical opportunities, including initial observational and more advanced direct patient care experiences, students should anticipate the personal and financial impact associated with transportation and accommodation outside the Evansville area for the majority of their full-time clinical course work. International clinical course placements for final-level DPT students may be available.

Prerequisite courses must be successfully completed prior to beginning the professional program. All science courses must be designed for science majors. Other designs will not be accepted.

### Prerequisite courses taken by University of Evansville students

Biology 107\*<sup>†</sup>; Chemistry 118\*<sup>†</sup>, 240\*; Exercise and Sport Science 112\*, 113\*; Mathematics 105\*<sup>††</sup> (or demonstrated proficiency); Physical Therapy 100; Physics 121\*<sup>†</sup>, 122\*; Psychology 121<sup>†</sup>

## Application Calendar, Application Materials, Admission Criteria

Enrollment in the University does not necessarily guarantee enrollment in the DPT program.

Application calendar, application materials, and admission criteria are available on the web at [pt.evansville.edu](http://pt.evansville.edu).

Admission criteria are subject to change. The Department of Physical Therapy reserves the right to make final decisions concerning all admission criteria.

## Doctor of Physical Therapy Curriculum

(Subject to Change)

Once accepted into the DPT program, students will be responsible for following programmatic guidelines and progression policies as outlined in the DPT student handbook, which is available at [pt.evansville.edu](http://pt.evansville.edu).

### Program Progression

The physical therapy faculty makes decisions regarding a student's progression through the professional program. It is the responsibility of the student to complete each course successfully and to demonstrate appropriate professional behavior in all situations in order to progress through the professional program. Successful completion is defined as the ability to demonstrate competence in course content. Criteria for successful completion of each course are conveyed to the student via the course syllabus. Failure to successfully complete a professional course will result in delayed progression or dismissal from the professional program.

Each course instructor determines the means for achieving competence in the professional course work he or she teaches. These criteria are articulated in the course syllabus that is provided to the student in written or electronic form. Every student is responsible for reviewing these criteria including the methods of evaluation and grading criteria.

### Grading Scale and Minimum Passing Grades for Doctor of Physical Therapy Program

The minimum passing grade for each course in the curriculum is a C.

For the post-baccalaureate semesters 4-9, students may earn no more than 10 semester hours of course work with grades of C+ or lower. If an 11th semester hour with a grade of C+ is earned, progression through the program will be delayed and the student will be placed on an individual program of remediation that will allow repetition of up to 2 courses. If an additional grade of C+ (or lower) is earned, the student will be dismissed from the program. All graduate work is counted and none of it may be omitted in computing the overall grade point average. All graduate work is counted and none of it may be omitted in computing the overall grade point average.

### Requirements (114 hours)

Biology 436/536; Physical Therapy 410/510, 412/512, 414/514, 417/517, 421/521, 422/522, 423/523, 431/531, 432/532, 434/534, 435/535, 441/541, 442/542, 451/551, 452/552, 623, 624, 626, 631, 633, 641, 642, 643, 644, 651, 652, 661, 726, 727, 728, 731, 732, 742, 751, 761, 762, 763

## College of Education and Health Sciences

# Master of Science in Athletic Training

Program Director: Kathy Liu

The certified athletic trainer (ATC) is a highly educated and skilled allied health professional. In cooperation with physicians and other allied health personnel, the ATC functions as an integral member of the health care team for the physically active. Traditionally, secondary schools, colleges and universities, sports medicine clinics, orthopaedic surgeon offices, industrial settings, and professional sports teams have employed certified athletic trainers.

The Master of Science in Athletic Training major is designed for those individuals who seek certification as an athletic trainer for the Board of Certification (BOC) and have an undergraduate degree with the necessary prerequisites. The Commission on Accreditation of Athletic Training Education (CAATE) is the accrediting body for athletic training education programs. The University of Evansville's ELM Athletic Training program is competitive, and a set number of students are allowed entry per year.

The master's degree program prepares the athletic training student for challenges that will be encountered as an allied health professional. The majority of clinical education occurs while working with the University's NCAA Division I athletic teams. Convenient off-campus assignments with clinic- and high school-based athletic trainers as well as physicians exist to ensure a well-rounded practical experience.

### Admission:

**Completed bachelor's degree and admission to UE with the following prerequisite course equivalents:** Exercise and Sport Science 112 and 113 (Human Anatomy and Physiology with Lab)

## Recommended:

Psychology 121 (Introduction to Psychology)

Exercise and Sport Science 356 (Biomechanics/  
Kinesiology)

Exercise and Sport Science 352 (Exercise Physiology)

Exercise and Sport Science 320 (Nutrition)

Physical Therapy 100 (Medical Terminology)

- Grade of C or better in prerequisite courses (all prerequisites must have been completed within the last 10 years prior to application)
- GRE Score of 1000 or better (if undergraduate cumulative GPA is below 3.0)
- Official transcripts showing completion of undergraduate degree
- Submission of Entry-level Master in Athletic Training program application
- Interview (phone or in-person)
- Completed Technical Standards Form
- Physical examination and proof of immunizations
- Hepatitis-B vaccination
- Current Emergency Response and CPR for Professional Rescuer Certification
- Recommended: observational experience documented by a certified athletic trainer

**Application deadline:** January 1 prior to the summer enrollment. Applications received after January 1 will be considered for rolling admission if spots are still available.

### College of Education and Health Sciences

## Master of Science in Health Services Administration

Program Director: Bill Stroube

The University of Evansville's Master of Science in Health Services Administration (MSHSA) is designed for those who want to assume management positions in public and private health service organizations. The multidisciplinary approach to the program is enhanced by adjunct faculty from the business community and health care organizations in addition to University of Evansville full-time faculty.

The student's area of undergraduate study, past work experience, and future career goals provide direction for the selection of elective courses and learning activities. Health agency field experience, supervised by faculty and agency preceptors, may be required or encouraged based upon learning needs and past experiences. A health services administration graduate-level study abroad experience is offered most summers at Harlaxton College in England or at other sites.

The health services administration graduate program is designed to suit the schedules of both students who hold full-time jobs and wish to further their education on a part-time basis and students interested in full-time study.

### Application Requirement

- Bachelor's degree from a regionally accredited college or university; a degree in health-related profession or business is preferred but other undergraduate degrees will be considered
- Scores for the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT)
- Two references from the applicant's work environment or undergraduate faculty
- A personal interview with the health services administration program director
- Requirements (114 hours)

### Requirements (39 hours)

Health Services Administration 505, 506, 507, 512, 514, 516, 520, 524, 528, 529, 532, 567, 590

Exact course requirements may vary depending upon the individual's background.

### College of Education and Health Sciences



# Master of Public Health

Program Director: Payal Patel-Dovlatabadi

The University of Evansville's Master of Public Health with an emphasis in health policy is a great opportunity for those who want further study in public health policy. Students may enroll on either a full-time or part-time basis, with a full-time student taking two years to complete the program.

The program provides a unified approach to policy. It is built on the recognition that issues of health policy cannot be divorced from principles of sound management, nor can health care management or policy be developed without a fundamental understanding of morbidity, mortality, and epidemiologic methods. Further, the program recognizes that leaders cannot make successful decisions about the delivery of health care nor solve the health problems affecting society over the next decades without extensive analytic and decision-making skills. Students need to be able to translate sound scientific evidence into effective health policy. The program emphasizes training in quantitative methods, economics, epidemiology, and evaluative methods for policy and management. Social and behavioral sciences are integral parts of many courses throughout the two-year curriculum.

## Application Requirement

- Bachelor's degree from a regionally accredited college or university;
- Scores for the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT)
- Three references from the applicant's work environment or undergraduate faculty
- A statement of purpose

## Requirements (42 hours)

Health Services Administration 532, Public Health 501, 509, 515, 525, 530, 535, 540, 542, 543, 547, 580, 590, 598

Exact course requirements may vary depending upon the individual's background.

## College of Education and Health Sciences

# MASTER OF PHYSICIAN ASSISTANT SCIENCE

Program Director: Michael Roscoe

Physician Assistants (PA) are nationally certified and state-licensed health care professionals who provide direct patient care and work as part of a physician-led team in delivering a broad range of diagnostic, therapeutic, preventive, and health maintenance services. They work in diverse medical and surgical specialties including family and internal medicine, emergency care, pediatrics, obstetrics and gynecology, general surgery and sub-surgical specialties, and mental and behavioral health care. PAs work in a wide variety of settings including hospitals, clinics, physicians' offices, and other health care facilities. For more information about the profession, visit [www.aapa.org](http://www.aapa.org).

Entry into the PA Program is based on both quantitative and qualitative variables. There are two admission pathways into the PA Program. Students on both pathways must meet the same minimum entrance requirements. Students on the B/PA pathway (Pathway 1) must meet additional requirements throughout their undergraduate experience at UE to maintain their status.

Application calendar and prerequisite, application and acceptance requirements are available on the PA program's website: <https://www.evansville.edu/majors/physicianassistant/admission.cfm>

Admission criteria are subject to change. The PA program reserves the right to make final decisions regarding all admission criteria.

Upon entry into the PA program, students will be responsible for following programmatic guidelines and progression policies as outlined in the PA Student Handbook, which is available on the PA website  
<https://www.evansville.edu/majors/physicianassistant/handbook.cfm>

PA Program Course Requirements (113 hours) PA 510, 511, 520, 521, 530, 531, 540, 541, 542, 543, 544, 612, 622, 623, 624, 625, 632, 633, 634, 645, 750, 751, 752, 753, 755, 760, 761, 762, 763, 764, 765, 766, 767, 770, 771, 772, 773, 774

Enrollment is limited to students admitted to the Physician Assistant Program.

# Graduate Course Descriptions

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## **Athletic Training (AT)**

AT 521 Applied Anatomy and Physiology Lab (2) This course is designed for graduate students who need to study human anatomy in a more detailed format. Emphasis is placed on the gross anatomy of the human skeleton, muscular, nervous, and circulatory systems using previously dissected cadavers. Students will explore, in greater detail, specific areas related to orthopaedic clinical evaluation (ankle, knee, hip, wrist, elbow, shoulder). Additionally, students will be expected to complete a teaching component based on instructor assignment of a body area.

AT 551 Exercise and Sport Psychology (3) This course will provide an overview of the rapidly developing field of sport psychology. A wide range of topics in sport and exercise psychology will be reviewed, including anxiety and performance, overtraining and staleness, psychometric characteristics of sport participants, and other psychological factors that may affect sport performance. Although the major interest of American sport psychology involves applications intended to enhance athletic performance, this course will also cover topics of exercise and mental health as well. There will be a strong emphasis on important issues in sport psychology research, in order that students may be able to evaluate the usefulness of popular performance enhancement techniques.

AT 575 Advanced Nutritional Issues in Athletic Training (3) In this course, students will gain knowledge about nutritional needs of athletes and nutrition-related issues that may arise in working with athletes. This study of the science of sport nutrition includes normal nutritional needs; needs for weight gain, loss, and maintenance; effect of diet on performance, training, and recovery; disordered eating, energy requirements, and exercise metabolism.

AT 580 Evidence-based Inquiry (3) Theory and practice of evidence-based sports medicine for both clinical and research environments, with emphasis on understanding the results of health care interventions and practices for patients and research subjects. This course will introduce the student to clinical epidemiology and the evaluation of the efficacy of prevention, diagnostic, and treatment strategies for acute and chronic conditions. Intended for graduate athletic training majors.

AT 582 Orthopedic Wrapping, Taping, and Related Skills (3) This course addresses a variety of topics in order to develop the student's competence as an athletic trainer. Emphasis is placed upon skills such as construction and application of protective devices, taping and bandaging techniques, on-field assessment techniques, and emergency care. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 587 Therapeutic Modalities (3) This course addresses the principles, indications, contra-indications, physiological effects, safety procedures, and application of therapeutic modalities for the treatment of athletic injuries, with particular emphasis on evidence-based practice and integration with modality selection. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 588 Evaluation of Lower Extremity (3) This course addresses the principles, techniques, and theories behind athletic injuries and their assessment from the waist down. The student will be able to assess an injury and determine which special tests to use in order to come to a conclusion about what has occurred to the athlete and what needs to be done in a timely manner. Also, a thorough knowledge of bony landmarks, dermatomes, and myotomes is covered, which will aid the athletic training student in injury assessment. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 589 Evaluation of the Upper Extremity (3) This course addresses the principles, techniques, and theories behind athletic injuries and their assessment from the head to waist. The student will be able to assess an injury and determine which special tests to use in order to come to a conclusion about what has occurred to the athlete. Also, a thorough knowledge of bony landmarks, dermatomes, and myotomes is covered, which will aid the student in injury assessment. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 591 Graduate Clinical Education I (2) This course is one of a series of four clinical education courses designed to provide proficiency instruction and clinical experience in the field of athletic training. The emphasis in this course is basic taping and bandaging techniques, emergency procedures and on-field assessment. The field experience portion will include local high school football coverage and other field experience as assigned. The athletic training student will work toward completion of the proficiency check-off sheet. This class will meet formally at the discretion of the instructor outside of the clinical setting to ensure adequate progress is being made toward completion of the respective clinical proficiencies. Total clinical hours will be a result of two clinical rotations with an area high school to provide an adequate equipment intensive rotation as well as a general medical rotation at Deaconess Family Medicine Residency. Hour totals for this course will be dependent upon successful completion of proficiencies designated for this class with a minimum of 90 clinical hours. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 592 Graduate Clinical Education II (2) This course is one of a series of four clinical education courses designed to provide proficiency instruction and clinical experience in the field of athletic training. The emphasis in the course is the clinical application of therapeutic modalities. The field experience will include sport rotations with emphasis on the application of modalities. The student will work toward completion of a proficiency check-off sheet. Class meets for one hour per week outside the clinical setting. Total clinical hours will be a result of three clinical rotations with the University of Evansville's athletic department. Hour totals for this course will be dependent upon successful completion of proficiencies designated for this class with a minimum of 90 clinical hours total. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 650 Administration of Athletic Training (3) This course is designed to familiarize students with the administration and management responsibilities of athletic training. Topics of study include management of athletic training facilities, personnel, students, facility design, purchasing of supplies and equipment, and budgeting. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 688 Advanced Rehabilitation of Athletic Injuries (3) This course is designed to prepare the student athletic trainer to plan, implement, document and evaluate the efficacy of therapeutic exercise programs for the rehabilitation and reconditioning of the injuries and illness of athletes and others involved in physical activity. It will include mobilization and taping techniques commonly used to facilitate the rehabilitation process. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 690 General Medical and Pharmacology (3) Offers insight on current trends in pharmacology use in an athletic training environment. Also offers current evaluation of general medical conditions, treatment, and referral base for conditions found in athletics. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 691 Graduate Clinical Education III (2) This course is one of a series of four clinical education courses designed to provide clinical experience in the field of athletic training. Each course has a specific area of emphasis to ensure a diverse experience and provide an opportunity to become proficient in required skills within athletic training. The emphasis in this course is rehabilitation. The field experience will be assigned per the clinical instruction plan. The student will work toward completion of the proficiency check-off sheet. This class will meet formally at the discretion of the instructor at least one hour per week, outside of the clinical setting, to ensure adequate progress toward completion of the respective clinical proficiencies. Total clinical hours will be a result of one clinical rotation with the University of Evansville's athletic department and with ProRehab PC. Hour totals for this course will be dependent upon successful completion of proficiencies designated for this class with a minimum of 90 clinical hours total. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 692 Clinical Education in Athletic Training IV (2) This course is one of a series of four clinical education courses designed to provide clinical experience in the field of athletic training. Each course has a specific area of emphasis to ensure a diverse experience and provide an opportunity to become proficient in required skills within athletic training. The emphasis in this course is the evaluation of athletic injuries and illness. Clinical time will be spent with a college athletic trainer working primarily in a traditional college athletic training room setting. The athletic training student will work toward completion of the proficiency check-off sheet. This class will meet formally at the discretion of the instructor outside of the clinical setting to ensure adequate progress is being made by the student toward completion of the respective clinical proficiencies. Field experience assignment will be made and student performance assessed by the clinical instructor. Total clinical hours will be a result of two clinical rotations with the University of Evansville's athletic department. Hour totals for this course will be dependent upon successful completion of proficiencies designated for this class with a minimum of 90 clinical hours total. This course is designed to satisfy CAATE competences related to the above mentioned content areas and is intended for graduate athletic training majors.

AT 693 Professional Issues in Athletic Training (1) As a capstone class to the program, this course will require synthesis of content from all previous courses in the program. It will place an emphasis on preparation for the NATA-BOC exam and professional development issues related to athletic training. These topics include incorporating evidence-based medicine into clinical practice, patient-oriented outcomes in athletic health care, creating a professional presence in athletic training (resume development, networking, and job search tactics), and professionalism/professional ethics.

AT 699 Directed Evidence-based Inquiry (3) Students will develop a critically appraised clinical topic and evaluate evidence related to its clinical efficacy. A faculty mentor will be assigned to the student who will act in a supervisory role during the research project.

### **Health Services Administration (HSA)**

Enrollment is limited to students admitted to the health services administration master's degree program.

HSA 505 Health Care Systems: Issues and Trends (3) Overview of the health care system. Reviews the history and current status of various segments of health care. Includes analysis of the impact of socioeconomic and political factors, as well as current health

care issues and trends.

HSA 506 Jurisprudence and Ethics in Health Care (3) Emphasizes legal and ethical processes and their application to the health care organization, administrator, staff, employees, and patients. Includes ethical dimensions of the decision-making process and current ethical issues in health care.

HSA 507 Health Care Research and Design (3) Examines research principles and methods as they contribute to health care organizations and the delivery system. Provides experience in developing a research proposal and formal critique of research literature.

HSA 512 Health Service Organizational Behavior (3) Uses various organizational, managerial, and behavioral theories, concepts, and principles to analyze, diagnose, predict, and guide human behavior within health care organizations. Emphasis on motivation, leadership, change, communication, personality, group dynamics, decision making, and organizational development. Stresses the importance of understanding professional roles within health care organizations.

HSA 514 Health Care Management Theory and Human Resources (3) Includes the study of management theory and practice as applied by managers of health services. Emphasizes analysis of the manager's role, interactions with people, the organization, and the environment. Special emphasis on human resource issues.

HSA 516 Health Care Information Systems (3) Provides an understanding of the concepts and applications of information systems used in the management of health care systems.

HSA 520 Health Care Planning and Marketing (3) Integrates long-range goal planning with dimensions of marketing for health care services. Concepts, techniques, and theories used in the planning and management of marketing in the health care industry.

HSA 524 Health Problems in Health Care (3) A study of health promotion, specific diseases, and health problems throughout the life cycle. Includes communicable and chronic diseases and conditions that affect the individual, the family, and the community. Explores role of health care system in dealing with these problems through prevention and treatment.

HSA 528 Financial Management of Health Care Organizations (3) Focuses on the acquisition, allocation, and management control of financial resources within health care organizations. Includes cost analysis, financial position analysis and strategies, reimbursement, pricing policies, budgeting, capital expenditure, analysis of financial reports, and informal and external controls.

HSA 529 Health Services Field Experience (3-6) Provides field experience within a selected health care organization with the supervision of an agency preceptor and faculty member. Design of course dependent upon the individual student's past and present work experiences in health care organizations as well as future goals. Prerequisite: Permission of the instructor.

HSA 532 Managed Health Care (3) Examines the changing role of managed care organizations in the health care system. Discusses the history, basic structure of managed care firms, the interrelationships among providers, and their evolving role. Their impact on health care economics discussed in detail.

HSA 567 Statistics for Appraisal and Evaluation (3) Focuses on the analysis of data common to health care. Includes data description, elements of probability, distribution of random variables, estimation and confidence intervals, binomial and normal distributions, hypothesis testing, contingency tables, regression analysis, and ANOVA.

HSA 590 Decision Making in Health Care (3) Examines decision making in health services administration by extensive use of case studies. Material from other HSA courses integrated into the study of decisions facing all types of health care organizations.

HSA 595 Independent Study (1-3) Independent research in health care management conducted under faculty supervision. Prerequisite: Permission of the instructor.

HSA 598 Internship in Health Care Management (1-6) Structured assignment which allows student to gain practical experience in a health care management position related to an area of career interest. Student is directed by the internship director and supervised by a member of the cooperating organization. Prerequisite: Permission of the health services administration program director.

HSA 599 Special Topics in Health Services Administration (1-3) Lectures and discussion of topics not covered in regular course offerings. Provides greater depth to topics of special interest or explores rapidly changing areas in health services administration.

### **Leadership (LDR)**

LDR 505 Leadership Theory/Shaping a Leader (3) This course examines leadership theory, concepts, and practice. Students will identify leaders and leadership styles and apply the knowledge to better understand and positively affect their organization, business, or institution. Self-reflection will be a focus of the class as students evaluate their leadership styles and practices to identify areas of growth and personal development.

LDR 506 Ethics: Leading with Integrity (3) Emphasizes ethical processes and their application to leadership. Included are ethical dimensions of the decision-making process and current ethical issues. Examines the relationship between legal and ethical issues.

LDR 508 Communicating across Organizations (3) This course will examine and analyze communication theories in organizations. The students will study the principles of communication effectively used in high-functioning teams. The course will allow students

to look at problems in communication and how it can effectively create change across an organization of any size.

LDR 512 Organizational Behavior (3) Uses various organizational, managerial, and behavioral theories, concepts, and principles in analyzing, diagnosing, predicting, and guiding human behavior within organizations committed to public service. Emphasizes motivation, leadership, change, communication, personality, group dynamics, and organization development.

LDR 590 Decision Making: Change Management (3) Examines decision making in leadership roles by extensive use of case studies. Material from other LDR courses is integrated into the study of decisions facing all types of organizations committed to leading and serving.

LDR 543 Strategic Planning and Implementation (3) This course examines the strategic dimensions of leadership. Topics include establishing a vision, strategic planning, and implementation of strategic initiatives. Students will examine strategic issues and apply their knowledge to positively affect their organization, business, or institution.

LDR 528 Finance (3) Focuses on the acquisition, allocation, and management control of financial resources within organizations. Includes cost analysis, financial position analysis and strategies, reimbursement, pricing policies, budgeting, capital expenditure, analysis of financial reports, and informal and external controls. Emphasizes financial terminology and organization of financial statements. Requires analytical approach to ratio analysis and organization diagnostics.

LDR 530 Cultural Competence and Leadership (3) This course examines the competencies needed to thrive as a culturally responsive leader, while fostering growth within a diverse organization. Course participants will learn to recognize personal and institutional biases associated with discrimination and acquire the knowledge and the skillset needed to lead cross-culturally.

LDR 599 Capstone Project (3) This is an experiential learning course in which students complete real-world consulting projects for start-ups or existing organizations (business, not-for-profit, civic, or educational). All teams are guided by a coach. Competencies are developed and refined in leading consulting projects, project management, teamwork, professional interaction, and communication presentation skills. Students draw upon diverse team member strengths to deliver value on their projects.

The Graduate Capstone course provides the student with the opportunity to apply the skillsets developed throughout the course of the program. The student will work in cross-disciplinary teams to develop recommendations for clients on real-world issues. This experience will allow the student to enhance his or her critical thinking, leadership, teamwork, and communication skills. The Capstone projects vary in focus and are based upon the specific needs of client and the professional development needs of the student. This experience is designed to excite, challenge, and exhilarate the student with a view of how to enhance his or her skills for professional effectiveness.

LDR 550 Critical Issues in Higher Education (3) This course will explore the academic, political, legal, governmental, financial, and other influencers that higher education leaders are forced to consider as they lead their institutions into the future. This course will build upon the content from the Policy and Historical Trends in Higher Education course, as well as the core leadership courses.

LDR 551 Student Services in Higher Education (3) This course focuses on the theoretical basis and best practices in student services in higher education with particular emphasis on financial aid, retention, recruitment, student activities, support services and residence life. Students will develop an understanding of the changing demographics and characteristics of college students in relation to academic, social, and physical needs.

LDR 552 Policy and Historical Trends in Higher Education (3) This course is designed to help you think about colleges and universities and the historical and social forces that have affected their development (including policy decision) in the United States. Formal education, including post-secondary education, has been integral to the social and economic development of the American free enterprise system. The aim of the course is to provide a sound framework for using historical analysis to interpret problems, shape policy, and develop sound decision making.

LDR 554 Legal Aspects of Higher Education (3) This course investigates the legislation and litigation which forms the basis of education at the national, state, and local levels. Students will examine historical and current cases rendered by federal and state courts concerning procedural and substantive due process, civil rights, special populations, parent and student rights, and contractual legalities to help professionals have a sound knowledge of the pertinent legal landscape for leadership and decision making.

LDR 540 Non-Profit Fundraising and Practice (3) This course is designed for current or aspirant managers, staff, and volunteers in the non-profit sector who want to become familiar with the fundamentals of fundraising. We will look at philanthropy on a global scale and within the United States. Key areas that will be covered are funding sources; motivations for giving; methods of giving; types of funding; and developing relationships.

LDR 541 Managing Non-Profit Organizations (3) This course will help students understand the important role non-profits play in the United States and the impact they have on communities. We will discuss the strengths, weaknesses, opportunities and threats

for non-profits and their leaders. Key areas such as a mission statement, strategic planning, boards, volunteers, and careers in non-profit organizations will be covered.

LDR 542 Change & Innovation in Non-Profit Organizations (3) This course is designed for students who are interested in learning about innovation in a world that is steeped in history. While the non-profit world tends to change slowly, recent innovations are forcing change quickly. In this course we will discuss the major theories of change; the differences between personal change and organizational change; the impact of organizational change on leaders; and innovations in the world of non-profits.

LDR 544 Non-Profit and Social Media (3) Social Media is an ever-changing field and non-profits are embracing the media platforms for various reasons. From telling your story through blogging, crowd funding, branding your non-profit, ensuring privacy, and creating apps; this class will maneuver the vast world of social media. We will use various platforms and speakers to discuss the tools of the trade and how non-profit organizations can best benefit from them.

## **Physical Therapy (PT)**

Enrollment is limited to students admitted to the Doctor of Physical Therapy program. All summer semester courses in the second and third years of the professional program are prerequisites for courses offered in the fall semester of that year. Fall courses are prerequisites for spring offerings.

PT 412/512 Physical Interventions (2) This lecture/lab course provides the student with an introduction to the therapeutic modality and other physical intervention skills commonly encountered in physical therapy practice. The course covers the healing process, pain mechanisms, indications/contraindication, and physiological effects of each intervention in a lab/lecture experience. The primary interventions covered include electrical stimulation, hydrotherapy, soft tissue massage, cryotherapy, thermal modalities, electromagnetic modalities, ultrasound, traction, and compression. Prerequisite: Physical Therapy 431/531.

PT 414/514 Foundations of Therapeutic Exercise (2) This course provides the student with an introduction to commonly prescribed therapeutic exercise interventions. An emphasis will be placed on understanding therapeutic exercise from a motor control perspective and how pain affects motor control and patterns of movement. Progression of fundamental exercises through the neurodevelopmental postures as they relate to common impairments found in the outpatient physical therapy setting will be covered. Students will learn the purpose of each therapeutic exercise technique and demonstrate application and critical thinking skills through practical experiences in preparation for future patient management courses. Prerequisite: Physical Therapy 431/531.

PT 417/517 Tests and Measurements (2) Introduces the basic procedures for objective assessment of the musculo-skeletal system through measurement of joint range of motion (ROM) and muscle strength. Laboratory sessions will allow practice in the techniques of goniometry and manual muscle testing (MMT). Inclometers, hand held dynamometers and isokinetic testing are introduced. Prerequisites: Biology 436/536; Physical Therapy 410/510, 412/512, 414/514, 432/532, 434/534, 442/542, 451/551. Spring.

PT 423/523 Wellness in Physical Therapy (2) This course address issues related to wellness and overall health and fitness promotion from a physical therapy perspective. Areas of learning will include introduction to common fitness and wellness programs, nutrition, balance and movement screening, and application of transition from rehabilitation to encouraging behavior change promoting lifelong wellness. This course, when completed in addition to PT 451/551 and PT 452/552, meets the criteria for the general education capstone outcome as well as one writing-intensive course. Prerequisites: Biology 436/536, Physical Therapy 410/510, 412/512, 414/514, 432/532, 434/534, 442/542, and 451/551.

PT 432/532 Kinesiology (2) Introduces the elements and principles basic to the study of human movement. It combines the disciplines of biomechanics, physiology, and anatomy to analyze functional movements, balance, and gait. Discusses concepts of kinetics, kinematics, length-tension relationships, and the functional significance of the structure of biological tissues. Emphasizes clinical application of mechanical concepts. Prerequisites: Physical Therapy 431/531, and 435/535. Fall.

PT 451/551 Scientific Inquiry I: Introduction to Statistics and Research Methods (2) This is the first in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include fundamentals of clinical rehabilitation research including evidence-based practice, searching the literature, and research ethics. Fundamentals of clinical research approaches include variable recognition, research validity, measurement theory, reliability, responsiveness, and validity. Basic statistical procedures to assess mean differences as well as inference testing are covered. This course, when completed in addition to PT 452/552 and PT 423/523, meets the criteria for the general education capstone outcome as well as one writing-intensive course. Prerequisites: Admission to the DPT program or permission of the instructor. Fall.

PT 452/552 Scientific Inquiry II: Principles of Critical Appraisal 1 (2) This is the second in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include critical appraisal of research related the diagnostic process and intervention trials. Student complete critical appraisals of published research in a written format and present their appraisals orally. This course, when completed in addition to Physical Therapy 451/551 and 423/523, meets the criteria for the General Education capstone outcome as well as

one writing-intensive course. Prerequisites: Admission to the DPT program and Physical Therapy 451/551 or permission of the instructor. Spring.

PT 623 Patient Management III: Multiple Systems (4) Studies physical therapy management of patients with amputations, integumentary and oncologic disorders, as well as acute and chronic disorders seen in the older adult. Student expected to discuss the medical, surgical, and pharmacological management of these conditions. Emphasis on problem solving with material presented in module format. Laboratory activities include balance assessment, wound assessment and management, lymphedema interventions including bandaging, geriatric screening, functional assessments, and exercise for the elderly. Concepts associated with limb amputations and prosthetic devices addressed in laboratory setting. Students participate in an observational experience in a prosthetic clinic, as well as at a health care facility specializing in wound care. Prerequisites: Physical Therapy 421/521, 422/522, 661. Fall.

PT 624 Patient Management IV: Pediatrics (3) Studies the physical therapy management of children with developmental disabilities. Presents examination and evaluation of infants and children with specific congenital and acquired disorders. Topics covered include family centered care, service delivery models, and service delivery settings including but not limited to early intervention, schools, acute care and rehabilitation. Laboratory activities include movement analysis, handling and positioning, developmental activities, use of adaptive equipment, and use of orthoses. Actual patient and video demonstrations are used when possible along with experiential and service learning, case studies, and treatment planning activities. Prerequisites: Physical Therapy 434/534, 633, 661. Spring.

PT 626 Patient Management V: Neuromuscular (7) Studies physical therapy management of the patient with neurologic dysfunction, including stroke, traumatic brain injury, spinal cord injury, and multiple progressive neurologic conditions. Pathology, etiology, and natural history of these disorders are presented in tandem with their medical, surgical, and pharmacological management. Students are expected to be able to examine and evaluate patients with neurological dysfunction by selecting appropriate tests and measures, developing efficacious plans of care, implementing therapeutic interventions, and documenting using the best evidence. Students are also expected to provide a rationale for all decisions made as part of this patient management process, including selection of appropriate outcome measures. Experiential opportunities, clinical simulations, role playing, small group learning activities, and video demonstrations are used with problem-solving exercises to reinforce mastery of the material. Prerequisites: Physical Therapy 631, 661. Spring.

PT 631 Neurobiology (3) Lecture-lab. Normal development of the brain and spinal cord and the gross anatomy of these structures examined. Laboratory provides opportunity to study human specimens and models to gain a three-dimensional understanding of the central nervous system during first part of course. Subsequently, pathways and associated structures that mediate general sensory, special sensory, autonomic, and somatic motor functions are described, and the consequences of lesions of these pathways are discussed. Prerequisite: Physical Therapy 561. Fall.

PT 633 Human Growth and Development (3) Presents typical human development from conception to death including functional changes in posture and movement. Presents processes of growth, maturation, adaptation, motor control, and motor learning. Discusses concepts of critical period, health risk, physiologic reserve, and senescence. The relationship of physical, cognitive, and social theories of human development and age-related system changes are discussed. Views motor behavior across the human life span within a social and psychological context. Prerequisite: Physical Therapy 661. Fall.

PT 641 Clinical and Professional Issues III: Ethics (2) This course is the continuation of clinical and professional issues course sequence, which encourages value clarification and ethical decision making and its relationship to health care. Various situations, dilemmas, and scenarios are utilized to reinforce topics discussed and to heighten awareness of ethical dilemmas that may be encountered by health care providers and their patients. Lecture. Prerequisites: Physical Therapy 541, 542, 561. Fall.

PT 642 Clinical and Professional Issues IV: Advocacy (1) Designed to promote the importance of political and social advocacy. Content related to professional education, outcomes assessment, and consultation addressed. Students explore the profession's core value of social responsibility and provide evidence of their own involvement in the community and political arena. Prerequisite: Physical Therapy 641, 661. Spring.

PT 643 Leadership and Administration (3) Examines leadership and administration theories and practice that are specific to physical therapy and rehabilitation. Practical implementation of this information is emphasized with the students actively involved in the processes of strategic planning, marketing, supervising, budgeting, effective documentation, and balancing human and fiscal resources within health care environments. Additional leadership concepts of motivation, communication, group dynamics, managing change, and organizational development are explored in depth. Prerequisites: Physical Therapy 641, 661. Spring.

PT 644 Behavioral Psychology (2) Draws together theoretical constructs of psychology, neuropsychological, and behavioral medicine to help explain the etiology of expected behavioral and emotional responses to compromised motor function and neurologic impairment typically experienced by patients in physical therapy rehabilitation and to provide guidance in management of these patients. Prerequisite: Physical Therapy 631, 661. Spring.



PT 651 Scientific Inquiry III: Research Methods (2) This course is the third in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include experimental research design such as single-subject and group designs, sampling theories, descriptive and survey research, clinical case reports, qualitative research and outcomes research. Prerequisites: Physical Therapy 452/552 and Physical Therapy 661. Fall.

PT 652 Scientific Inquiry IV: Principles of Critical Appraisal 2 (2) This course is the fourth in a series of five courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. Topics include critical appraisal of research related injury risk, harm, prognosis studies and systematic reviews are emphasized. Student complete critical appraisals of published research in a written format and present their appraisals orally. Prerequisites: Physical Therapy 622, Physical Therapy 623, Physical Therapy 633, and Physical Therapy 651, or permission of instructor. Spring.

PT 661 Clinical I (5) Active participation in this full-time clinical course (320 hours) emphasizes development of professional behavior, written and verbal communication skills, and evaluation, examination, and interventions previously addressed in didactic course work. Emphasizes physical therapy management of musculoskeletal conditions. Patient care supervised by a licensed physical therapist. Prerequisites: All 500 level physical therapy course work; completion of undergraduate degree. Summer.

PT 670 Special Topics in Physical Therapy (1) This course provides students who have a special interest in furthering their skills in the orthopedic physical therapy setting with advanced diagnostic and treatment interventions. An emphasis will be placed on identifying meaningful impairments hindering functional movement patterns and utilizing appropriate manual therapy and motor control exercise interventions to improve movement quality. Through lecture and laboratory experiences the students will be able to diagnosis movement pattern limitations and create appropriate treatment progressions as it relates to their physical therapy evaluation.

PT 726 Patient Management V: Advanced Musculoskeletal Practice (5) This course builds upon previously acquired examination and intervention skills related to musculoskeletal patient management. An emphasis is placed on examination and subsequent evaluation leading to the physical therapy diagnosis for the adult and athletic population. Evidence-based interventions emphasizing manual therapy and therapeutic exercise are covered in detail in lecture and laboratory sessions. Specific techniques include joint mobilization/manipulation, segmental stabilization for the spine, trigger point treatment, and neural mobilization. Therapeutic exercise and sport-specific progressions are addressed in relation to commonly encountered physical impairments. Master clinicians and physicians share their expertise through classroom and laboratory presentations. Students learn to use these concepts and techniques to develop comprehensive patient management programs. Students also have the opportunity to participate in an athletic event coverage observational experience. Prerequisites: Physical Therapy 566, 761. Fall.

PT 727 Community Health (4) Expands the students' knowledge and experiences in the areas of health pro- motion, wellness, and autonomous care. Students will analyze and identify health needs and develop and implement a community-based health promotion, prevention, or wellness program. Areas of learning include physical therapist's role in developing and marketing community wellness pro- grams. Additionally, students examine health-related issues for individuals of varying races and ethnicities, national origin, and sexual orientation. Prerequisite: Physical Therapy 761. Fall

PT 728 Advanced Screening and Differential Diagnosis (3) Enables students to function as independent health care providers with the ability to identify signs and symptoms that fall outside the scope of physical therapy practice and to refer clients appropriately to additional medical care. Addresses strategies to identify source of various signs and symptoms. Tools used in course include questionnaires based on presenting symptoms to be used as a guide in history-taking and inter-practitioner communication. Prerequisite: Physical Therapy 761. Fall.

PT 731 Rehabilitation Pharmacology (2) Presents basic aspects of the mechanism of action of drugs commonly employed in the practice of rehabilitation. Fundamental principles are followed by an in-depth discussion of drug classifications. Topics include pharmacokinetics, pharmacodynamics, and adverse drug reactions. Prerequisite: Physical Therapy 761.

PT 732 Medical Imaging (1) Covers basic principles of diagnostic imaging pertinent to clinical practice. Familiarizes student with magnetic resonance imaging, computed tomography, ultrasonography, and plain film studies of the spine and extremities. Students view and interpret normal and abnormal images for these modalities. Student examines research related to diagnostic imaging with regard to sensitivity, specificity, and correlation with clinical findings. Prerequisite: Physical Therapy 761. Corequisite: Physical Therapy 726. Fall.

PT 742 Clinical and Professional Issues V: Transition to Practice (2) This course is the culmination of the series of clinical and professional issues courses. The course is focused on the processes involved in the transition from student to new professional. Content includes career planning topics such as interviewing, résumé building, and professional licensure as well as opportunities and responsibilities of the new professional. The importance of becoming a high-performance, well-balanced professional will be emphasized. Prerequisite: Physical Therapy 761. Fall.

PT 751 Scientific Inquiry V: Synthesis and Application of Current Evidence in Practice (2) This is the last in a series of courses designed to prepare the graduate to practice in an evidence-based manner and to be an astute consumer and judge of scientific research. This course is completed concurrently with Physical Therapy 762, Clinical III and Physical Therapy 763, Clinical IV. Students pose answerable clinical questions germane to their current clinical environment related to diagnosis, prognosis, and intervention; search the literature for the current best evidence; and complete a critical appraisal of the evidence. Prerequisites: Successful completion of all previous courses in the DPT program or permission of the instructor. Corequisites: Physical Therapy 762, 763.

PT 761 Clinical II (5) Full-time clinical experience (320 hours) emphasizes examination, evaluation, and management of patients with neurologic, neuromuscular, cardiopulmonary, or integumentary disorders. Further development of professional interaction skills and written and verbal communication. Patient care supervised by a licensed physical therapist. Prerequisites: All 600-level course work. Summer.

PT 762 Clinical III (5) Full-time clinical experience (280 hours) assists student in achieving clinical competence as an entry-level physical therapist. Student examines and evaluates patients, and designs, implements, and analyzes a physical therapy plan of care. Includes documentation of test results and patient progress. Can occur in an outpatient, acute care, or rehabilitation setting. Student can manage musculoskeletal, neuromuscular, neurologic, and geriatric pathologies, as well as developmental disabilities and cardiopulmonary dysfunction. Patient care supervised by a licensed physical therapist. Prerequisites: Physical Therapy 726, 727, 728, 731, 732, 742. Corequisites: Physical Therapy 751, 763. Spring.

PT 763 Clinical IV (5) Full-time clinical experience completes achievement of clinical competence as an entry-level physical therapist. Student examines and evaluates patients, and designs, implements, and analyzes a physical therapy plan of care as an entry-level practitioner. Professional communication and socialization further developed. Clinical experience can occur in an outpatient, acute care, rehabilitation, or specialized setting. Prerequisites: All 600 level physical therapy courses; Physical Therapy 761. Corequisites: Physical Therapy 751, 762. Spring.

### **Physician Assistant (PA)**

Enrollment is limited to students admitted to the Physician Assistant program. All previous semester courses are prerequisites for courses offered in the following semester.

PA 510 Medical Literature and Evidence Based Medicine (3) This course is designed to expose students to some of the most common study designs found in the medical literature (Review/meta-analysis, correlational, case series, cross-sectional, case-control, cohort, experimental, qualitative) and the associated statistical analysis within the clinical environment. A focus is to prepare students to develop and apply the principles of research design within populations to enable an independent critical appraisal of the medical literature. The second part of the class focuses on Evidence-Based Medicine and its application in clinical practice and with patients. Research skills developed in this course emphasize a systematic and scientific approach to problem solving.

PA 520: Pharmacology (4) The goal of pharmacology is to appreciate the principles of drug absorption, distribution, metabolism, excretion and the mechanisms of drugs to enable the rational use of effective agents in the diagnosis and treatment of disease. Major emphasis is placed on mechanism of action, indications, adverse effects, and drug interactions.

PA 521: Behavioral Health (3) This course examines the various social and behavioral sciences domains. A focus is on diagnosis, treatment and prevention of psychiatric/behavioral conditions using the DSM-V as a guide. Additionally, normal and abnormal development across the life span is covered. This includes detection and treatment of substance abuse, human sexuality, issues in death, dying and loss; response to illness, injury and stress; principles of violence identification and prevention.

PA 540: The PA Profession (2) This course will provide the PA student with instruction in the PA profession. Instruction will cover the historical development of the profession and current trends/events. Topics will include the physician-PA team relationship, political issues that affect PA practice, documentation, professional conduct, PA certification and licensure; certification maintenance; malpractice insurance; coding and billing. The role of the PA organizations will also be discussed.

PA 541: Medical Ethics (1) This course covers the instruction in principles and practice of medical ethics. It will provide a method and examples for identifying, analyzing, and resolving ethical issues in clinical medicine. Additionally, in-depth discussions will examine a wide variety of ethical dilemmas encountered in health and medicine. These will be used to help students apply a structured approach.

PA 542 Health Systems and Policy (3) This course discusses health care delivery systems and Health policies. The course will focus on the settings for health care delivery and people who provide health care. The course will cover key management and policy issues in contemporary health systems and the process of public policy development and its impact on health system improvement. Students will learn how to evaluate the performance of health systems. Special attention will be on the US Healthcare system. Finally, healthcare reform will be covered from a historical perspective to modern day events.

PA 544 Cultural Competence and IPE (2) This course covers the core cultural competencies for physician assistant students within

the domains of knowledge, professional attitude and skills. Culture competence in health care combines the tenets of patient/family-centered care with an understanding of the social and cultural influences that affect the quality of medical services and treatment provided. This course also focuses on inter-professional education (IPE). It provides the knowledge and skills that foster professional development and team participation in the interdisciplinary healthcare environment.

PA 511 Human Physiology (4) This course focuses on the aspects of human physiology that are most important to build a basic science foundation for future clinical practice. The focus is that all disease and injury to the human body is a deviation from normal anatomy and physiology. Material will focus on normal physiology (and some anatomy) and clinically relevant pathophysiology to set a foundation for future clinical courses. Instruction will introduce how clinicians use “breaks” in homeostasis to diagnosis and treat disease. This course material is linked to PA 530 Diagnostic test and PA 531 Medical Imaging.

PA 530 Diagnostic Tests (2) This course focuses on common medical diagnostic tests used to help diagnose a variety of medical conditions. Students will learn normal values and abnormal values to interpret basic primary care diagnostic tests. Students will begin foundational work on using laboratory findings to build differential diagnosis, and monitoring of disorders commonly found in clinical practice. The course sequence is paired with PA 511 (Human Physiology).

PA 531 Medical Imaging (3) This course focuses on common medical imaging tests used to help diagnose a variety of medical conditions. Students will learn what normal images area and abnormal images to interpret basic primary care diagnostic pathology. Students will begin foundational work on using imaging findings to build differential diagnosis, and monitoring of disorders commonly found in clinical practice.

PA 543 Population-Based Health (3) This course focuses on the concepts of public health as they relate to medical providers. The course will also review historical developments of public health, the core functions and essential services, the history and current status of the interactions between medicine and public health, and systems thinking approaches used in healthcare and public health. Additionally, the role of health providers in the prevention of disease and maintenance of population health, participating in disease surveillance, reporting and intervention will be discussed. Material will also cover prevention and disease within diverse populations and health disparities within the population.

PA 612 Human Structure (Gross Anatomy) (8) This course is a cadaver dissection gross anatomy course that will be taught in conjunction /partnership with the Indiana University School of Medicine Evansville. This course will focus on normal anatomy but will emphasizes those aspects of human anatomy that are most important to an understanding of patho-anatomy, physical diagnosis of disease, and an interpretation of patient clinical assessment.

PA 622 Clinical Medicine 1 (5) This course is the first of a two-part series covering clinical medical care across the life span from prenatal through elderly to include preventive, emergent, acute, chronic, rehabilitative, palliative and end-of-life care. The course focuses on the general findings, disease etiology, clinical findings (signs and symptoms, tests, etc.), differential diagnosis and non-pharmacologic management of specific disease states. The course topics will be paired with PA 623 (Therapeutics 1), for pharmacologic interventions.

PA 623 Therapeutics 1 (2) This course is the first of a two-part series covering therapeutic interventions on the clinical disease topics covered in the Clinical Medicine Course Series. This course is specifically paired with the disease topics covered in PA 622 (Clinical Medicine 1). These interventions will cover therapeutic care across the life span from prenatal through elderly to include preventive, emergent, acute, chronic, rehabilitative, palliative and end-of-life care. Focus will be on drug class, indication, contraindications, dosing, adverse reactions, drug interactions, safety/monitoring, pharmacology, cost, compliance, and alternatives.

PA 632 History and Physical Exam 1 (3) This course is the first of a two-part series teaching physician assistant students how to perform an accurate and thorough history and physical exam to be able to make diagnostic and therapeutic decisions. Students will learn medical documentation for a full H&P and incorporate this knowledge to develop diagnosis, differential diagnosis and treatment plans. Interpersonal communication skills and professionalism will be emphasized in the instruction of all patient encounters. Students will also learn about patient instruction, education and treatment plans.

PA 624 Clinical Medicine 2 (6) This course is the second of a two-part series covering clinical medical care across the life span from prenatal through elderly to include preventive, emergent, acute, chronic, rehabilitative, palliative and end-of-life care. The course focuses on the general findings, disease etiology, clinical findings (signs and symptoms, tests, etc.), differential diagnosis and non-pharmacologic management of specific disease states. This course’s topics will be paired with PA 625 (Therapeutics 2), for pharmacologic interventions.

PA 625 Therapeutics 2 (3) This course is the second of a two-part series covering therapeutic interventions on the clinical disease topics covered in the Clinical Medicine Course Series. This course is specifically paired with the disease topics covered in PA 624 (Clinical Medicine 2). These interventions will cover therapeutic care across the life span from prenatal through elderly to include preventive, emergent, acute, chronic, rehabilitative, palliative and end-of-life care. Focus will be on drug class, indication, contraindications, dosing, adverse reactions, drug interactions, safety/monitoring, pharmacology, cost, compliance, and alternatives.

PA 633 History and Physical Exam 2 (3) This course is the second of a two-part series teaching physician assistant students how to perform an accurate and thorough history and physical exam to be able to make diagnostic and therapeutic decisions. This course focused on focused and specialty exams. Students will learn medical documentation for specialty H&P and incorporate this knowledge to develop diagnosis, differential diagnosis and treatment plans. Interpersonal communication skills and professionalism will be emphasized in the instruction of all patient encounters. Students will also learn about patient instruction, education and treatment plans.

PA 634 Clinical Skills (5) This course is designed to provide instruction and practice in a wide range of medical and surgical procedures. A focus is placed on primary care outpatient procedures with demonstration of proficiency. Students will also be introduced to other procedures that could be expected of by PAs in specialty settings. Students will also be exposed to curriculums of basic life support and Advanced Cardiac Life Support Courses.

PA 645 Interpersonal Communication and Case Based Learning (1) This course is designed to provide students with a course to integrate material "horizontally" from previous courses. Students will work on communication skills by developing a clinical case and presenting the case to their fellow classmates. Students will obtain history and physical exam information and develop a differential diagnosis through a treatment plan. Faculty functions as a guide through the process to develop both integration of clinical knowledge, but also interpersonal communications skills.

PA 750 Family Medicine (4) This course is designed to provide students with an exposure and experiences in a primary care outpatient setting. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of family medicine/primary care as they relate to the clinical care of patients. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 751 Internal Medicine (4) This course is designed to provide students with an exposure and experiences in an internal medicine setting. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of internal medicine/primary care as they relate to the clinical care of patients. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 752 Community Mental Health (4) This course is designed to provide students with an exposure and experiences in the field of Mental Health. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of Mental Health as they relate to the clinical care of patients. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 753 Pediatric Medicine (2) This course is designed to provide students with an exposure and experiences in a pediatric medicine setting. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of pediatric medicine as they relate to the clinical care of patients. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 755 General Medicine (4) This course is designed to provide students with an interest in primary care an additional exposure and experiences in the field of primary care. This experience is focusing on family or internal medicine for those students wanting a general medicine focus of studies. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 760 General Surgery (4) This course is designed to provide students with an exposure and experiences in a surgery setting. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of general surgery as they relate to the clinical care of patients. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 761 Emergency Medicine (4) This course is designed to provide students with an exposure and experiences in an emergency medicine setting. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of emergency medicine as they relate to the clinical care of patients. Students will be exposed to emergency medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and

physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 762 Orthopedic Medicine (4) This course is designed to provide students with an exposure and experiences in the field of orthopedics. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of orthopedics as they relate to the clinical care of patients. Students will be exposed to orthopedic care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 763 Cardiology (2) This course is designed to provide students with an exposure and experiences in the field of Cardiology. The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of Cardiology as they relate to the clinical care of patients. Students will be exposed to cardiology medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 764 Women's Health (2) This course is designed to provide students with an exposure and experiences in the field of obstetrics and gynecology (OB/GYN). The goal is for students to gain exposure to the approach to patients in this specialty and identify the fundamental principles of Women's Health as they relate to the clinical care of women. Students will be exposed to medical care across the life-span. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 765 Elective Rotation (2) This course is designed to provide students with an exposure and experiences in the medical field of their choice. The goal is for students to gain exposure to the approach to patients in a specialty that is not required and identify the fundamental principles of this specialty as they relate to the clinical care of patients. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 766 Elective 2 (2) The goal is for students to gain exposure to the approach to patients in a specialty that is not required and identify the fundamental principles of this specialty as they relate to the clinical care of patients. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 767 Elective 3 (2) The goal is for students to gain exposure to the approach to patients in a specialty that is not required and identify the fundamental principles of this specialty as they relate to the clinical care of patients. With the guidance of the clinical preceptor, students will perform history and physical exams, obtain diagnostic testing and develop differential diagnosis/treatment plans. Students will learn to communicate effectively with medical providers, preceptor, patients and family members. Student may perform procedures at the discretion of the preceptor.

PA 770 Core Review 1 (1) This course is a three-part course series designed to provide students with broad based clinical knowledge that may not be found within the supervised clinical practice encounters (SCPEs), but is needed for successful clinical practice. It also serves to review material previously taught within the curriculum that is required for physician assistant practice. Finally, this course series serves to evaluate students on the PA Program competencies and prepare students for the Physician Assistant National Certifying Exam (PANCE).

PA 771 Core Review 2 (1) This course is a three-part course series designed to provide students with broad based clinical knowledge that may not be found within the supervised clinical practice encounters (SCPEs), but is needed for successful clinical practice. It also serves to review material previously taught within the curriculum that is required for physician assistant practice. Finally, this course series serves to evaluate students on the PA Program competencies and prepare students for the Physician Assistant National Certifying Exam (PANCE).

PA 772 Core Review 3 (1) This course is a three-part course series designed to provide students with broad based clinical knowledge that may not be found within the supervised clinical practice encounters (SCPEs), but is needed for successful clinical practice. It also serves to review material previously taught within the curriculum that is required for physician assistant practice. Finally, this course series serves to evaluate students on the PA Program competencies and prepare students for the Physician Assistant National Certifying Exam (PANCE).

PA 773 Inter-professional Education Clinical Experience (2) This course is designed to provide students with an exposure and experiences in a profession other than their own to gain exposures to another member of the medical team. The goal is for students to experience the approach to patients from a different health team perspective and how care received from this health

care team member complements the traditional care a PA would provide.

PA 774 Summative Experience - Capstone (2) This course is designed to assess the student's integration of the PA Program's curriculum, competencies and preparedness to sit for the National Boards and enter clinical practice. Students must show a minimum entry level competency in primary care medicine knowledge, primary medicine clinical skills, and professionalism to pass this course. This course is an accreditation requirement for program endorsement of students, and must be passed to be eligible to sit for the PANCE exam.

### **Psychology (PSYC)**

PSYC 526 Advanced Child and Adolescent Development (3) Examines developmental stages from conception through adolescence, giving special emphasis to physical, cognitive, social, and emotional aspects related to maturational as well as learning processes. This course builds upon Psychology 226 (Child and Adolescent Psychology) but delves further into each topic so that each student gains a greater appreciation for and understanding of the concepts and processes involved in the development of children. Prerequisites: Psychology 226 or admission into a master's program or permission of the instructor. Summer, offered periodically.

### **Public Health (PH)**

PH 501 (3) This course covers applications of epidemiologic methods and procedures and the study of the distribution and determinants of health and diseases, morbidity, injuries, and mortality in populations. Epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries are discussed. Other topics include quantitative aspects of epidemiology, for example, data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. Spring.

PH 509 Environmental Health (3) Environmental health is concerned with the biological chemical, and physical influences on human health. The course will examine topics such as environmental health determinants, general mechanisms of toxicity, genetic, physiologic, and psychosocial factors related to environmental health, environmental risk assessment methods, federal and state regulatory guidelines and programs, environmental justice, risk communication, and prevention and management of environmental hazards. Fall.

PH 515 Health Behavior (3) Health Behavior is an overview of the health behaviors contributing most dramatically to increased morbidity and mortality in the United States. The course emphasizes public health interventions, theoretical models, and strategies to promote health behaviors and discourage unhealthy behaviors. The course examines consequences, patterns, risk factors, and change/interventions for each behavior or problem. Behaviors are examined from multiple perspectives (e.g. individual, social, environmental) and with a systems perspective in mind, illuminating the interconnecting influences on behaviors. Health behavior and behavior change interventions are presented in the context of current research and theory. The course also examines the role of health disparities, public health policy, current debate, health behavior theory, and emerging research. Fall.

PH 525 Biostatistics (3) This course will cover biostatistical methods and applications related to public health. Topics will include descriptive statistics, probability theory, and a wide variety of inferential statistical techniques that can be used to make practical conclusions about empirical data. Learned statistical knowledge will be applied to understanding and designing research studies. Fall and Spring.

PH 530 Health Economics (3) The course is designed to introduce students to the field of Health Economics. The provision and production of health care have different characteristics and incentives from other consumer goods making health related markets a unique topic for study. Topics that will be examined include economic concepts, why health is different from other goods, aspects of the U.S. health care market, health care in other countries, health care reform, and economic evaluation techniques. Fall.

PH 535 Public Health Law & Ethics (3) The course is focused on the use of law and policy tools to promote access to healthy living conditions as an important determinant of population health and community well-being. Priorities and opportunities will be identified for public health law and policy interventions that seek to characterize, prevent, and ameliorate risks to population health. Legal powers and duties of the state will be discussed. We will also discuss individual rights as limitations on the power of the state to act in furtherance of the common good. Through case studies and simulations on topics such as sexually transmitted infections, tobacco control, obesity, exposure to environmental hazards, and public health emergencies, students will engage in an experiential and problem-based study of law as a tool for promotion of population health, well-being, and equity. Fall.

PH 540 Strategic Management in Health Programs (3) The course is designed to provide students with the tools they need to take their place as leaders of public health or healthcare organizations. The course introduces concepts of governance, strategic thinking, systems thinking, and implementation science. Students will learn the principle tenets of governance, strategy, and financial leadership. Spring.

PH 542 Health Systems and Policy (3) The aim of this course is to provide students with an overview of the U.S. health care system,

its components, and the policy challenges created by its organization. The course will focus on the major health policy institutions and important issues that cut across institutions, including private insurers and the federal/state financing programs. Attention will also be given to disparities in access to care, the role of pharmaceuticals in health care and the pricing and regulation of the pharmaceutical industry, the quality of care, the challenges of long-term care, and the aging of the population, and the drivers of cost growth. Spring.

PH 543 Population-Based Health (3) This course presents selected information, concepts, and methods from the field of public health. Topics concerning the history, organization, financing, and services of the public health system are discussed. All topics are presented from a population-based perspective. Summer.

PH 547 Survey Research Methods (3) The course provides an introduction to population surveys typical in descriptive and analytic epidemiologic research. The course has a strong emphasis on telephone questionnaire methods, but also includes other data collection modes and their relative advantages and disadvantages. Survey sampling, survey planning and data collection, computer interviewing and data management techniques for research surveys are emphasized. The course includes generalized methods and didactic materials as well as case studies. Spring.

PH 580 Programs, Problems, & Policies in Public Health (3) This course examines the myriad of programs and policies in public health via a developmental approach to learning about health problems. The course will cover a variety of topics, including state programs and policies, maternal and infant health, program planning, research, monitoring, and advocacy. Spring.

PH 590 Integrative Experience (3) This class serves as the capstone course for public health students. It provides an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to synthesize, integrate, and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience. Spring.

PH 598 Public Health Internship (3) A comprehensive and integrated application of the curriculum required by the MPH program which allows students to demonstrate professional competency in public health within a practice setting. The internship is an integral part of the MPH curriculum. It is intended to broaden the student's public health perspectives and provide experience in applying the theory and content learned in didactic courses in public health practice. It is therefore expected that through the internship experience the student will have the opportunity to interact with public health professionals and participate in activities that constitute public health. It is further expected that the student will be exposed to various paradigms and ways to solve public health problems, with experiences that reinforce communication principles, use of relevant information technology, sensitivity to diversity and cultural issues, and enhance a student's leadership, program planning, and systems thinking skills. Fall, Spring and Summer.

### **Public Service Administration (PSA)**

Course credits apply only to the PSA program.

Enrollment is limited to students admitted to the public service administration master's degree program.

PSA 505 Public Service Leadership (3) Leadership that grows from shared vision, teamwork, and communication is essential for success in public service. Focuses on the requisite knowledge, skills, and dispositions for effective leadership. Students learn leadership theories and principles and assess their own leadership styles for a practical understanding of application of concepts.

PSA 506 Ethics and Jurisprudence (3) Emphasizes legal and ethical processes and their application to public service organizations, administrators, staff, and employees. Includes ethical dimensions of the decision making process and current ethical issues in public service.

PSA 507 Applied Research and Program Evaluation (3) Examines research principles and methods as they contribute to organizations committed to public service. Provides experience in developing a research proposal and formal critique of research literature.

PSA 508 Social Justice and Diversity (3) Diversity dynamics will be considered from the individual group, and organization viewpoints. Focuses on attitudes regarding diversity as well as skills for promoting and increasing diversity and working with diverse populations.

PSA 512 Organizational Behavior (3) Uses various organizational, managerial, and behavioral theories, concepts, and principles in analyzing, diagnosing, predicting, and guiding human behavior within organizations committed to public service. Emphasizes motivation, leadership, change, communication, personality, group dynamics, and organization development.

PSA 514 Management Theory and Human Resources (3) The study of management theory and practice as applied by managers of public service based organizations. Emphasizes analysis of the manager's role, interactions with people, the organization, and the environment. Special emphasis on human resources issues.

PSA 516 Information Systems (3) Provides an understanding of the concepts and applications of information systems used in the

management of organizations committed to public service.

PSA 520 Public Service Marketing (3) Integrates long-range goal planning with dimensions of marketing for organizations committed to public service. Concepts, techniques, and theories used in the planning and management of marketing in the public service organizations.

PSA 528 Public Service Finance (3) Focuses on the acquisition, allocation, and management control of financial resources within organizations. Includes cost analysis, financial position analysis and strategies, reimbursement, pricing policies, budgeting, capital expenditure, analysis of financial reports, and informal and external controls.

PSA 543 Grant Writing (3) Provides information targeted to increase administrator effectiveness in identifying external funding sources, developing needs into coherent proposal ideas, and writing successful proposals. Combines instruction and practical exercises to take participants through grant proposal preparation.

PSA 567 Measurement and Statistics (3) Focuses on the analysis of data common to development of business plans or grant proposals. Includes data description, elements of probability, distribution of random variables, estimation and confidence intervals, binomial and normal distributions, hypothesis testing, contingency tables, regression analysis, and use of SPSS program to analyze data.

PSA 590 Decision Making (3) Examines decision making in public service administration by extensive use of case studies. Material from other PSA courses is integrated into the study of decisions facing all types of organizations committed to public service.

### **Writing (WRTG)**

WRTG 500 Graduate Writing Workshop (3) Writing 500 is a graduate-level lecture and workshop course that provides students an opportunity to write short stories, poems, essays, and/or plays with daily discussion and criticism in a small group. Through writing, revision, and discussion with notable visiting authors, editors, and publishers, students will improve their craft and gain a broader understanding and appreciation of their craft. Students in this course must be currently enrolled as a graduate student at an accredited university. An additional \$500 workshop fee applies. All majors welcome. Prerequisite: one course in creative writing or permission of instructor.



# Faculty, Senior Administrators, Trustees

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## Faculty

Randy L. Abbott (1988) *Head Reference Librarian and Associate Professor*, MA, University of Southern Florida  
Katie Aldred (2016) *Assistant Professor of Biology*, PhD, Vanderbilt University  
Yasser Alhenawi (2010) *Assistant Professor of Finance*, PhD, University of New Orleans  
James H. Allen (2006) *Associate Professor of Civil Engineering*, PhD, University of Cincinnati  
Patricia Andueza (2011) *Assistant Professor of Spanish*, PhD, Ohio State University  
Atefeh Yazdanparast Ardestani (2012) *Assistant Professor of Marketing*, PhD, University of North Texas  
Joe Atkinson (2015) *Digital Media Specialist in Residence*, MA, University of Evansville  
Margaret E. Atwater-Singer (1997) *Collection Management Librarian and Associate Professor*, MLS, Rutgers University  
Mohammad K. Azarian (1985) *Professor of Mathematics*, PhD, St. Louis University  
Suzanne L. Bailey (1993) *Associate Professor of Nursing*, MSN, Indiana University  
Robert Baines (2014) *Assistant Professor of English*, PhD, Trinity College, Dublin  
Ann L. Baker (1991) *Assistant Professor of Spanish*, MA, University of Evansville  
Severine Bates (2016) *Assistant Professor of French*, PhD, University of Minnesota  
Omer Bayar (2010) *Assistant Professor of Economics*, PhD, University of Tennessee  
Anthony F. Beavers (1991) *Professor of Philosophy*, PhD, Marquette University  
Lora A. Becker (1999) *Associate Professor of Psychology*, PhD, State University of New York  
Davies E. Bellamy (1991) *Associate Professor of Education*, PhD, Indiana State University  
James J. Berry (1978) *Associate Professor of Anthropology*, PhD, Indiana University  
Dick K. Blandford (1975) *Associate Professor of Electrical Engineering*, PhD, University of Illinois  
Paul B. Bone (2004) *Associate Professor of English*, MFA, University of Arkansas  
William E. Bootz (1978) *Professor of Music*, DMus, Indiana University  
Stephen Boulmetis (2010) *Associate Professor of Theatre (Lighting Design)*, MFA, Boston University – School for the Arts  
Jeffrey J. Braun (1984) *Professor of Physics*, PhD, Oklahoma State University  
Diane R. Brewer (2001) *Professor of Theatre*, PhD, University of California  
Gifford C. Brown (1979) *Professor of Physics*, PhD, Cornell University  
Renato Butturi (1989) *Assistant Professor of Music*, MM, Washington University  
Daniel Byrne (2005) *Associate Professor of History*, PhD, Georgetown University  
Larry W. Caldwell (1988) *Professor of English*, PhD, University of Nebraska  
Chun-Ming Chen (2016) *Assistant Professor of Music*, CMA, University of Iowa  
Tzurei Chen (2012) *Assistant Professor of Physical Therapy*, PhD candidate, University of Oregon  
Mark Cirino (2007) *Associate Professor of English*, PhD, Graduate Center of the City University of New York  
Donna Cobb (2016) *Assistant Professor of Nursing*, DNP, University of Southern Indiana  
Cindy Crowe (2014) *Instructor of Spanish*, MA, University of Evansville  
Shala Cunningham (2012) *Assistant Professor of Physical Therapy*, PhD, Ola Grimsby Institute  
Carol J. Dallinger (1972) *Oramay Cluthe Eades Distinguished Professor of Music*, MM, University of Illinois  
Erin J. Davis (1997) *Associate Professor of Mathematics*, PhD, Rensselaer Polytechnic Institute  
Mark S. Davis (1998) *Associate Professor of Biology*, PhD, University of Illinois  
Robert L. Dion (2001) *Associate Professor of Political Science*, PhD, Indiana University  
David J. Dwyer (1990) *Professor of Mathematics*, PhD, Purdue University  
Laura L. Dwyer (1999) *Associate Professor of Management*, PhD, Purdue University  
Jennie R. Ebeling (2002) *Associate Professor of Archaeology*, PhD, University of Arizona  
Dale D. Edwards (1994) *Professor of Biology*, PhD, Wake Forest University  
Joan E. Fedor-Bassemier (2008) *Simulation Coordinator and Assistant Professor of Nursing*, MS, University of Evansville  
John E. Felton (1979) *Assistant Professor of Psychology*, PhD, Hofstra University  
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Stephanie H. Frasier (2001) *Associate Professor of Art*, MFA, Indiana State University

Jared Fulcher (2014) *Assistant Professor of Mechanical Engineering*, PhD, University of Kentucky  
Daniel J. Gahan (1986) *Professor of History*, PhD, University of Kansas  
Sharon R. Gieselmann (2007) *Associate Professor of Education*, PhD, University of Louisville and Western Kentucky University  
Noah M. Gordon (2010) *Assistant Professor of Biology*, PhD, University of Missouri  
M. Kevin Gray (2005) *Associate Professor of Sociology and Criminal Justice*, PhD, Michigan State University  
Robert A. Griffith (2000) *Professor of English*, MFA, University of Arkansas  
Tiffany Griffith (2002) *Assistant Professor*, PhD, Southern Illinois University - Carbondale  
Mark E. Gruenwald (1989) *Professor of Mathematics*, PhD, Northern Illinois University  
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Sean Harper (2016) *Assistant Professor of Physician Assistant*, MPAS, Butler University  
Elizabeth A. Hennon Peters (2005) *Associate Professor of Psychology*, PhD, Temple University  
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Kristina L. Hochwender (2006) *Associate Professor of English*, PhD, Washington University  
Christina L. Howe (2009) *Associate Professor of Electrical Engineering*, MS, Vanderbilt University  
Bethany Huebner (2014) *Assistant Professor of Physical Therapy*, DPT, Indiana University, Indianapolis  
Deborah J. Hwang (1995) *Associate Professor of Computer Science*, PhD, Massachusetts Institute of Technology  
George Iber (2015) *Associate Professor of Education*, PhD, University of Iowa  
Su Jin Jeong (2015) *Assistant Professor of Public Health*, DPH, University of Alabama  
Benjamin Johnson (2010) *Visiting Assistant Professor of Accounting*, DBA candidate, Anderson University  
Derek Jones (2012) *Assistant Professor of Philosophy*, PhD, Indiana University  
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John M. Jordan (2000) *Assistant Professor of Music*, PhD, Southwestern Baptist Theological Seminary  
Thomas J. Josenhans (2005) *Associate Professor of Music*, DMA, State University of New York  
Alan E. Kaiser (2001) *Professor of Archaeology*, PhD, Boston University  
Arlen D. Kaufman (1996) *Professor of Chemistry*, PhD, Purdue University  
Alanna Keenan (2013) *Assistant Professor of Music*, DMA, Louisiana State University  
Mary P. Kessler (1991) *Associate Professor of Physical Therapy*, MHS, University of Indianapolis  
Walayet A. Khan (1989) *Professor of Finance*, PhD, University of Arkansas  
Kyle B. Kiesel (2000) *Professor of Physical Therapy*, PhD, University of Kentucky  
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S. Mark Kopta (1985) *Professor of Psychology*, PhD, Northwestern University  
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John R. Lakey (1973) *Professor of Psychology*, PhD, University of Texas  
Jerrilee LaMar (2007) *Associate Professor of Nursing*, PhD, Indiana State University  
Andrew J. Lampkins (2013) *Associate Professor Physician Assistant*, PhD, University of Florida, PharmD, Butler University  
R. Scott Lank (1987) *Professor of Theatre*, MFA, University of Nebraska  
Ralph M. Larmann (2000) *Professor of Art*, MFA, James Madison University  
John K. Layer (2007) *Associate Professor of Mechanical Engineering*, PhD, University of Louisville  
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Mary M. Lombardo-Graves (2013) *Assistant Professor of Education*, EdD., Northern Illinois University  
Mohsen Lotfalian (1982) *Professor of Electrical Engineering*, PhD, Michigan State University  
Jessica Lofton (2015) *Assistant Professor of Mechanical Engineering*, PhD, University of Illinois-Urbana  
William F. Loudon (1994) *University Librarian and Associate Professor*, MLS, University of Pittsburgh  
John David Lutz (1965) *Professor of Theatre*, MFA, University of New Orleans  
W. Bryan Lynch (1994) *Professor of Chemistry*, PhD, University of Pittsburgh  
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James L. MacLeod (1994) *Professor of History*, PhD, New College, University of Edinburgh  
Dennis P. Malfatti (2007) *Associate Professor of Music and Director of Choral Activities*, PhD, Louisiana State University  
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 Amy E. McBride (1998) *Assistant Professor of Education*, PhD, Indiana State University  
 Eric McCluskey (2014) *Assistant Professor of Music*, DM, Jacobs School of Music, Indiana University, Bloomington  
 Ian McDonald (2014) *Instructor of First-Year Seminars*, MA, Austin State University  
 Joni T. McFelea (2008) *Associate Professor of Physical Therapy*, PhD, Old Dominion University  
 Margaret E. McMullan (1990) *Professor of English*, MFA, University of Arkansas  
 Charles D. Meacham Jr. (1998) *Professor of Theatre and Technical Director*, MFA, University of Illinois, Urbana-Champaign  
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 Robert F. Morse (1998) *Professor of Computer Science*, PhD, State University of New York  
 Rania Mousa (2010) *Assistant Professor of Accounting*, PhD, University of Birmingham, UK  
 Katie Mullins (2015) *Assistant Professor of Creative Writing*, MFA, Spalding University  
 Steven A. Mussett (1987) *Catalog Librarian and Professor*, MLS, Indiana University  
 Leanne H. Nayden (2002) *Lecturer*, MS, University of Evansville  
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 Annette P. Parks (1996) *Professor of History*, PhD, Emory University  
 Heather Parola (2015) *Assistant Professor of Management*, PhD candidate  
 Payal Patel-Dovlatbadi (2011) *Assistant Professor of Public Health*, DrPH, University of Alabama at Birmingham  
 Lesley C. Pleasant (2007) *Associate Professor of German*, PhD, University of Virginia  
 Mari Plikuhn (2010) *Assistant Professor of Sociology*, PhD, Purdue University  
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 Mark Randall (1999) *Assistant Professor of Electrical Engineering*, Master of Science in Computer Science and Engineering, University of Evansville  
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 Angela Reisetter (2012) *Assistant Professor of Physics*, PhD, University of Minnesota  
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 Anthony M. Richardson (2000) *Associate Professor of Electrical Engineering*, PhD, Duke University  
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 Donald B. Roberts (2002) *Associate Professor of Computer Science*, PhD, University of Illinois  
 Donald W. Rodd (1995) *Professor of Exercise and Physical Therapy*, PhD, Pennsylvania State University  
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 Robert Shelby (2016) *Assistant Professor of Sociology*, ABD, University of Louisville  
 Mark L. Shifflet (1998) *Professor of Mass Communication*, PhD, Rutgers University  
 Michael C. Slade (2013) *Assistant Professor of Chemistry*, PhD, University of North Carolina at Chapel Hill  
 Lori Smith (2010) *Instructor of Communication*, MA, Western Kentucky University  
 John D. Stamm (2005) *Associate Professor of Physics*, PhD, University of Minnesota  
 Joyce C. Stamm (2005) *Associate Professor of Biology*, PhD, University of Minnesota  
 Douglas W. Stamps (1995) *Professor of Mechanical Engineering*, PhD, University of Michigan  
 Valerie A. Stein (2002) *Associate Professor of Religion*, ThD, Harvard Divinity School

Kenneth R. Steinsultz (2008) *Associate Professor of Music and Director of Bands*, DMA, University of Illinois at Urbana-Champaign

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William B. Stroube (1998) *Professor of Health Services Administration*, PhD, University of Kentucky

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Wendy B. Thomas (2004) *Assistant Professor of First-Year Seminar*, MA, University of Oregon and Bryn Mawr College

Todsapon Thananathanachon (2011) *Assistant Professor of Chemistry*, PhD, Washington University

Jeffrey W. Tilly (1996) *Assistant Professor of Exercise and Athletic Training*, MS, University of Florida

Garnet W. Ungar (1995) *Associate Professor of Music and Piano*, DMA, University of Houston

David J. Unger (2001) *Professor of Mechanical and Civil Engineering*, PhD, University of Illinois

Mark L. Valenzuela (1999) *Associate Professor of Civil Engineering*, PhD, Cornell University

Robb Waltner (2016) *University Librarian with Faculty Rank of Associate Professor*, MA, University of South Florida

Tamara L. Wandel (2006) *Associate Professor of Communication*, PhD, Argosy University

Christia S. Ward (2000) *Associate Professor of Theatre*, MFA, Southern Methodist University

James P. Ware (1995) *Professor of Religion*, PhD, Yale University

Shane A. White (2008) *Instruction Librarian with Faculty Rank of Associate Professor*, MLS, University of North Carolina at Greensboro

Danielle N. Williams (2000) *Periodicals Librarian and Assistant Professor*, MA, University of Missouri

Krista Williams (2015) *Assistant Professor of French*, PhD, Indiana University

Gregory S. Wilson (1999) *Professor of Exercise*, PED, Indiana University

Angela C. Wooton (2006) *Assistant Professor of Nursing*, MSN, University of Evansville

Mary Ellen Wylie (1993) *Professor of Music*, PhD, University of Kansas

Pencheng Xiao (2015) *Assistant Professor of Mathematics*, PhD, University of Texas

Yuri Yoshida (2012) *Assistant Professor of Physical Therapy*, PhD, University of Delaware

Jie Zhang (2010) *Assistant Professor of Communication*, PhD, University of Texas, Austin

Timothy J. Zifer (1996) *Professor of Music and Trumpet*, DMA, Louisiana State University

## **President**

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## **President's Cabinet**

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Gerald Seaman (2014) *Principal of Harlaxton College*, PhD

Mark D. Spencer (2015) *Director of Athletics*, MS

Brian J. Swenty (1993) *Interim Dean of the College of Engineering and Computer Science*, PhD, PE

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Abigail L. Werling (2008) *Vice President of Development and Alumni/Parent Relations*, MPSA

LaNeeça R. Williams (2013) *Diversity and Equity Officer*, MS

## Harlaxton College Faculty and Administration

Gerald Seaman (2014) *Principal*, PhD

Nicola Boyle (2017) *Teaching Fellow in British Studies*, MA

Edward Bujak (2001) *Senior Lecturer in British Studies and History*, PhD

David Green (2007) *Senior Lecturer and Chair of British Studies*, PhD

Amber Pouliot (2015) *Teaching Fellow in British Studies and History*, PhD

Cliff Pettifor (1982) *Lecturer in Politics*, PhD

Ian Welsh (1992) *Vice Principal for Business and Technology and Lecturer in Marketing*, MBA

Tim Williams (2013) *Director of Music*, PhD

## Emeriti Faculty

Arthur B. Aarstad (1958) *Professor Emeritus of Political Science*

Jonette L. Aarstad (1975) *Lecturer/Assistant Librarian Emerita*

JoAnn S. Alexander (1975) *Lecturer/Assistant Librarian Emerita*

Helen M. Arensman (1967) *Associate Professor Emerita of Nursing*

Ray W. Arensman (1958) *Professor Emeritus of Economics*

William E. Baer (1958) *Professor Emeritus of Creative Writing*

Kathryn R. Bartelt (1958) *Associate Professor Emerita of Acquisition and Collection Development Librarian* Jean Beckman (1978) *Professor Emerita of Chemistry*

Rita K. Behnke (1968) *Professor Emerita of Nursing*

Gene W. Bennett (1963) *Professor Emeritus of Mathematics*

Allen B. Bess (1963) *Professor Emeritus of Accounting*

Gale M. Blalock (1958) *Professor Emeritus of Economics*

E. Hope Bock (1983) *Professor Emerita of Communication*

William E. Bootz (1958) *Professor Emeritus of Music*

James A. Brenneman (1970) *Professor Emeritus of Biology*

Arthur Brown (1995) *Professor Emeritus of English*

Gifford C. Brown (1958) *Professor Emeritus of Physics*

Rexel E. Brown (1968) *Professor Emeritus of Education*

James A. Byers (1965) *Associate Professor Emeritus of Health and Physical Education*

Michael J. Carson (1969) *Professor Emeritus of English*

Robert E. Ciscell (1958) *Professor Emeritus of Education*

Galen W. Clough (1963) *Professor Emeritus of English*

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Paul Dove (1968) *Professor Emeritus of Music*

Phillip C. Ensley (1968) *Professor Emeritus of History*

Ronald M. Faust (1964) *Professor of Management*

Joseph P. Flauto (1978) *Professor of Theatre*

Donald M. Freeman (1978) *Professor Emeritus of Political Science*

Paul E. Funk (1968) *Professor Emeritus of Mechanical Engineering*

Cheryl A. Griffith (1976) *Professor Emerita of Physical Therapy*

William J. Hemminger (1990) *Professor Emeritus of English*

Deborah A. Howard (1958) *Professor Emerita of Law*

Charles W. Johnson (1965) *Associate Professor Emeritus of Psychology*

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Joan T. Kiely (1970) *Associate Professor Emerita of Nursing*

Philip A. Kinsey (1956) *Professor Emeritus of Chemistry*

Mary K. Kittinger (1970) *Professor Emeritus of Nursing*

J. Robert Knott (1968) *Professor Emeritus of Mathematics*

Sylvia S. Kolb (1972) *Assistant Professor Emerita of Education*  
 Edwin V. Lacy (1967) *Oramay Cluthe Eades Professor of Music*  
 Bung-Chung Lee (1960) *Professor Emeritus of Mechanical Engineering*  
 Walter Lewis *Assistant Professor of Education, Education*  
 William F. Loudon (1958) *Associate Professor Emeritus, University Librarian*  
 James L. Lott (1977) *Professor Emeritus of Civil Engineering*  
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 Suzanne "Tink" Martin (1958) *Professor Emerita of Physical Therapy*  
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 Patti E. McCrory (1989) *Professor of Emerita of Theatre, MA, University of California*  
 Christine McKeag (1984) *Assistant Professor Emerita of Accounting*  
 Margaret E. McMullan (1958) *Professor Emerita of English*  
 Darrell G. Megli (1962) *Professor Emeritus of Physics*  
 Leslie Miley Jr. (1961) *Professor Emeritus of Art*  
 Henry L. Miner (1971) *Associate Professor of Foreign Language / German*  
 Charlotte N. Nicksch (1980) *Assistant Professor of Nursing*  
 Rita M. Nugent (1973) *Assistant Professor of Exercise and Sport Studies*  
 Charles R. O'Neal (1981) *Professor Emeritus of Marketing*  
 John M. Parr (1988) *Professor Emeritus of Electrical Engineering*  
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Visitors are welcome at the University of Evansville. The Office of Admission is located in Room 104, Olmsted Administration Hall. Advance appointments are recommended for campus visits. For appointments, call 812-488-2468 or 800-423-8633, ext. 2468.

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# Index

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Academic Advising, 70  
Academic Calendar, 1  
Academic Load, 71  
Academic Standards, 80  
Access to Records, 49  
Accounting, 166  
Accreditation, 4  
Additional Degree, Requirements for, 45  
Additional Major, Requirements for, 45  
Administrators, 369  
Advising, 59  
Adult Degree Programs, 194  
Anthropology, 108  
Archaeology, 73  
Art, 73  
Art History, 73  
Athletic Training, 156  
Attendance, 60  
Assessment of Academic Programs, 47  
Associate's Degrees, 143  
Auditing Courses, 62

Biochemistry, 87  
Biology, 79  
Biomedical Option, 179  
Business Administration, 136

Cancellation of Registration, 61  
Career Development, 29  
Chemistry, 85  
Civil Engineering, 184  
Classical Studies, 87  
Classical Languages, 99  
Classification of Students, 61  
Clinical Laboratory Science, 158  
Cognitive Science, 89  
Commencement, 71  
Communication, 91  
Computer Engineering, 179  
Computer Science, 172  
Computers, Personal, 175  
Co-op Program, 87  
Counseling Services, 25  
Courses, Repeating, 66  
Credit from Other Institutions and by Examination, 63  
Criminal Justice, 106  
Cultural Engagement and International Services, 32  
Cultural Events, 32

Degree Programs, 2  
Degree Requirements, 68

Dining Facilities, 31  
Disability Support Services, 27  
Discussion Groups, 56  
Diversity Initiatives, 31  
Doctor of Physical Therapy, 169

Economics, 137  
Education, 47  
Electrical Engineering, 172  
Emeriti Faculty, 375  
Engineering Management, 176  
English, 94  
English Language, 198  
Environmental Studies, 95  
Exercise Science, 159  
Exercise and Sport Science, 254

Faculty, 369  
Financial Aid, 7  
Foreign Languages and Cultures, 44  
Foreign Language Proficiency Requirement, 44  
Freshman Applicants, 5

Gender and Women's Studies, 262  
General Education Program, 46  
Gerontology, 108  
Global Leadership, 22  
Grades, 65  
Graduation, 5

Harlaxton College, 54  
Health Center, 30  
Health Education, 27  
Health Services Administration, 160  
History, 102  
History of the University, 2  
Honor Code, 58  
Honors Program, 48

Integrated Business with Arts and  
Sciences Education – iBACE, 72  
Individualized Study, 196  
Independent Study, 62  
Intensive English Program, 198  
Interdisciplinary Studies, 103  
International Students, 45  
International Studies, 105

Jazz Studies, 121

Latin American Studies, 104  
Legal Studies, 111  
Libraries, 36

Major Discovery Program, 55

Mathematics, 112  
Mechanical Engineering, 186  
Minor, Requirements for, 46  
Mission of the University, 25  
Music, 116  
Music Performing Ensembles, 121

Neuroscience, 122  
Nursing, 165

Organizational Leadership, 194  
Organizations, Student, 32  
Orientation, 26

Payment Policy, 24  
Philosophy, 123  
Physical Therapy, 168  
Physics, 124  
Political Science, 107  
Preprofessional Programs, 125  
    Pre-dentistry, 125  
    Pre-law, 126  
    Pre-medicine, 126  
    Pre-optometry, 126  
    Pre-pharmacy, 127  
    Pre-ministry, 127  
    Preprofessional Clinical Psychology, 128  
    Preprofessional Social Work, 128  
    Pre-veterinary, 128  
President's Cabinet, 374  
Progress Toward Degree, 11  
Psychology, 128  
Public Health 162  
Public Service Administration, 336

Recreation and Athletics, 32  
Refund Policy, 19  
Registration, 61  
Religion, 130  
Religious Life, 31  
Residence Life, 13  
Residency Requirement, 15  
Russian Studies, 99

Satisfactory Academic Progress, 12  
Social Work, 128  
Sociology, 108  
Sport Psychology, 164  
Sport Communication, 156  
Sport Management, 165  
Study Abroad, 15  
Summer School Registration, 63  
Suzuki Violin Pedagogy, 121

Teacher Education, 145

Theatre, 131  
Transfer Students, 174  
Trustees, 369  
Tuition and Fees, 18

UExperience, 32  
Undeclared Majors, 55  
Undergraduate Research, 125

Veterans Benefits, 11  
Visual Communication Design, 78  
Volunteer Programs, 30

Withdrawal, 23  
Women's Studies, 101  
Writing Proficiency Requirement, 43