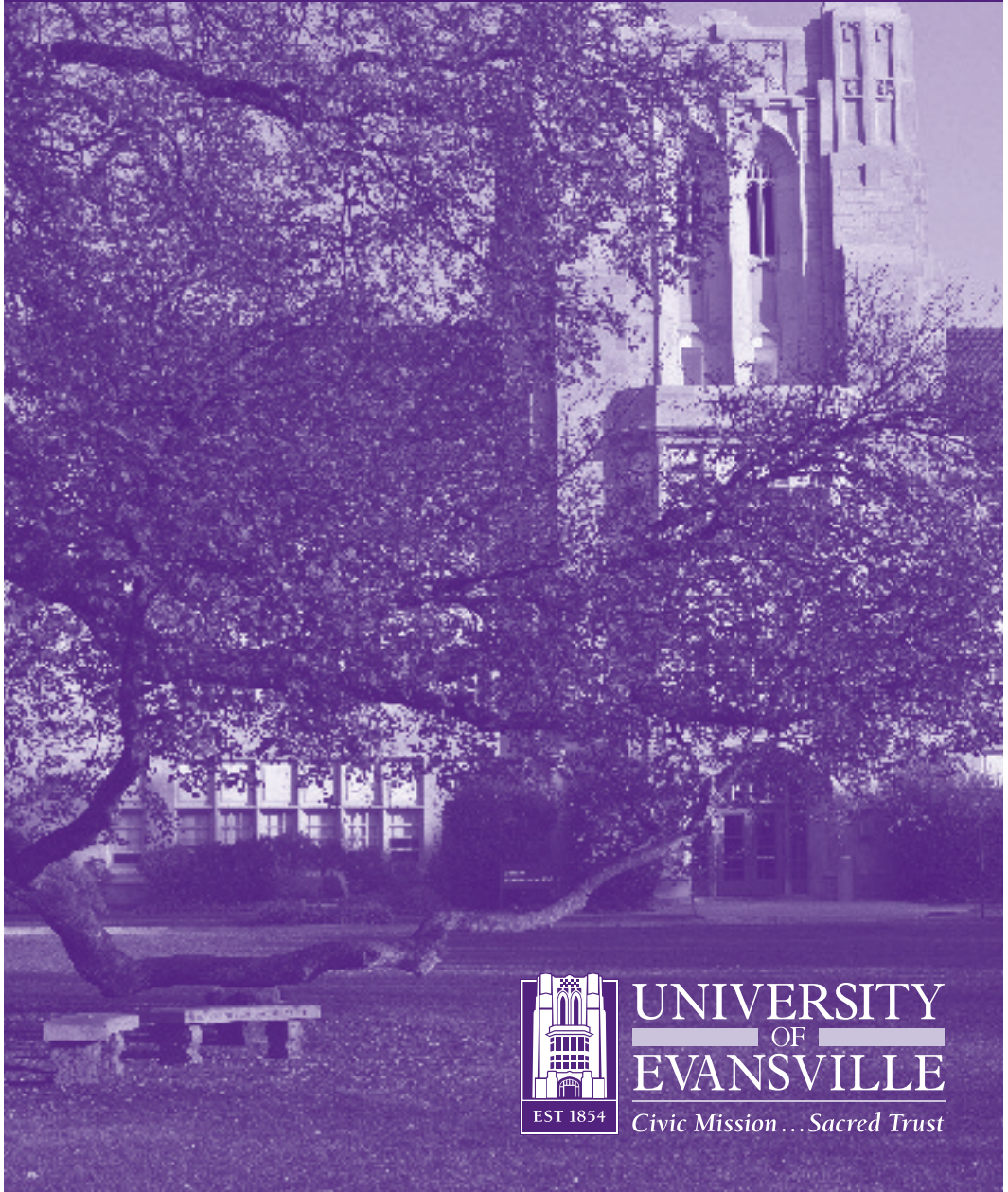




# Catalog

2011-2013



EST 1854

UNIVERSITY  
OF  
EVANSVILLE

*Civic Mission... Sacred Trust*

# 2011-2013 Undergraduate and Graduate Catalog

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*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 creating a binding contract between the student and the school.*

*The University of Evansville is an independent, United Methodist Church-affiliated university which operates, in all aspects pertaining to students, faculty, administration, and staff, under a nondiscriminatory policy with regard to race, color, creed or religion, national origin, gender, sexual orientation, age, or disability.*

# Academic Calendar

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## 2011-2012

### Fall Semester 2011

Classes Begin . . . . . Wednesday, August 24  
Last Day to Register or  
Add Courses . . . . . Tuesday, August 30  
Last Day to Drop a Course  
without a W . . . . . Tuesday, August 30  
Fall Break Begins . . . . . Saturday, October 8  
Classes Resume . . . . . Wednesday, October 12  
Last Day to Drop a Course  
with a W . . . . . Friday, November 11  
Thanksgiving  
Break Begins . . . . . Wednesday, November 23  
Classes Resume . . . . . Monday, November 28  
Reading/Study Day . . . . . Wednesday, December 7  
Final Examinations Begin . . . . Thursday, December 8  
Final Examinations End . . . . Wednesday, December 14  
Commencement . . . . . Wednesday, December 14

### Spring Semester 2012

Classes Begin . . . . . Monday, January 9  
Last Day to Register or  
Add Courses . . . . . Friday, January 13  
Last Day to Drop a Course  
without a W . . . . . Friday, January 13  
Martin Luther King Jr. Day  
Celebration (no classes) . . . . . Monday, January 16  
Spring Break Begins . . . . . Saturday, March 3  
Classes Resume . . . . . Monday, March 12  
Last Day to Drop a Course  
with a W . . . . . Friday, March 30  
Easter Break Begins . . . . . Friday, April 6  
Classes Resume . . . . . Monday, April 9  
Reading/Study Day . . . . . Wednesday, April 25  
Final Examinations Begin . . . . Thursday, April 26  
Final Examinations End . . . . . Wednesday, May 2  
Commencement . . . . . Saturday, May 5

## 2012-2013

### Fall Semester 2012

Classes Begin . . . . . Wednesday, August 22  
Last Day to Register or  
Add Courses . . . . . Tuesday, August 28  
Last Day to Drop a Course  
without a W . . . . . Tuesday, August 28  
Fall Break Begins . . . . . Saturday, October 6  
Classes Resume . . . . . Wednesday, October 10  
Last Day to Drop a Course  
with a W . . . . . Friday, November 9  
Thanksgiving  
Break Begins . . . . . Wednesday, November 21  
Classes Resume . . . . . Monday, November 26  
Reading/Study Day . . . . . Wednesday, December 5  
Final Examinations Begin . . . . Thursday, December 6  
Final Examinations End . . . . Wednesday, December 12  
Commencement . . . . . Wednesday, December 12

### Spring Semester 2013

Classes Begin . . . . . Monday, January 7  
Last Day to Register or  
Add Courses . . . . . Friday, January 11  
Last Day to Drop a Course  
without a W . . . . . Friday, January 11  
Martin Luther King Jr. Day  
Celebration . . . . . Monday, January 21  
Spring Break Begins . . . . . Saturday, March 2  
Classes Resume . . . . . Monday, March 11  
Last Day to Drop a Course  
with a W . . . . . Thursday, March 28  
Easter Break Begins . . . . . Friday, March 29  
Classes Resume . . . . . Monday, April 1  
Reading/Study Day . . . . . Wednesday, April 24  
Final Examinations Begin . . . . Thursday, April 25  
Final Examinations End . . . . . Wednesday, May 1  
Commencement . . . . . Saturday, May 4

# 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 campus 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 45 states and 46 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

Students will:

- Acquire a broad foundation in the liberal arts and sciences through the General Education Program together with a depth of knowledge in one or more disciplines of their choice
- Exhibit personal growth through improved critical self-awareness and personal creativity
- Master communication, organizational, and critical-thinking skills
- 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 in their communities through involvement in study, internship, and extracurricular activities
- Develop skills and competencies to be productive team members and leaders
- Understand the ethical significance of their personal and professional decisions
- Seek and use available resources, including technology, to answer questions and solve problems
- Be committed to lifelong learning

## Accreditation

The University of Evansville is accredited as a degree granting institution by the Higher Learning Commission, is a member of the North Central Association of Colleges and Schools, and 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, National League for Nursing Accrediting Commission, National Council for Accreditation of Teacher Education, Indiana Department of Education, Commission on Accreditation of Athletic Training Education, and the Commission on Accreditation in Physical Therapy Education. The civil engineering program, computer engineering program, electrical engineering program, and mechanical engineering program are accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700. The computer science program is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700.

For information about the University of Evansville's institutional accreditation by the Higher Learning Commission of the North Central Association of Colleges and Schools, contact the North Central Association of Colleges and Schools at [www.ncahlc.org](http://www.ncahlc.org) or 230 South LaSalle Street, Site 7-500, Chicago, Illinois, 60604; telephone 800-621-7440.

Approved by the American Association of University Women, National Strength and Conditioning Association, American College of Sports Medicine, 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 including four years of English, two social sciences, two lab sciences, Algebra I, Geometry, Algebra II, and 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 the required application fee, official high school transcript, SAT or ACT scores, and a counselor recommendation form. Early Action deadline is December 1, with notification by December 15. The Priority Application due date is February 1, with notification by February 15. Applications are accepted on a rolling basis after February 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 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. Transfer students should submit the following: a transfer application with the required application fee, official high school transcripts, official transcripts from all postsecondary schools attended, official SAT or ACT scores (if requested), and a completed Dean of Students Recom-

mentation form. This form should be from the student affairs office where the majority of classes were taken or the student's most recently attended university. Transfer students may submit an optional personal statement.

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

## Re-entry Admission

Students who have formerly been admitted to 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.

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, regardless if 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. Applicants

must score at least 500 on paper-based TOEFL or 61 on Internet-based TOEFL or 5.5 on the IELTS test. 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 U.S.A.  
001-812-488-1392 or 001-812-488-2146  
international@evansville.edu  
www.evansville.edu

## 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 which, 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** Students who 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** Students who are currently enrolled in high school or are homeschooled and wish to take courses at UE
- **College Graduate Students** Students who have a college degree but need additional undergraduate credit to earn special licensing or to prepare for graduate school
- **Personal Enrichment Students** Non-degree seeking students who 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:

*Center for Adult Education*  
University of Evansville  
1800 Lincoln Avenue  
Evansville, Indiana 47722  
812-488-2981  
800-423-8633, ext. 2981  
cce@evansville.edu  
www.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 which 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; therefore, sometime after the freshman year, part or all of a student's scholarship may be renamed in honor of the donor who sponsors it.

Although the University is eager to help students, it believes that the principal responsibility for financing an education lies with the student and his or her family. They 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 March 10 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). Only loans are available for less than full-time but more than half-time students.

A student must be admitted to UE to receive a financial aid award. Students and parents must reapply for need-based financial assistance every year by completing a FAFSA and listing UE as a recipient of the analysis. UE's code for the FAFSA is **001795**. The application period is between January 1 and March 10 for the following academic year. Incoming freshmen will be notified in March or April about action taken on their applications. Returning students will receive their award notification in late June.

## Types of Financial Aid

### University of Evansville Scholarships and Grants

These awards do not require repayment and range from \$100 to full tuition, fees, room, board, and books. They are awarded on the basis of financial need, or academic performance, or artistic and athletic ability. Students apply for UE academic scholarships on the Application for Admission and Scholarship and apply for grants by completing the FAFSA. Renewal for scholarships vary according to the year a student entered UE and the type of scholarship awarded. A 2.50 cumulative UE GPA is required for annual renewal of UE academic, art, music, and theatre scholarships; National Need for Nurses Scholarships; Toyota Scholars and American Corporate Scholars awards; and the UE Scouting Scholarship. National Merit finalists receiving either three-quarter or full tuition Academic Scholarships require a 3.35 UE GPA for annual renewal. Renewal of the UE Trustee or Dean's Scholarships requires a 3.35 annual UE GPA. Renewal of the Cultural Diversity Award, and Indiana

Academic Honors Award requires general satisfactory academic progress. Renewal of all UE grants requires general satisfactory academic progress. Additional information about renewal for specific UE merit-based scholarships may be found in the annually published Financial Aid Award Guide.

### Federal Pell Grant

The Federal Pell Grant is awarded on the basis of financial need. The maximum amount awarded varies from year to year (\$5,550 in 2010-11). Students may apply for this grant by filing the FAFSA.

### Federal Supplemental Educational Opportunity Grants (FSEOG)

FSEOG is a federal grant of limited funding that is awarded to a small number of students who have qualified for the Pell Grant with highest financial need. Awards range from \$100 to \$4,000 a year. No additional application other than the FAFSA is necessary.

### State Scholarships and Grants

Students who are residents of the state of Indiana are eligible to be considered for the following awards: Hoosier Scholarships, Higher Education Award, Freedom of Choice Award, and Twenty-first Century Scholars Award. The FAFSA must be received at the federal processor by March 10 annually for state grant consideration. The maximum amount awarded varies from year to year as state funds allow (\$7,056 in 2010-11 for HEA and FOC combined).

### Federal Direct Student Loans

Eligible students can borrow money through the Federal Direct Student Loan Program (Direct Loan). Students qualify for either the subsidized or the unsubsidized Direct Loan by filing the FAFSA. Eligibility is determined on an annual basis. The yearly maximums are \$5,500 for freshmen; \$6,500 for sophomores; and \$7,500 for juniors and seniors. A graduate student may borrow \$8,500 in the subsidized and unsubsidized Direct Loan program, with up to an additional \$12,000 available in unsubsidized eligibility as long as the student's program cost of attendance is under the combined \$20,500 total.

## Federal Perkins Loans and Federal Nursing Loans

The Federal Perkins Loan is a program that has limited funding and loans are available only to the neediest of students. Eligible students may borrow up to \$4,000 per year. The loans are interest-free while the student is in school and repayment is at a fixed rate of 5 percent beginning nine months after the student graduates or drops below half time. A third student loan is the Federal Nursing Loan. This loan program also has limited funding, and financial need is used in the awarding of these funds to nursing students. Maximum loan amounts are \$2,500 for the freshman and sophomore years and \$4,000 for juniors and seniors. The interest rate and repayment terms are the same as for the Federal Perkins Loan.

Additional information about these loans may be obtained by contacting the Office of Financial Aid.

## Federal Direct Parent Loans for Undergraduate Students

The Direct PLUS program allows creditworthy parents to borrow up to the cost of education minus student financial aid at low interest rates and long payback periods. Information about this loan will be forwarded to the student's family as part of his or her financial aid award packet each year. Completing the FAFSA is required to apply for this loan. Families must reapply each year for this loan by completing a loan request form.

## On-Campus Employment

There are approximately 420 jobs on campus that allow a student to work to earn money for educational expenses. Most jobs pay minimum wage. Students work an average of 7 hours a week and receive electronic payments totaling about \$1,500 for the year. Not all eligible students are awarded work because funds are limited.

## Outside Scholarships

Students are required to report the receipt of scholarships from organizations such as civic groups, schools, businesses, and churches. Unless otherwise directed by the donor, the scholarships are divided equally between the fall and spring semesters. If possible, outside scholarships will be added to other financial aid awarded for the academic year. Under no circumstances, however, is the sum of all financial aid allowed to exceed the cost of education.

## Veterans Benefits

Information on all veterans 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 V.A. 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 Stafford loans may be available for a fifth year based on need as demonstrated on the FAFSA. UE students enrolled at UE for the duration in the Doctor of Physical Therapy program may be eligible for institutional aid for 12 or 14 semesters (depending upon their track in the program).

## Satisfactory Academic Progress Policy

The Higher Education Act of 1965, as amended, requires students to maintain satisfactory progress toward their degree in order to receive financial aid. At the University of Evansville, these standards are established for students who are receiving or applying for financial aid from federal, state, or institutional sources in the form of grants, scholarships, work, or loan programs.

The satisfactory academic progress standards for financial aid apply to all students who want to establish or continue aid eligibility. These standards apply to a student's entire degree program including terms in which financial aid was not applied for or disbursed.

## Quantitative Standards for Undergraduate Full-Time Students

Students must earn two-thirds, or 67 percent, of all attempted credit hours with a passing grade. Every May, a student's total successfully completed hours will be divided by the hours attempted to determine whether the 67 percent requirement has been met.

**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. Grades of F, W, and I and classes



taken for audit do not result in completed credits. Credits earned by examination will be considered completed credits. Transfer credits that count toward the UE degree will be considered completed credits.

**Attempted credits** include hours earned in classes with letter grades, transfer credits that count toward the UE degree, and credits earned by examination. 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 next checked, or sooner at the student's request. Repeated courses where a passing grade was previously earned will count as attempted credits each time the course is taken.

### **Qualitative Standards for Undergraduate Full-Time Students**

The minimum cumulative grade point average (GPA) requirement is 1.60 or higher at the end of spring semester for freshmen who enter UE as full-time students each fall, global leadership students completing the first year of the program, and transfer students with less than 30 hours earned toward UE degree. A 2.0 or higher GPA at the end of spring semester is required for all other students.

### **Maximum Time Frame for Eligibility**

Full-time students in four-year degree programs receive state and UE financial aid for a maximum of eight semesters or until the first bachelor's degree is earned, whichever comes first. Federal Pell Grant and Federal Stafford and PLUS loans may be used for additional semesters beyond eight, but the period cannot exceed 150 percent of the time frame needed under normal circumstances to complete the degree. Students in the five-year health services administration master's program or the 12- or 14-semester physical therapy doctoral program will continue to receive UE scholarship assistance for the duration of their program, as long as all other eligibility requirements are maintained. Full-time students working toward an associate's degree must complete all course requirements within three years.

### **Quantitative and Qualitative Standards for Part-Time Students**

Part-time students also must make progress toward their degree. The requirement for students enrolling for less than 12 hours a semester is that 67 percent of credit hours attempted must be earned. At the point that 24

hours have been earned, a 1.60 cumulative GPA is required. Once a student has earned 48 hours, a 2.00 cumulative GPA is required.

### **Quantitative and Qualitative Standards for Graduate Students**

Graduate students must maintain a minimum cumulative grade point average of 2.00. Graduate students must complete at least 67 percent of all credit hours attempted each academic year. They may attempt up to 150 percent of the hours required for their graduate degree.

### **Aid Denial Due to Lack of Satisfactory Academic Progress**

Students who fail to meet the above standards will be ineligible for financial aid. Summer courses may be used, at the student's expense, to correct the previous two semesters' deficiencies. It is important to remember that grade deficiencies can only be corrected at UE, but credits to correct a deficiency in hours may be taken elsewhere and transferred to UE through arrangement with the Office of the Registrar.

### **Official Notification**

Letters are sent to students each May notifying them if they are ineligible for further financial aid until deficiencies are rectified. Students are responsible for maintaining satisfactory academic progress for aid renewal whether or not they receive the official notification letter. UE cannot be responsible for address changes that are not reported to us or for other problems with mail delivery.

### **Appeals to Regain Eligibility**

Students who fail to meet these standards and have lost eligibility for financial aid may appeal. Appeals that are based upon serious illness or accident on the part of the student; death, accident, or serious illness in the student's immediate family; or other serious, extenuating circumstances are reasonable. Appeals should be submitted to the Office of Financial Aid in writing and must be accompanied by appropriate supporting documents. The reasonableness 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. If approved, one semester of aid will be granted, with academic expectations attached. A letter

will be sent to the student that must be signed and returned indicating the student's acceptance of the expectation that is imposed. Aid will be continued if the student meets those stated expectations.

## Moving off Campus

Full renewal of University of Evansville gift assistance for students who live on campus is dependent on continued living in UE housing. For freshman students entering in 2006-07 through 2008-09, the reduction for moving out of UE-owned housing is \$3,400. For freshmen entering in 2009-10 and after, the reduction for moving out of UE-owned housing is \$4,000.

## Summer Aid

Work on campus, Federal Pell Grants, 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.



# Tuition and Fees for the Academic Year 2011-2012

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## Tuition

Full-Time Undergraduate (12-18 credit hours)	\$28,620
Each Additional Hour	800
Part-Time Undergraduate (1-11; per credit hour)	800
Global Leadership	12,186
Organizational Leadership (per credit hour)	450
Graduate HSA and MSCE (per credit hour)	745
Master of Science Public Service Administration	8,208
Master of Science Teaching (per credit hour)	482
RN to BSN (per credit hour)	265

## Harlaxton – Tuition/Room/Board

Comprehensive Fee (per semester)	19,075
Services Fee	515

## Registration and/or Activity Fees

Registration fee (per semester)	50
Student Activity Fee – Evansville and Harlaxton	326
Health and Wellness Fee – Evansville and Harlaxton	250
Technology Fee – Evansville and Harlaxton	220

## Room and Board

Residence Halls (double occupancy):	
Hughes	4,340
Brentano, Hale, Moore, Morton, Powell, Schroeder	4,940
North Hall	6,860
Village Properties	5,780
Meal Plans:	
Block 200 Plan with \$65 Flex	4,590
Block 150 Plan with \$165 Flex	4,590
Block 100 Plan with \$350 Flex	4,590
Seniors in Residence Halls, Village Occupants, and Commuters:	
Block 40 Meal Plan with \$200 Flex	2,100
Commuter Only Flex Plan	780

## Special Fees (per semester)

Applied Music (per credit hour)	\$345
Practice Teaching – Administrative Fee	60
Practice Teaching (per week)	32
Co-op Position (per period)	330
Late Registration	180
Parking (per year)	50
Credit by Exam (per credit hour)	85
Tuition Exchange (per year)	200
Finance Charge – 1.5 percent per month calculated on the month-end unpaid balance	

Independent Study classes for undergraduates are charged full part-time rates.

Senior Scholars rate is \$120 per credit hour.

Inquire in the Continuing Education office.

Rates are subject to change without notice.

## Institutional Refund Policy

*(effective Fall 2006)*

*Please note that the summer refund policy remains unchanged and is published annually in the summer sessions bulletin.*

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 PLUS loans, Federal Pell Grants, and Federal SEOG. Federal work-study funds are excluded from the refund calculation.

### Refund Policy

This policy refers to all traditional and nontraditional, undergraduate University students. Students enrolled in one of the University's adult programs, such as the global leadership or public service administration programs, should refer to the appropriate refund policy found at the end of this section.

If a student finds it necessary to completely withdraw from the University before the end of a semester, the withdrawal process begins in the Office of the Dean of Students where an official date of withdrawal is determined for refund purposes. This policy refers only to students who withdraw from all classes. The section titled "Dropping below Full Time" exists for students who drop below full time, but do not withdraw from all classes.

A student's withdrawal date is considered to be the earlier of (a) the date the student began the University's withdrawal process; that is, completed the withdrawal form in the Office of the Dean of Students; (b) the student's last date of attendance at a documented academically-related activity; or (c) the midpoint of the semester for a student who leaves the University without notifying anyone ("walks away") during the semester. 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.

The University of Evansville refund policy treats all students the same, regardless of the type of financial being received or the absence of such. 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) after the 60 percent point; Title IV aid is considered to be 100 percent earned after that point.

The University institutional policy for the refund of institutional charges, which are tuition, fees (activity, technology, health and wellness), housing, and meal plan charges will be determined as follows.

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

All financial aid, other than federal aid as described above, will be refunded according to the tuition, fees, housing, and meal refund schedule as indicated above. In other words, all UE financial aid and private 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.

The State Student Assistance Commission of Indiana (SSACI) policy for refunds dictates that to be eligible for these awards, a student must be enrolled at the end of the first four weeks of a semester. Hence, if a student completely withdraws from the University before the end of



the first four-week period, the student is not eligible for the state award and the University must return 100 percent of the semester's award to SSACI. After the first four weeks, the student's SSACI 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. SSACI aid consists of Higher Education Awards, Freedom of Choice Grants, Twenty-first Century Scholar Awards, Hoosier Scholarships, and part-time state grants.

### Institutional Charges versus Non-institutional Charges

When implementing the UE refund policy the following are considered institutional charges: tuition, activity fee, registration fee, health and wellness fees, technology fee, and on-campus room and board charges. All other fees and costs (special fees, books, insurance fees, off-campus living expenses, transportation expenses, and the like) are considered non-institutional costs. Sample return of funds calculations are available in the Office of Financial Aid. UE retains a \$100 administrative fee when calculating a refund for all students.

### Room Charges

Cancellation requests must be made in writing to the Office of Residence Life. Refunds for room and board charges will be determined through the fourth week of the semester as outlined above.

**New Students:** Entering students who cancel their housing forfeit their housing and damage deposit.

**Currently Enrolled Students:** Contracts can be cancelled without penalty by May 1 for the fall semester and November 1 for the spring semester for the reasons listed in the housing contract. Students should contact the Office of Residence Life for cancellation requests made after these deadlines as penalties can result.

### Returning Federal Financial Aid to Accounts

All students who have federal aid will have unearned aid returned according to the 1998 return of Title IV funds policy (Section 668.22 of the HEA) in the following descending order up to the full amount disbursed:

- Federal Direct Unsubsidized Stafford Loan
- Federal Direct Subsidized Stafford Loan
- Federal Perkins Loan
- Federal Direct PLUS Loan
- Federal Pell Grant
- ACG Grant
- National SMART Grant
- Federal SEOG

- Other Title IV Aid Programs (LEAP, if known)
- Other Federal, State, Private, or Institutional Aid Student

After federal aid has been returned to the appropriate accounts according to the federal statute, the University returns state, private, and University aid according to the institutional policy (100 percent, 80 percent, 60 percent, 40 percent, 20 percent, and 0 percent after four weeks). Any refund of charges will be applied to the student's account and all adjustments for aid, loans, fines, and nonrefundable 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.

### 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. Such students will also be responsible for any amounts owed the University from the adjustment made under the refund policy.

### Adult Programs Refund Policy

If a student in the 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 continuing education where an official date of withdrawal is determined for refund purposes.

A student's withdrawal date is determined using the same process as the federal refund policy (see above). The director of continuing education may determine a different date due to extenuating circumstances if such conditions exist and can be documented.

The University's refund policy for these two adult programs treats each five-week course in the semester as a separate period. Students register and are billed for the semester at the beginning of the term, but refunds will be calculated based upon the five-week course(s) completed or the time in the five-week course 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 course:

During week one	75% refund
During week two	50% refund
During week three	0% refund

(Students receiving Title IV federal aid will have their refund of aid calculated according to the established federal guidelines using the per diem calendar that determines aid earned in a particular term. The percentage of aid earned will depend upon how much of the term has been completed when the withdrawal occurs. [Note: Title IV federal aid recipients are responsible for any student account balance resulting from federal aid adjustments due to withdrawal.] Please refer to “Returning Federal Financial Aid to Accounts.”)

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

The refund policy for the Executive Master of Business Administration Program is unique to that program and may be obtained from the Office of Financial Aid.

### Student and Institutional Responsibilities in Regard to the Return of the Title IV Funds

The University’s responsibilities include:

- providing each student with information about the refund policy;
- identifying students who are affected by the policy;
- completing the Title IV return of funds calculation for those affected; and
- returning 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:

- 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;
- returning his or her share of unearned aid attributable to a loan under the terms and conditions of the promissory note;
- making payment to the University for any student account balance that results from the adjustments to the account.

### Dropping below Full Time

When a student withdraws from a course but continues as a part-time student (fewer than 12 semester hours), the tuition refund shall be the difference between the

initial billing and the revised billing multiplied by the following applicable percentage refund: first week, 80 percent; second week, 60 percent; third week, 40 percent; fourth week, 20 percent; fifth week and thereafter, 0 percent. The first day of the semester is not considered in this refund determination.

Students who drop below full time during this refund period will have all financial aid removed. However, if a student continues to be enrolled for at least six credit hours and is eligible for a portion of the Federal Pell Grant and/or the Federal Direct Stafford Loan, that funding is retained after eligibility is recalculated.

### General Information about the Technology Fee

The technology fee supports campus technology that benefits the students with an array of up-to-date, efficient, and reliable technology services that have become an important part of today’s education environment. The funds maintain the instructional and student general purpose computer labs, the computers in the library, and the technology systems in classrooms across campus. The fee also supports the technology infrastructure on campus, allowing for upgrades in bandwidth and making the Internet accessible in classrooms. The fee allows for the acquisition of new hardware such as servers that provide for increased storage capacity for student files, upgrades to application software, and newer technology such as wireless connectivity at multiple locations across campus.

### 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 paid when due, the entire balance, including accrued interest, shall, at the option 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. The Student Handbook includes important information regarding excused absences, formal grievance procedures, and the student code of conduct and 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, Career Services and Cooperative Education, Counseling Services (including disability services), International Student Scholar and Services, Religious Life, 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 three-and-a-half 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 [safetyandsecurity.evansville.edu](http://safetyandsecurity.evansville.edu). For general assistance, students may call 812-488-2051. All emergencies should be reported to 812-471-6911.

## Counseling Services

It is recognized that interpersonal, psychological, and developmental issues can interfere with learning and, ultimately, with personal success. The Office of Counseling Services provides counseling services to students experiencing personal adjustment or psychological problems that require professional attention. The counselors assist students with identifying and developing skills that will help them to effectively meet their educational and life goals.

## Personal Development Counseling

Individual counseling is available for psychological or developmental issues such as school adjustment problems, self-esteem enhancement, 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

The Office of 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 life-long 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 counselors in the Office of Counseling Services abide 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 the Office of 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 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 establish eligibility by providing appropriate written documentation of the disability to the Office of 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 a counselor and disability service provider (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 the Office of 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 to inform the necessary staff members about the student's disability. The counselor 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 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 delineated within the accommodation letter issued by the Office of Counseling Services. If students or faculty have difficulty with specific accommodation needs, the counselor should be contacted for assistance. If, as the semester progresses, the student feels additional accommodations are warranted, the student should consult with the counselor 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 and disability service coordinator, the student will complete a grievance/appeal petition (available from counseling 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 vice president for academic affairs, who makes the final decision on the request.

## Subsequent Semesters

Students who wish 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 Ronda Stone, coordinator of disability services, at 812-488-2663. Information regarding documentation guidelines and grievance procedures are available upon request. Please see the Student Handbook for additional information.

## Career Services

The Office of Career Services and Cooperative Education 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 [careerservices.evansville.edu](http://careerservices.evansville.edu).

## Volunteer Programs

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, duplexes, and apartments, are also available to upperclassmen. Other students commute from their homes or prefer off-campus living in privately owned facilities.

All single freshmen recently graduated from high school and not residing with parents, legal guardians, or immediate family are required to live in University residence halls. 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, fosters a broader sense of community by providing all students with cross-cultural experiences and supporting the needs and interests of students of color.

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

## Religious Life

As a United Methodist Church-affiliated institution, the University of Evansville believes that transformational education must shape the heart as well as the mind. To that end, UE offers an active religious life program and various ways in which religious commitment may be expressed through worship, service, study, and fellowship.

The heart of the religious life activities is found in Neu Chapel, which houses a sanctuary, the Office of the Chaplain, and Grabill Lounge. Ecumenical worship services and Roman Catholic Mass are held weekly at Neu Chapel, drawing leadership from across the campus. University worship, led by the chaplain, is held on Sundays at 10:30 a.m. and Roman Catholic Mass is held on Sundays at 1:00 p.m. and on Wednesdays at 9:30 p.m. Student, faculty, and staff leadership are a vital part of these services and of all other campus religious life activities.

Other significant events such as Founders Day, Honors Day, Martin Luther King Jr. Day Celebration, special convocations and the Christmas Candlelight Vespers are held in Neu Chapel.

A number of diverse Bible studies, fellowship groups, and other opportunities are offered throughout the week by a team of campus ministers who represent a number of different traditions. The Kell Interfaith Prayer Room, located in Neu Chapel, offers non-Christian students a place to gather for prayer and fellowship. The University chaplain is also available for individual counseling by appointment.

## Dining Facilities

The University of Evansville contracts with Sodexo Services 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, [residencelife.evansville.edu/dining\\_options.htm](http://residencelife.evansville.edu/dining_options.htm).

## 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**

Special programs for the entire international community are 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, the Host Family Program, Friendship Conversation Partners, and the International Speakers Bureau.

## **International Student Scholar and Services**

The Office of International Student Scholar and 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.

## **UExperience: An Experiential Transcript**

UExperience, UE's experiential transcript, is an official record of a student's cocurricular experiences. The transcript records participation in recognized student organizations, community service, and other cocurricular 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 student government.

## **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 major campus 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**

A monthly magazine printed for the UE community by students, the *Crescent* 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 graphically interpret and evaluate campus activities and aspirations.

## WUEV-FM

We Understand the Expression of Values (WUEV) is part of living, and that is why the University of Evansville's radio station is so unique. 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 hot 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 indeed a unique learning resource that serves the UE community, surrounding Tri-State area and now 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 [www.evansville.edu/prospects/studentlife/organizations.asp](http://www.evansville.edu/prospects/studentlife/organizations.asp).

## 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*), 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 journey 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, accessible across campus as well as off campus.

UE Libraries' collections include more than 275,000 bound volumes of books and periodicals, access to 50,000 scholarly journal titles, 480,000 microform units, and access to an expanding array of online 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 for students permit a renewable three-week loan for books.

The University of Evansville Libraries is open 96 hours per week during academic semesters. Professional librarians are ready to assist students with research assignments. Specialized services and resources include the University Archives as well as the Multimedia Learning Resources Center located in Graves Hall. The University of Evansville Libraries supports study and teaching at Harlaxton College, the University's British campus, by providing access to online databases available on the Evansville campus.



# Degrees, Curriculum, Academic Opportunities

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## Degrees

### Associate Degrees

The University of Evansville offers a specialized Associate of Science (AS) degree to students completing the Physical Therapist Assistance Program.

### 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 pre-professional programs follows.

### Graduate Degrees

UE offers six graduate degrees: Master of Arts in Teaching (MAT), Master of Business Administration (MBA), Masters of Science (MS) for the public services administration cohort program and for the education program, Master of Science in Computer Science and Engineering (MSCSE), Master of Science in Health Services Administration (MSHSA), and Doctor of Physical Therapy (DPT).

## 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

- Visual Communication Design

#### Department of Biology

- Applied Biology

- Pre-dentistry\*

- Pre-medicine\*

- Pre-optometry\*

- Pre-veterinary Medicine\*

- Professional Biology

#### Department of Chemistry

- Chemistry

- Biochemistry

- Business Emphasis

#### Classical Studies

#### Department of Communication

- Communication

  - Advertising and Public Relations Specialization

  - Journalism Specialization

  - Multimedia Production Specialization

  - Organizational Communication Specialization

#### Economics

#### Department of English

- Creative Writing

- Literature

- Writing

#### Environmental Studies

- Environmental Administration

- Environmental Science

#### Department of Foreign Languages

- Chinese\*

- Japanese\*

- French

- Latin\*

- German

- Russian\*

- Greek\*

- Spanish

- Hebrew\*

#### Gender and Women's Studies\*

#### Department of History

- History

#### Interdisciplinary Studies

#### International Studies

#### Department of Law, Politics, and Society

- Criminal Justice

- Legal Studies

- Political Science

- Sociology

  - Anthropology Specialization

  - Gerontology Specialization

  - Preprofessional Social Work Specialization

  - Sociology Specialization

#### Department of Mathematics

- Applied Mathematics

- Mathematics

- Predocorial Mathematics

#### Department of Music

- Music

- Music Management Specialization

- Music Education

- Music Performance

- Music Therapy

#### Department of Philosophy and Religion

- Cognitive Science

- Ethics\*

- Philosophy

- Religion

  - Theological Studies

  - Biblical Studies

#### Department of Physics

- Physics

#### 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
- Business Administration
  - Economics
  - Finance
  - Global Business
  - Management
  - Management Information Systems
  - Marketing
- Executive Master of Business Administration Program

## 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
    - Physical Education and Health
    - Special Education
  - Elementary Education
  - Senior High, Junior High, Middle School Education
    - Art
    - English
    - Foreign Languages
    - Mathematics
    - Physical Education and Health
    - Science
    - Social Studies
    - Theatre
  - Master of Arts in Teaching
  - Master of Science
- Department of Exercise and Sport Science
  - Athletic Training
  - Clinical Laboratory Science
  - Exercise Science
  - Physical Education and Health
  - Sport Communication
  - Sport Management
- Department of Nursing and Health Sciences
  - Nursing
    - Health Services Administration (bachelor's and master's degrees)
- Department of Physical Therapy
  - Physical Therapist Assistance (associate's degree)
  - Physical Therapy (doctoral degree)

## College of Engineering and Computer Science

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

- Department of Electrical Engineering and Computer Science
  - Computer Science
  - Computer Engineering
  - Electrical Engineering
  - Internet Technology
  - Computer Science and Engineering (master's degree)
- Department of Mechanical and Civil Engineering
  - Civil Engineering
  - Mechanical Engineering

Co-op options are available in all undergraduate programs.

## 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 U.S. universities.

## Center for Adult Education

- Global Leadership
- Individualized Study
- 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-theology            |
| Pre-medicine  | Pre-veterinary Medicine |
| Pre-optometry |                         |

\*These programs do not offer a degree or major

# 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 General Education Program:
  - World Cultures and First-Year Seminar Sequence (6 hours)
  - General Education Courses (35 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 University writing proficiency requirement
- 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

Throughout the curriculum and the four years of baccalaureate study, the University of Evansville emphasizes writing wherever and whenever appropriate to a particular course or academic discipline. From the very outset

of freshman studies, writing is featured as a major and important form of expression in the seminar sections of the World Cultures and First-Year Seminar Sequence core curriculum.

The writing skills of all new students are assessed prior to their first terms of enrollment through the ACT or SAT. All students must meet the criteria outlined by the University writing program, which include 12 semester hours of writing-intensive course work. These criteria are accomplished through six hours of the World Cultures and First-Year Seminar Sequence and six hours of course work within the major discipline. Each department designs and implements a plan to meet the unique writing needs of the particular discipline. An external assessment of freshman and senior writing is completed by a sample of students participating in the Collegiate Learning Assessment, which includes writing. Internally, individual programs include evaluation of writing among upper-level students in their departmental assessment reports.

The specific procedures governing the writing proficiency requirement for matriculating freshmen, international students, and transfer and part-time students are outlined below.

## Freshman Students

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 comprehensive writing sections of World Cultures and First-Year Seminar in their first year to provide extra help in developmental writing skills.

## 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 meet the criteria of entry-level writing through achievement of a specified score on the writing portion of the selected exam will be required to enroll in comprehensive writing sections of World Cultures and First-Year Seminar in their first year to provide extra help in developmental writing skills. In fulfillment of the criteria outlined by the University writing program, students must successfully complete the World Cultures and First-Year Seminar Sequence (or its equivalent) and six additional hours of writing-intensive course work within their major area of study.



## 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 International Student Scholar and Services and will be read by the director of the Writing Center, who will determine the appropriate writing sequence for each student.

**International freshmen** are required to enroll in the World Cultures and First-Year Seminar Sequence and the appropriate English language courses simultaneously if the student's command of the English language is determined to be sufficient. If an international freshman student's command of the English language is determined to be so deficient that exceptional difficulties would be encountered in World Cultures 110 and First-Year Seminar 120, commencement of the World Cultures and First-Year Seminar Sequence may be deferred to the second (sophomore) year. (Generally, if a student is required to enroll in the English Language 110-111 sequence, enrollment in World Cultures 110 and First-Year Seminar 120 should be delayed until the sophomore year.)

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, or by scoring sufficiently high on the University-approved placement examination or achievement test. 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 placement exam. The tests are administered during freshman registration. See details below.

For students who have successfully completed the equivalent of a third-year college course in a foreign language or introduction to literary analysis, the College Board Advanced Placement Examinations will be recognized if a grade of four or five is reported. This meets the foreign language proficiency requirement through the second-year University level. Advanced placement examinations are administered in May at approved testing centers.

## Foreign Language Placement Testing

1. Placement testing is required for all students with previous foreign language experience.
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.
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 achieving particular scores on the placement exam.
4. Students who begin their foreign language study above the 111 level may petition for up to six hours of non-graded credit in introductory or intermediate level courses below that level if they successfully complete the lower-level course with a grade of C or higher. Example: Student places into French 211. Upon successful completion of French 211, the student may petition for six hours of non-graded credit for French 111, 112. Petitions should be filed with the Department of Foreign Languages.

## 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 course 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; however, the degrees may not be named the same (e.g., two Bachelor of Science degrees). 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.

# General Education Program

## Core Curriculum

The general education requirements are based on the following assumptions. To participate fully in a democracy, citizens must be informed and capable of making rational decisions based on different kinds of knowledge and facts. They must be able to analyze data and arguments. They must understand how ideas and events are linked together to give form and meaning to human experience.

Furthermore, citizens must learn how to think clearly and creatively and how to express their ideas effectively. Finally, they must cherish the rights of individuals and respect, as appropriate, the will of the majority. Meeting the requirements above satisfies the following objectives:

- To develop students' ability to communicate clearly and correctly, orally and in writing
- To help students master the basic competencies of mathematics and logical analysis
- To assist students to understand historical achievements and to comprehend challenges in our culture and other cultures
- To facilitate students' ability to analyze, interpret, and interrelate information given in literature, art, music, philosophy, history, and religion
- To foster in students the ability to think critically about the complexities of the world and to make and to assess judgments of value in such areas as ethics, aesthetics, and public policy
- To provide students an understanding of the basic principles of the natural and physical sciences and the implications of science and technology in society
- To promote among students comprehension of the basic principles, methods, and objectives of the social sciences
- To enable students to comprehend and to put into practice basic skills in a foreign language and to understand the perspectives of the culture associated with the target language
- To encourage students to become personally fit and to develop lifelong habits of healthy living

Courses taken prior to their approval as general education courses may satisfy the general education requirements upon review of individual student petitions by the Admissions and Standards Committee. Petitioning students must offer evidence in support of any contention that the course or courses in question fulfilled the general education criteria at the time the course was taken.

Any courses used to satisfy a student's general education requirements may not be used to satisfy the student's primary major requirements.

## General Education Courses

To meet the goals and objectives above, the 41-hour general education requirement is divided into the following categories:

American Traditions	(3 hours)
Creative Dimension	(3 hours)
Foreign Language	(6 hours or demonstrated proficiency)
Health and Wellness	(1 hour)
Human Behavior and Society	(3 hours)
International Perspectives	(3 hours)
Mathematical Thought	(3 hours)
Philosophical/ Spiritual Dimension	(3 hours)
Science and Technology	(7 hours)
Senior Seminar	(3 hours)
World Cultures and First-Year Seminar Sequence	(6 hours)

### American Traditions (3 hours)

#### *Definition*

Courses in this category address the uniquely American features of their given subject matters. Such courses take a critical approach to expressions of American cultural identity and they thus endeavor to locate and analyze these expressions, in all their variety, diversity, and complexity, within an identifiable tradition that can be properly labeled "American." American Traditions courses may focus in-depth on a given topic, but they must also take a historical approach to the materials, examining the evolution of its related cultural attitudes and practices across time and exploring the implications of this evolution for future generations. As a component of the General Education Program, courses in American traditions are writing intensive.

### *Outcomes*

- Awareness of the factors – political, social, economic, religious, geographic, environmental, ethnic, artistic – that help explain and define American cultural identity
- Understanding of how the factors outlined above have caused the American experience to be different from that of other nations and cultures
- Awareness and appreciation of their own traditions as well as those of others
- Comprehension of the complexities of contemporary interactions between representatives of the American cultural tradition and others

### *Courses*

The student takes one course from outside his or her major discipline.

History 141, American History to 1865  
History 142, American History since 1865  
History 343, The Civil War and Reconstruction  
History 345, United States Foreign Policy since 1776  
History 348, The Great Crash and Great Depression: U.S., 1919-1941  
Interdisciplinary 150, The American Corporation  
Legal Studies 125, Law in Society  
Literature 241, Major American Writers I  
Literature 242, Major American Writers II  
Music 156, Music in America  
Political Science 143, American National Government and Politics  
Sociology 105, Introduction to Sociology

### **Creative Dimension (3 hours)**

#### *Definition*

Courses in this category address issues of aesthetic value, including the processes of creating artistic presentations, of presenting or performing them, and of evaluating them. Courses in this category may also provide historical treatment of the development of the various genres. As a part of the General Education Program, courses in the Creative Dimension require a significant writing component.

### *Outcomes*

- Ability to respond in written and oral form to creative works
- Ability to give a reasoned analysis, interpretation, and evaluation of a creative work

- Appreciation of the skill and understanding required to be successful in the creative process
- A desire to continue exploration and experiences in the creative arts

### *Courses*

The student takes one course from outside his or her major discipline.

Art 105, Introduction to the Visual Arts  
Art 200, Introduction to Studio Art  
Art History 208, Survey of Art I  
Art History 209, Survey of Art II  
Communication 110, Fundamentals of Public Speaking  
Interdisciplinary 235, British Cathedrals and the Arts  
Interdisciplinary H282/382, The British Experience\*  
(see ID H282/382 distribution requirements in footnote below)  
Music 154, Introduction to Music  
Music 155, Music and Film  
Music 156, Music in America  
Music 158, Jazz History  
Theatre 110, Introduction to Theatre  
Writing 205, Introduction to Imaginative Writing

### **Foreign Language (6 hours or demonstrated proficiency)**

Student must demonstrate proficiency equivalent to the completion of a university-level first year foreign language course numbered 112. (Refer to the “Foreign Language Proficiency Requirement” section for details.)

Chinese 111/112, Elementary Chinese  
French 111/112, Elementary French  
German 111/112, Elementary German  
Greek 111/112, Elementary Ancient Greek  
Hebrew 111/112, Elementary Hebrew  
Japanese 111/112, Elementary Japanese  
Latin 111/112, Elementary Latin  
Russian 111/112, Elementary Russian  
Spanish 111/112, Elementary Spanish

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\*Three hours of Interdisciplinary H282/382 (6 hours) must be used to satisfy the International Perspectives requirement. The other 3 hours may substitute for the three (3) hour requirement in one of three categories: Creative Dimension, Philosophical/Spiritual Dimension, or Human Behavior and Society. Category selection is based on the recommendation of the academic advisor to the Office of the Registrar.

**Health and Wellness (1 hour)***Definition*

Wellness is a quality of life that encompasses the dimensions of healthy body, mind, and spirit and depends upon personal lifestyle decisions directed toward achieving balance and well-being. Course work in this category draws from health content areas (nutrition, consumer health, alcohol/tobacco/other drugs, chronic/communicable diseases, mental/emotional/spiritual health, fitness, injury prevention, environmental/community health, sexuality/family life). As a component of the General Education Program, Health and Wellness courses are reading and writing intensive, requiring self-reflection on personal wellness and enhancement of personal wellness.

*Outcomes*

- Gain knowledge, skills, and attitudes conducive to the development of lifelong habits of healthy living by:
  - Developing habits of healthy living
  - Improving attitude toward developing and maintaining a healthy lifestyle
  - Gaining skills to help lead a healthy lifestyle
  - Acquiring knowledge to help lead a healthy lifestyle

*Courses*

Select one course from the following:

- Exercise and Sport Science 111,
- Concept of Human Performance
- Health Education 260, Personal and Community Health
- Health Sciences 101, Adult Health and Wellness
- Nutrition 304, Nutrition Concepts and Controversies

**Human Behavior and Society (3 hours)***Definition*

This category includes disciplines that address our political, economic, personal, social, and cultural lives and includes the study of human behavior in its social and cultural aspects. At the core is a desire to understand human beings – both individually and collectively. The major focus is on understanding behavioral and/or social processes and the use of those processes to predict and/or influence human behavior, whether at the level of the individual, small group, institution, organization, community, society, or cultural system. It also involves approaches for measuring and analyzing behavior, psychological function, and the social environment. Courses in Human Behavior and Society address key physical,

social, cultural, and behavioral issues; apply methodological, theoretical, and empirical approaches to social and behavioral functioning; and examine underlying psychological processes and social interactions. As a component of the General Education Program, courses in the Human Behavior and Society category have a writing component.

*Outcomes*

- Insight and knowledge that enhances development as members of social communities (such as family, class, ethnicity, neighborhoods, clubs, nations) and the development of those social communities
- Awareness of the causes and effects that arise in social relations among persons in the intercommunication and interaction among persons and groups
- Ability to apply theoretical, empirical, and methodological scientific approaches to the behavioral and social functioning of human beings
- A developmental, life span perspective; an appreciation for individual variation and variation across sociodemographic, socioeconomic, and sociocultural status
- Focus on both the social and psychological context of human behavior

*Courses*

The student takes one course from outside his or her major discipline.

- Anthropology 207, Cultural Anthropology
- Communication 130, Introduction to Communication
- Economics 101, Principles of Macroeconomics
- Economics 102, Principles of Microeconomics
- Exercise and Sport Science 218, Social Aspects of Sport
- Gender and Women's Studies 101, Introduction to Gender and Women's Studies
- Geography 240, Cultural Geography
- History 320, Women's Lives before the Modern Age
- Interdisciplinary H282/382, The British Experience\* (see ID H282/382 distribution requirements in footnote)
- Interdisciplinary 433, Human Growth and Development
- Political Science 100, World Politics
- Psychology 121, Introduction to Psychology
- Sociology 105, Introduction to Sociology
- Sociology 230, Social Problems in the Modern World

## International Perspectives (3 hours)

### Definition

Courses in this category address the uniquely international features of their given subject matters. Such courses take a critical approach to expressions of cultural identity from outside the United States and they thus endeavor to locate and analyze these expressions, in all their variety, diversity, and complexity, within an evolving international framework. Courses in International Perspectives may focus in-depth on a given topic, but they must also take a global, historical approach to the materials, examining cultural perspectives and practices through time and across national boundaries and exploring the present and future implications of such perspectives and practices on an international scale. As a component of the General Education Program, courses in International Perspectives are writing intensive.

### Outcomes

- Knowledge of cultural traditions, perspectives, and practices from nations other than the United States
- Awareness of the factors – political, social, economic, religious, geographic, environmental, ethnic, artistic – that explain and define differences between and among cultures and nations
- Understanding of how the factors outlined above have led to different cultural traditions, perspectives, and practices in different areas of the world
- Comprehension of the complexities of contemporary cooperation and conflicts among different nations, traditions, and cultures

### Courses

The student takes one course from outside his or her major discipline.

Anthropology 200, World Prehistory  
 Archaeology 105, Introduction to Greek Archaeology  
 Archaeology 106, Introduction to Roman Archaeology  
 Chinese 175, Introduction to Chinese Culture  
 Chinese 275, Topics in Chinese Studies  
 Communication 380, Intercultural Communication  
 French 434, French Civilization  
 Geography 120, World Regional Geography  
 German 433, German Civilization  
 History 111, World History to 1500  
 History 112, World History since 1500

History 352, Dictatorship and Democracy in Latin America since 1808: Argentina, Brazil, Chile, Colombia, Peru  
 History 381, Modern Britain: Challenge, Continuity, and Change, 1815-Present  
 History 383, Modern Scotland, Politics, Culture, and Identity, 1707-Present  
 Interdisciplinary H282/382, The British Experience\* (see ID H282/382 distribution requirements in footnote below)  
 Japanese 333, Japanese Culture  
 Literature 231, Masterpieces of English Literature I  
 Literature 232, Masterpieces of English Literature II  
 Philosophy 221, Modern European Philosophy  
 Political Science 100, World Politics  
 Political Science 160, Introduction to International Relations  
 Religion 212, Living World Religions  
 Russian 333, Russian Culture  
 Spanish 433, Hispanic Civilization  
 World Literature 122, Modern World Literature  
 World Literature 223, World Classics  
 World Literature 340, Contemporary World Literatures  
 World Literature 344, Masterpieces of Russian Literature

## Mathematical Thought (3 hours)

### Definition

Courses in this category are drawn from the field of mathematics and provide either the introductory (college) level understanding of college algebra or calculus, or offer a survey of mathematical principles and applications. In addition to manipulative skills, courses in this field require mathematical modeling and analysis as well as quantitative problem solving. As part of the General Education Program, courses in Mathematical Thought include a laboratory or project component requiring writing that combines mathematical and English expression.

\*Three hours of Interdisciplinary H282/382 (6 hours) must be used to satisfy the International Perspectives requirement. The other 3 hours may substitute for the three (3) hour requirement in one of three categories: Creative Dimension, Philosophical/Spiritual Dimension, or Human Behavior and Society. Category selection is based on the recommendation of the academic advisor to the Office of the Registrar.



**Outcomes**

- Problem solving skills
- Application of mathematics to real world problems (modeling)
- Numeracy – appreciation for the reality of numbers
- Logical reasoning
- Use of the language of mathematics

**Courses**

Select one course from the following:

Mathematics 101, Mathematical Ideas  
 Mathematics 105, College Algebra  
 Mathematics 134, Survey of Calculus  
 Mathematics 221, Calculus I  
 Quantitative Methods 227, Introduction to  
 Statistics

Or demonstrate proficiency by examination

**Philosophical/Spiritual Dimension (3 hours)****Definition**

Courses in this category address questions concerning the nature of knowledge, the foundations of values, the nature and basis of truth, and the relation of human intelligence and spirit to the natural world and the divine. Courses in this field require reflective reading of classical and contemporary works in literature, philosophy, and religion; they require discussion of the timeless questions raised in these works; and they require analytical/critical writing that addresses these issues. As a component of the General Education Program, courses in the Philosophical/Spiritual Dimension are writing intensive.

**Outcomes**

- Understanding and appreciation of efforts to identify and explain humankind's place in the world and some understanding of the issues that need to be addressed in arriving at such explanations
- Desire to continue reflection and study of spiritual and philosophical issues

**Courses**

The student takes one course from outside his or her major discipline.

History 321, The West and the Islamic World in the Middle Ages  
 History 322, Old Regime and Revolution: Europe in the Eighteenth Century  
 Interdisciplinary 254, Christian Worship

Interdisciplinary H282/382, The British Experience\*  
 (see ID H282/382 distribution requirements in footnote)

Philosophy 111, Freshman Seminar in Philosophy  
 Philosophy 121, Introductory Ethics  
 Philosophy 211, Ancient Greek Philosophy  
 Philosophy 221, Modern European Philosophy  
 Philosophy 311, Phenomenology and Existentialism  
 Philosophy 316, Environmental Ethics  
 Philosophy 324, Epistemology  
 Philosophy 416, Bioethics  
 Philosophy 445, Philosophy of Science  
 Religion 130, Christian Thought  
 Religion 140, Introduction to the Old Testament  
 Religion 150, Introduction to the New Testament  
 Religion 201, Christian Ethics  
 Religion 210, Ancient Christianity  
 Religion 212, Living World Religions  
 Religion 213, Introduction to Judaism  
 Religion 220, Reformers and Revolutionaries in Christian History  
 Religion 250, John Wesley and the People Called Methodists

**Science and Technology**

(7 hours, including at least one laboratory)

**Definition**

Courses in this category address the unique features of science and technology. In the sciences, there is study of the natural world, including observation, quantification, organization, and validation of hypotheses. Technology offerings focus on the application of scientific principles to production of devices, structures, processes, and systems to meet society's wants and needs. As a component of the General Education Program, courses in Science and Technology include technique, a scientific writing component and consideration of the roots and applications of the discipline.

**Outcomes**

- Experience in the practice of science (empirical and/or computational)
- Understanding of and enthusiasm about the natural world
- Understanding of the technological basis of modern society
- Understanding of technology limits and trade-offs
- Ability to evaluate data and claims based on data

- Ability to evaluate the implications of scientific and technological advances on society
- Understanding of how common devices and processes work

### *Courses*

The student takes two courses from two different disciplines outside of his or her major discipline – at least one course in biology, chemistry, or physics; at least one of the courses with a hands-on laboratory component that includes formal written reports.

Astronomy 101, Descriptive Astronomy  
Biology 100, Fundamentals of Biology  
Biology 107, General Biology  
Biology 110, Clinical Microbiology  
Biology 201, Human Genetics and Society  
Chemistry 100, Fundamentals of Chemistry  
Chemistry 108, Elementary Chemistry  
Chemistry 118, Principles of Chemistry  
Cognitive Science 111, Introduction to Cognitive Science  
Environmental Studies 103, Fundamentals of Environmental Sciences  
Geography 230, Physical Geography  
Geology 130, Environmental Geology  
Interdisciplinary 111, Structures and Materials of World Cultures  
Physics 100, Conceptual Physics  
Physics 121, Algebra Physics I  
Physics 200, Physics of Music  
Physics 210, Calculus Physics I  
Psychology 125, Introduction to Behavioral Neuroscience

### **Senior Seminar (3 hours)**

#### *Definition*

Limited to students of senior standing, the senior seminars represent a culmination of the general education curriculum and learning experiences. All senior seminars include independent research, a significant writing component, oral discourse, and a formal defense of the work generally presented before a critical audience. This capstone requirement may be met by approved departmental offerings involving research projects, supervised professional practice, or juried performances and exhibitions or by special senior-level interdisciplinary courses.

### *Outcomes*

- Unite the intellectual demands of a general liberal arts and sciences education with the skills of discourse that lead to professional success

### *Courses*

Select one course from the following:

Archaeology 400, Archaeological Method and Theory  
Art 401, Art and Culture  
Biology 480 and 481, Senior Seminar I and II  
Biology 482, Applied Biology Senior Seminar  
Civil Engineering 495, Civil Engineering Design Project I  
Communication 487, Integrated Communication Campaigns  
Computer Science 495, Senior Project Phase I  
Criminal Justice 450, Advanced Criminal Justice Seminar  
Economics 470, Development of Economic Thought  
Education 490, Schools in a Changing Society  
Electrical Engineering 495, Senior Project Phase I  
Exercise and Sport Science 493, Current Issues in Exercise and Sport Science  
Foreign Languages 401, Language, Culture, and Literature  
History 490, Senior Seminar in History  
Information Technology 490, Information Theory and the Internet  
Interdisciplinary 480, Origins and Effects of Modern Technology  
Legal Studies 497, Contemporary Legal Issues  
Management 497, Global Strategic Management  
Mathematics 495, Senior Seminar: Mathematical Modeling  
Mechanical Engineering 495, Professional Practice I  
Music 498, Seminar in World Music  
Nursing 484, Dynamic Integration: Health Issues  
Philosophy 499, Senior Seminar in Philosophy  
Political Science 495, Senior Seminar in Political Science  
Psychology 490, Senior Review and Senior Thesis  
Religion 499, Senior Seminar  
Sociology 450, Advanced Sociology Seminar  
Theatre 465, Senior Seminar in Theatre  
World Literature 480, Literature and Its Relations

### World Cultures and First-Year Seminar Sequence (6 hours)

The World Cultures and First-Year Seminar Sequence is the cornerstone of the General Education Program. The learning goals for the sequence are to introduce, improve, and assess reading, critical thinking, and writing while maintaining a global perspective.

World Cultures 110 is taught in the fall semester. Central lectures and seminal texts discussed in small groups serve to focus attention on the intellectual, artistic, philosophical, and religious expressions that have shaped human history. Faculty members from all of the University's colleges and schools lead the discussion groups and give general lectures.

First-Year Seminar 120 is taught in the spring semester, and consists of topic-based sections that differ in content but share the learning goals of the sequence.

World Cultures 110 and First-Year Seminar 120 should be completed during the freshman year.

#### Courses

World Cultures 110, The Ancient World to the Reformation

First-Year Seminar 120, Sections individually titled

### General Education for Transfer and Part-Time Students

As with traditional matriculating freshmen, the 41-hour general education requirement for transfer and part-time students is divided as follows:

American Traditions	(3 hours)
Creative Dimension	(3 hours)
Foreign Language	(6 hours or demonstrated proficiency)
Health and Wellness	(1 hour)
Human Behavior and Society	(3 hours)
International Perspectives	(3 hours)
Mathematical Thought	(3 hours)
Philosophical/ Spiritual Dimension	(3 hours)
Science and Technology	(7 hours)
Senior Seminar	(3 hours)
World Cultures and First-Year Seminar Sequence	(6 hours)

Refer to the preceding sections describing general education for the courses that satisfy each category. The registrar or the registrar's designee, in consultation with appropriate chairs or deans, will determine the acceptability of transfer courses and credits.

### World Cultures and First-Year Seminar Sequence

Students transferring from institutions with an integrated, interdisciplinary general education component or core curriculum similar to that of the World Cultures and First-Year Seminar Sequence at UE will be granted equivalent credit up to a total of six hours. Any additional credit hours earned in such a curriculum will be applied toward general education courses or electives.

**Second semester freshman transfers must enroll in First-Year Seminar 120 and complete both courses in the sequence.** Other transfer students who come from institutions where an analogous core curriculum is unavailable and all nontraditional part-time students are encouraged to take the World Cultures and First-Year Seminar Sequence, subject to the following provisions:

1. enrollment in the sequence must begin during the first semester the student attends the University of Evansville; and
2. both courses must be completed.

If the student and his or her advisor determine that taking the World Cultures and First-Year Seminar Sequence would cause academic hardship, the following alternative program is available.

A total of six hours must be completed in two different categories drawn from the following or, for transfer credits, from similar courses. Part or all of this requirement may be met by similar course work taken at another institution.

#### Fine Arts Appreciation

Art 105, Introduction to the Visual Arts; or Music 154, Introduction to Music; or Theatre 110, Introduction to Theatre

#### World History

History 111, World History to 1500; or History 112, World History since 1500

#### World Literature

World Literature 223, World Classics

#### Philosophical and Religious Thought

Philosophy 111, Freshman Seminar in Philosophy; or Religion 212, Living World Religions

#### Political and Social Thought

Anthropology 207, Cultural Anthropology; or Geography 120, World Regional Geography; or Political Science 100, World Politics

## 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, a representative from each of the faculty academic governance units as defined in the faculty bylaws, the director of institutional effectiveness, and an administrative representative from the vice president of the Office of Academic Affairs, the dean of the College of Arts and Sciences, and the chair of the Writing Subcommittee. The assessment process begins with entering students and continues throughout their academic careers and into their postgraduate years. 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 students who have a desire to excel scholastically a stimulating academic environment in which they are expected to engage their professors as well as each other. Honors classes and activities frequently become arenas of widely divergent and contested ideas. Their ultimate goal is a deeper understanding of self and the world in which we live.

The Honors Program is designed to enhance one's academic and social experience at the University. Special honors courses are offered each semester, as is the opportunity to create an honors experience from virtually any non-honors course through a process called "contracting." An honors project serves as the program capstone and is expressed through research, publication, or performance.

Special honors events include guest lectures, book and movie discussions, theatre talk-backs, an annual philanthropic event, and off-campus trips. Honors students enjoy many benefits, such as priority class registration, honors campus housing, opportunity to apply for undergraduate research funds, and access to a 24-hour honors lounge equipped with computers and printers.

The Honors Program is structured to allow students in each of the University's colleges and schools to participate. Acceptance to the program is selective. Incoming student applicants are evaluated based upon the rigor of their high school curriculum (or college curriculum in the case of transfer students), standardized test scores, and an application essay. Current UE students may also apply but are encouraged to do so by their sophomore year to allow time to complete the program requirements. In addition to the Honors Program application, current student applicants require a letter of recommendation from a UE academic advisor or professor. Application criteria can change from year to year; therefore, it is best to consult with the Office of Admission or Honors Program staff about application 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.

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 housing during the summer months 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.

## Co-op Program

A cooperative education plan is available as an alternative to the traditional four-year plan for the following majors:

- Business Administration
- Chemistry
- Engineering
- Environmental Studies

The co-op plan combines classroom education with full-time work experience in industry 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 co-op plan, the student spends alternate 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).

	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
First Year	School	School	
Second Year	School	School	Work 1
Third Year	School	Work 2	School
Fourth Year	Work 3	School	Work 4
Fifth Year	School	School	

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 90, which is a non-credit seminar conducted weekly by the director of the co-op program. To be eligible for admission to the co-op program a student must have a cumulative grade point average of at least 2.25 (2.50 for business administration majors) based on at least three semesters of full-time study in one of the degree programs mentioned above. In addition, the eligible applicant must have completed the equivalent of the first four semesters of the desired degree at the time of the first work period and be able to plan to complete at least three semesters of work. Most employers require U.S. citizenship or permanent residence status. 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.

The co-op director 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 placement 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 co-op director 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 or in Cooperative Education 91-95. A cumulative GPA of at least 2.00 must be maintained to continue in the program. A co-op fee is charged for enrollment in Cooperative Education 91, 92, and 93 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.

While on the job, 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 co-op director with the assistance of the student's academic advisor. Through mail and visits

by the co-op director, communication with the student is maintained while employed.

Employers participating in the co-op program are located throughout the nation and include large national companies, smaller local companies, public utility companies, government agencies, and laboratories. High priority is given to meeting 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 contact their major department directly for any changes or updates.

## Harlaxton College and Other Study Abroad Programs

The University of Evansville is dedicated to preparing its students to meet the challenges of international education. This commitment is evident through our campus at Harlaxton College in England as well as the study abroad programs offered in conjunction with outside providers throughout the world. Through participation in overseas study, students learn to think critically, adapt to changes, and communicate effectively within an international framework. They are prepared to function as citizens of a global society.

Harlaxton College, housed in a magnificent nineteenth-century manor house, is situated majestically in the English East Midlands, just outside Grantham, England, one hour north of London. UE's British campus welcomes second- to fourth-year students to sample England, not as tourists but as residents. 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 adventurous Harlaxton students. Harlaxton College operates a semester-length program each fall and spring and a five-week summer session. Other shorter-term summer courses also use Harlaxton as a base for study. 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.

A number of historic state rooms, including the Conservatory, Gold Room, Long Gallery, and State Dining Room, provide some of the facilities at Harlax-

ton. In addition, the manor includes a library, classrooms, computer labs, student lounges, bistro, sports hall, and soccer field. The manor is centrally heated and contains modern conveniences within a historic setting.

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. Many of the courses focus upon British and European studies, permitting a comparison of the American and English lifestyles. Courses are taught both by British faculty and visiting faculty from the United States.

In addition to the opportunities afforded through Harlaxton College, the University of Evansville offers faculty-led summer courses abroad. Locations change annually, and interested students are advised to consult with the Office of Study Abroad each year in October as plans for the following summer are confirmed.

A limited number of students are approved annually for semester-length study abroad programs through outside providers in locations throughout the world. If the student is approved, UE financial aid may be used, although a study abroad fee will apply. Such students must apply for approval through the Office of Study Abroad in the winter for any study abroad plans to take place the following academic year. Students are urged to consult early with the Office of Study Abroad in formulating their study abroad plans.

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.

The Office of Study Abroad is the place to come for applications and early planning. 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.



## 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. Furthermore, this program provides students with a home department, complete with social activities and events that help them connect to campus and to their future studies.

Usually students are undeclared because their interests range broadly; therefore, they are encouraged to embark on academic explorations without pressure to decide what they are going to do. Moreover, because undeclared students are often academically strong, they are not discouraged from exploring disciplines beyond the introductory level, for it is often at the second or third encounter with a discipline that students develop a sufficiently deep interest in and love for that discipline. 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 sophomore year to ensure on-time graduation.

## 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.



# 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 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 – an ideal that requires the commitment of both students and faculty. Members of the faculty affirm a commitment to the Academic Honor Code by clearly defining 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 utilize honor-based testing devices, such as the take-home exam and examinations without a proctor. Each instructor is obligated to clearly define unauthorized aid 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.

## 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 and the Office of Student Affairs, 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.

Each freshman participates indirectly in the selection of his or her advisor. When a prospective freshman indicates an area of interest or a major, an advisor is assigned on the basis of academic specialty and generally is a faculty member with whom the student has been in contact prior to matriculation. 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.

## Upper-Class Advising

Faculty advisor assistance in academic and career planning continues for students throughout their academic careers and includes regular meetings to discuss academic programs, course scheduling, and the relationship of academic programs to career and further education goals. When students select or change a major, they should choose a new advisor in their discipline of choice in consultation with the academic department chair or dean.

## Academic Load

**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 – a minimum of 90 semester hours earned

Junior – a minimum of 60 semester hours earned

Sophomore – a minimum of 30 semester hours earned

Freshman – fulfillment of entrance requirements and less than 30 semester 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
500-699	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. A full refund is given 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. The approval of the academic advisor is required in all cases and, if dropping courses after the semester has begun, the instructors' signatures are also required. After the semester has begun, an official drop/add form must be filed in the Office of the Registrar.

### 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 with-

drawal. 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.

Although an auditor receives no credit, the course will appear on the student's transcript with the notation AU. The hours will not be applied toward meeting graduation requirements nor will the grade of AU be computed in the grade point average. Audit courses are not included in determining full-time enrollment status. 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 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. The total of all transfer hours may not exceed the requirements that must be completed in residence at UE. 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 and the University reserves the right to accept or reject courses for transfer credit. Courses with a grade of C- or lower and institutional exams will not be accepted for transfer credit. Grades are not transferred, only credits are transferred.

## 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. Visit [www.evansville.edu/registrar](http://www.evansville.edu/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, in physical education activity courses, 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.

## 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
I	Incomplete	
P	Pass	
W	Withdrew from course	

All A, B, C, and D grades are passing grades. Grades of I, 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, no course being used to meet a general education requirement, and no courses used to meet foreign language or health and wellness degree requirements 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 time 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 each 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 formally question a course grade 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 taken by the Admissions and Standards Committee.

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 majors. The University reserves the right to dismiss at anytime 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.

Semester and 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

Hours of Credit	GPA
Less than 30	1.6
30-59.9	1.9
60 or more	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 of 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 semester and cumulative grade point averages) will be reviewed at the end of each semester (fall/spring).

### **Academic Probation**

Only students whose scholastic averages are maintained at or above good standing will be permitted to continue in the University.

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

### **Academic Dismissal**

Students who fail to remove probationary status for two consecutive semesters (exclusive of summer terms) will be dismissed automatically 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.

A student dismissed from the University may appeal the decision, but the appeal must be made in writing by the student within a reasonable time, stating reasons for the appeal and explaining any extenuating circumstances. The appeal should be addressed to the Admissions and Standards Committee, to the attention of Center for Academic Advisement. Students should request their faculty advisors submit a recommendation regarding their appeals.

### **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 of time indicates that records are accurate as stated.

## 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. 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 three times a year: at the end of the fall semester, the end of the spring semester, and the end of the 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 Center for Adult Education advisor 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. Students completing degree requirements in the current academic year and following summer sessions may participate in the ceremony. A December commencement is also held for fall graduates.



# College of Arts and Sciences

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*Susan E. Calovini, Dean*

The 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, economics, 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 Japanese, 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.

## Archaeology and Art History

Faculty: Ebeling (Chair), Kaiser, 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, the University's British campus, 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 has a long-standing connection with an excavation at the site of Poggio Civitate (Murlo) in Italy; 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)

*General education* – 41 hours

*Major* – 37 hours

Archaeology 105, 106, 192, 206 or 207; Engineering 283, 285; 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* – 36 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)

*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, 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: Brown, Frasier (Chair), Larmann

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)

*General education* – 41 hours, including Art 401

*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)

*General education* – 41 hours, including Art 401

*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)

*General education* – 41 hours, including Art 401

*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)

*General education* – 41 hours, including Art 401

*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)

*General education* – 41 hours, including Art 401 or Communication 487

*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: Cullen (Chair), Davis, Edwards, Ernsting, 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 phycology, and oceanography. See Professor Edwards for details.

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

### Requirements (120 hours)

**General education** – 41 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 108, 109, 110\* or 430, 117, 118, 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; 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** – 40 hours for Bachelor of Arts  
39 hours for Bachelor of Science

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

### Requirements (120 hours)

**General education** – 43 hours, including Biology 480, 481; Chemistry 118; Mathematics 134 or 221; Physics 121 or 210

**Major** – 37 hours for Bachelor of Arts  
45 hours for Bachelor of Science

Biology 108, 109, 117, 118, 320, 331, 440; 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 480 and 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 hours for Bachelor of Arts  
32 hours for Bachelor of Science

### Biology Minor (18 hours)

Biology 108, 109, 117, 118; 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, 430, 434, 440, 442, 445

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\*Biology 110 plus 1 additional hour of biology independent study



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 or 117, 118, 331, 430, 440, 445; Chemistry 118.

## Preprofessional Health

### Pre-medicine Recommendations

Biology 107 or 117, 108, 331, 425, 427, 430, 440; Chemistry 118, 240, 341, 280 or 360 or 370/371; Mathematics 221; 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, Professor Michael Cullen.

### Pre-dental Recommendations

Biology 107 or 117, 108; Chemistry 118, 240, 341, 280 or 370/371; Communication 110 or 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, Professor Joyce Stamm.

### Pre-optometry Recommendations

Biology 107 or 117, 108, 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, Professor Dale Edwards.

## Pre-veterinary Medicine Recommendations

Biology 107 or 117, 108, 331; Chemistry 118, 240, 280, 341; Mathematics 221, 222; statistics course; Physics 121, 122; 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, Professor Cris Hochwender.

## Chemistry

Faculty: Beckman, Kaufman, Lutgring, Lynch, Miller (Chair), Morrison, 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

*General education* – 42 hours, including Mathematics 221; Physics 210

*Major* – 54 hours

Chemistry 118, 240, 280, 341, 351, 360, 370, 452, 461, 483, 490 (one hour); 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* – 18 hours for Bachelor of Arts  
24 hours for Bachelor of Science

## Requirements (120 hours)

### Basic Chemistry Major

*General education* – 42 hours, including Mathematics 221; Physics 121 or 210

*Major* – 41 hours

Chemistry 118, 240, 280, 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

*General education* – 42 hours, including Mathematics 221; Physics 121 or 210

*Major* – 53 hours

Accounting 210; Chemistry 118, 240, 280, 351, 360, and one chemistry elective; Economics 102; Finance 361; Management 300, 331; Marketing 325; Mathematics 222; Physics 122 or 211; Software Application 110

*Electives* – 25 hours

## Requirements (120 hours)

### Biochemistry Major

*General education* – 42 hours, including Mathematics 221; Physics 121 or 210

*Major* – 61 hours

Biology 107, 108 or 109, 331; one from Biology 427, 430, 440, 442, 445; Chemistry 118, 240, 280, 341, 351, 360, 370, 371, 473, 474, 490 (one hour); one from Chemistry 452, 461, 483; Mathematics 222; Physics 122 or 211

*Electives* – 17 hours

## Chemistry Minor (20 hours)

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

## Secondary Education

Those students preparing to teach chemistry in secondary schools should refer to the appropriate section in the College of Education and Health Sciences.

## 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 a program such as College Year in Athens or the Intercollegiate Center for Classical Studies in Rome. Harlaxton College, UE's British campus, 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)

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

*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)

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

*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, Colter, Connolly, Hennon, 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 is intended primarily for graduate-bound students who wish to learn the fundamentals of perceptual processing, neurophysiology, and human cognition while engaging the principles and theories that guide reflection on them.

At the lower division, students encounter a range of methods (computational and experimental) in the preliminary study of psychology, philosophy, and computer programming. They are also introduced to cognitive science and the research methods used by professionals in the field. At the upper division, students confront the questions of cognition in the context of specialized research from philosophy, neuroscience, and psychology.

In keeping with the interdisciplinary spirit of cognitive science, majors are encouraged to add depth and breadth to their experience according to their choice of a senior thesis topic and the way they use the 31 elective credits permitted by the program. To supplement their degree, students may complete a second major, pick up additional minors, or design their own path through a variety of relevant courses.

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

#### Requirements (120 hours)

*General education* – 41 hours, including Philosophy 221; Psychology 121, 125; Psychology 490 or Philosophy 499

*Major* – 48 hours

Cognitive Science 111, 498; Computer Science 210, 215; Philosophy 231, 324, 445, 447; Psychology 245, 246, 355, 357, 358, 366; two technical electives from Anthropology 416, 440, Computer Science 315, 430, Psychology 326, 450, 457, 466

#### *Electives* – 31 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.

A second major in philosophy or psychology can be completed with the addition of a few courses as part of a student's electives. See the specifics under the philosophy or psychology program areas.

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

#### Cognitive Science Minor (18 hours)

Cognitive Science 111, 498; Philosophy 447; Psychology 125 or 357, 366; one technical elective from Anthropology 416, 440, Cognitive Science 498, Philosophy 221, 324, 445, Psychology 326, 355, 450, 457, 466

(Minors may take an additional section of Cognitive Science 498 as a technical elective if the two sections taken for the minor are on different topics.)

## Communication

Faculty: Shifflet (Chair), Thomlison, 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 four specialty areas: advertising and public relations, journalism, multimedia production, or organizational communication. 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)

**General education** – 41 hours, including Communication 487

**Major** – 25 hours

Communication 130, 211, 221, 231, 251, 390 (3 hours; an additional 6 hours can be earned as electives), 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; two approved journalism electives for Bachelor of Arts

**Multimedia production:** Communication 340, 341, 352; two approved multimedia production electives

**Organizational communication:** Communication 380, 381, 382, 383, 388

**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** – 15 hours for Bachelor of Arts  
21 hours for Bachelor of Science

## Communication Minor (18 hours)

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

# Economics

Faculty: Alhenawi, Bayar, Blalock, Khan, Zimmer

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)

**General education** – 41 hours, including Economics 470 and Mathematics 134 or 221

**Major** – 36 hours

Economics 101, 102, 345, 346, 372, 425; Quantitative Methods 227; 15 hours of economics electives

**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

## Bachelor of Science with a Major in Economics

The Bachelor of Science degree with a major in economics is a combination of general education, major requirements, a supporting area of study, and free electives.

### Requirements (124 hours)

**General education** – 41 hours, including Economics 470 and Mathematics 134 or 221

**Major** – 30 hours

Economics 101, 102, 300, 345, 346, 372, 425; nine hours of economics electives

**Supporting area** – 18 hours (select one)

**Business Administration:** Accounting 210; Finance 361; Management 300 or 377; Marketing 325; Quantitative Methods 227; Software Application 110

Accreditation rules for the Schroeder Family School of Business Administration stipulate that for this degree not more than 25 percent of the total course work taken in business (31 hours) can apply toward graduation. (Of the courses listed above, Software Application 110 and Quantitative Methods 227 are exempt from this requirement.) Consequently, students who wish to complete additional elective course work in business administration should not take course work totaling more than 19 hours in business (defined as accounting, finance, law, management, marketing, and quantitative methods) beyond the courses listed above.

**Public Policy:** Political Science 143; 15 hours of elective courses in politics or law

Students in this area should include Economics 381 among their economics electives.

**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 mass communication, foreign languages, international studies, or computer science. 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

## English

Faculty: Baer, Bone (Chair), Brown, Caldwell, Cirino, Griffith, Hemminger, Hochwender, McMullan, Snow (Harlaxton)

The Department of English offers majors and minors in both literature and 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 degree may be earned in either literature or writing; 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 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)

*General education* – 41 hours

*Major* – 36 hours

Literature 231, 232, 241, 242, and 350; three additional 300-level courses in English literature (Literature 300, 310, 320, 351, 370, 375, 380, or 385); plus four additional 300- or 400-level literature or world literature courses (World Literature 223 may substitute for one of these additional four courses). Literature 330 may 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 Writing

### Requirements (120 hours)

*General education* – 41 hours

*Major* – 36 hours

Literature 241, 242, 350; one additional literature course; Writing 204; minimum of 21 hours from Writing 202, 205, 206, 207, 306, 307, 308, 330, 390, 490, 494, 495; Writing 330 may be taken 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 Fine Arts with a Major in Creative Writing

### Requirements (120 hours)

*General education* – 41 hours

*Major* – 60 hours

Any combination of available courses in writing, literature, and world literature, including Interdisciplinary 200 (International Cinema) and Interdisciplinary 205 (American Cinema); Writing 330 may be taken up to 3 times so long as topics differ

*Electives* – 19 hours

### Literature Minor (21 hours)

Literature 231, 232, 241, 242, 350; one literature elective; World Literature 223

### Writing Minor (21 hours)

Writing 204, 205, 206 or 207, 306, 307, 490 or 495; one writing 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)

*General education* – 42 hours, including Chemistry 118; Mathematics 134 or 221; Philosophy 316; Physics 121 or 210; Political Science 143

*Major* – 49 hours

Biology 108, 109, 118, 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* – 17 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)

*General education* – 42 hours, including Chemistry 118; Mathematics 134 or 221; Philosophy 316; Physics 121 or 210; Political Science 143

### *Major* – 45 hours

Biology 108, 109, 118, 320; Chemistry 240; Environmental Studies 440, 495 (3 hours); Geology 130; Law 201; Legal Studies 380; Management 300; 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* – 21 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 108 or 109, 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 Minor

Core Faculty: Colter, Connolly, Oliver

The ethics minor is an interdisciplinary program designed to help fulfill the core purpose of the University of Evansville to prepare students to engage the world as informed, ethical, and productive citizens. This minor complements any major, providing clear engagement with the ethical dimensions of who we are and how we ought to live as citizens of the world. As an interdisciplinary minor grounded in the liberal arts, the ethics program provides opportunities for disciplined engagement with core human questions and dilemmas. It also offers knowledge of basic methods, theories, and tools in ethical analysis and practice.

The goals of the ethics minor are:

- To explore questions of value, justice, responsibility, and meaning in the realm of human conduct and the moral life
- To understand the fundamental theories and concepts of ethical and moral reflection in both philosophical and religious contexts
- To examine significant ethical issues in the contemporary world and ways in which moral reflection might be brought to bear on them
- To develop the ability to articulate the principles and theoretical underpinnings of students' own ethical frameworks
- To cultivate judgment and a commitment to moral integrity in one's own life and vocation

## Ethics Minor (18 hours)

Philosophy 121; Religion 201 (both of these entry-level courses must be completed with a grade of B- or above)

Three courses from at least two different disciplines: Communication 485; Health Services Administration 406; Philosophy 316, 416, 446; Religion 350, 445

Ethics 401

Other courses may potentially count toward the minor with the approval of the chair of the Department of Philosophy and Religion

## Foreign Languages

Faculty: Andueza, Baker, Ekida, Fraley, Hemminger, Kaiser, Meredig, Mohn, Pieroni (Chair), Pleasant, Quevedo, Stein, Thomas, Ware

In keeping with the global focus of the University of Evansville, the Department of Foreign Languages 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 minors in Japanese studies, Russian studies, Latin American studies and classes in Greek, Hebrew, and Latin. Many students combine a language major with global business or international studies. 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

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

- Students express themselves confidently in a variety of oral and written registers, keeping in mind the communicative context and conventions of the particular culture.
- Students read and comprehend texts in the target language tailored to a variety of communicative needs.
- Students write documents in the target language tailored to a variety of communicative needs, keeping in mind the conventions of the particular cultures.
- Students understand native speech.
- Students demonstrate a familiarity with current events, pop culture, and social structures of the countries and cultures in which the target language is spoken.
- Students demonstrate an understanding of language variation (social, dialectal, and contextual.)
- Students are able to perform a linguistic (synchronic and diachronic) analysis of language.
- Students read literary texts in the target language and analyze them critically using a theoretical framework.
- Students understand literary and artistic movements and the history of ideas.

During their senior year, majors complete an assessment project based on these outcomes.

### Requirements (120 hours)

*General education* – 41 hours, including Foreign Languages 401

*Major* – 39 hours

Proficiency in a second foreign language through the 112 level

**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), 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

*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. Those courses replace University of Evansville courses.

### French, German, or Spanish Minor (21 hours)

Foreign language minors are required to take 21 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. Those courses replace University of Evansville courses.

### Japanese Studies Minor (21 hours)

A minor in Japanese studies is based on an interdisciplinary curriculum utilizing courses in Japanese and other disciplines. It requires 21 credit hours in Japanese studies at the 200-level or above. The required courses are Japanese 211, 212, 311, 312 (Japanese 438 may substitute for any of these); nine credit hours of both elective and affiliated courses with at least three credit hours from Japanese 333 or 438. The affiliated courses are Anthropology 207, Communication 380, Foreign Languages 401, Management 331, Political Science 459, and Religion 212. Study in Japan is strongly recommended.

### Russian Studies Minor (21 hours)

The minor in Russian studies combines Russian language courses with courses taught in English on Russian culture and literature. It requires 21 credit hours at the 200-level or above, including a minimum of 12 hours of Russian language courses (Russian 211-312); two Russian culture courses (Russian 333 and 334); a Russian lit-

erature course (World Literature 344). Nine semester hours of course work at a Russian university may be counted toward these requirements.

### **Latin American Studies Minor** (24 hours)

The minor in Latin American studies is an interdisciplinary curriculum utilizing courses in Spanish, history, and political science. The required courses are: History 352, 353, 448; Political Science 160 or 380; Spanish 211, 212, 311, 320. For more information please contact the chair of the Department of Foreign Languages.

### **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 in one of the University's language facilities.

### **Advanced Courses**

Advanced courses are at the 300-level and have a prerequisite of a 311 course or permission of the instructor. Courses are offered in rotation and address culture, literature, language analysis, 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.

### **Seminars**

Seminars are 400-level courses and have six hours at 300-level or permission of instructor as prerequisites. Advanced students are provided with a range of literature, culture, linguistics, and civilization courses as well as foreign language internship opportunities. Lectures and assignments are in the target language. Please refer to the back of the catalog for individual course descriptions.

### **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, 314, 315, 316, 317, 333; 12 hours, chosen from 415,\* 434, 438,\* Foreign Languages 420

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

**Spanish:** 15 hours, chosen from 311,† 314, 316, 320, 321,† 333, 350; 12 hours, chosen from 410, 433, 438,\* 450, 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

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\*Course may be repeated with content change.

†Required and must be taken at the University of Evansville

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: Blake

The gender and women's studies minor has two major goals: to develop and offer a coherent program of study in gender and women's studies and to promote the understanding of gender and women's issues for a more informed curriculum that reflects new scholarship. 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 life course. Through examining women's history, present conditions, and future possibilities, students will come to understand gender as socially constructed. The curriculum consists of three categories of courses: (1) core courses 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) cross-listed 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.

Core curriculum: Gender and Women's Studies 101 and five additional courses from core, cross-listed, and affiliated courses; at least two of the five additional courses must be from either core or cross-listed courses

### Core Courses

Gender and Women's Studies 101, 492, 493

New courses meeting the criteria of either cross-listed 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.

### Cross-Listed Courses

(See the appropriate department for course descriptions.)

Archaeology 415, Art 493,\* History 320,\* Legal Studies 420, Political Science 290,\* Religion 340, 375

### Affiliated Courses

(See the appropriate department for course descriptions.)

History 418, Interdisciplinary 255, Japanese 333, Psychology 229, Theatre 395,\* World Literature 348

## History

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

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

\*This course number is offered as a special topics course.

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.

These goals can also be advanced through a semester of study at Harlaxton College or a similar overseas center. 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 in England and still complete all degree requirements within four years.

## Bachelor of Arts with a Major in History

### Requirements (120 hours)

*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 three courses from History 311, 312, 313, 314, 317, 318, 319, 320, 321, 322, 324, H378, H379, 381, 383, 418, 438, 450, 482; at least three courses from History 323, 329, 341, 343, 345, 348, 349, 352, 353, 448

*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

### History Minor (21 hours)

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

## 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)

*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 9 hours must be earned from each discipline chosen. Of the total hours earned in each discipline, at least 12 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: Wesley Milner

International studies is an interdisciplinary major that rests on the understanding that twenty-first century problems and careers are not restricted to single disci-

plines. 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)

#### *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* – 24 hours

Economics 101, 102; Political Science 100 or 160; one from Political Science 212, Quantitative Methods 227, Sociology 235; two from Political Science 320, 360, 361, 363, 380, H385, 390, 435, 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* – 12 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, Eurasia and Russia, Middle East, South Asia, the Pacific Rim, Latin America, and Africa. Any appropriate 300- and 400-level courses in anthropology, archaeology, economics, geography, history, modern foreign languages, political science, and world literature may be selected. Students may also incorporate course work from the Schroeder Family School of Business Administration 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 320, 361, 363, 435, 461; one from Political Science 360, 380, H385, 459, 461, 489

Three courses, in consultation with the director, from anthropology, archaeology, history, modern foreign languages, 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, Blake, Dion, Gray, Howard, Kim, Milner (Chair), Pieper, Plikuhn

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, a Bachelor of Science degree with a major in legal studies, and Bachelor of Arts and Bachelor of Science degrees with a major in sociology with specializations in anthropology, general sociology, gerontology, and preprofessional social work. In addition, the department offers 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)

*General education* – 41 hours, including Sociology 105; Criminal Justice 450

*Major* – 39 hours

Criminal Justice 205, 210, 342 or 380, 360, 370, 410; Sociology 230, 235, 327, 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 any four additional 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)

*General education* – 41 hours

*Major* – 36 hours

Political Science 143, 212; one from Political Science 100, 160; one from each of the following four areas:

American politics:\* Political Science 312, 313, 326, 343, 344, 345, 349

International relations:\* Political Science 361, 363, 435, 440, 461

Comparative politics:\* Political Science 320, 360, 380, H385, 459, 489

Political thought and theory:\* Political Science 376, 490

Five courses (15 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 five 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, 363, 380, 435, 459, 461, 489; one course from Political Science 312, 313, 326, 343, 344, 345, 349; one course from Political Science 376, 490

## Bachelor of Science with a Major in Legal Studies

The major is designed to prepare the student to assume the duties of a legal assistant or paralegal. Members of the legal profession need personnel who can assist lawyers at a paraprofessional level. Paralegals assist lawyers in research, development of services and office procedures, collection of information from clients, and preparation and interpretation of legal documents.

The legal studies program is designed for students seeking careers as paralegal professionals. The program provides a broad background in liberal arts and sciences, technical training in legal research and various areas of the law, and an understanding of management appropriate to the legal environment.

### Requirements (120 hours)

*General education* – 41 hours, including Political Science 143; Sociology 105 or 230; Legal Studies 497 or another senior seminar the student is qualified to take

*Major* – 45 hours

Accounting 210; Communication 130; Law 201; Software Application 110 or 120; a three-hour 300- or 400-level political science elective; Legal Studies 125, 300, 301, 491; at least 18 additional hours of legal studies course work chosen in consultation with the faculty advisor

*Electives* – 34 hours

### Legal Studies Minor (18 hours)

Legal Studies 125, 300, 301; three 300- or 400-level legal studies electives

## Legal Studies Postgraduate Certificate (30-33 hours)

The postgraduate certificate program allows students who have a degree from an accredited institution of higher education to take required courses and receive a certificate of recognition. To earn the certificate, students are required to complete 30 hours at the University of Evansville. This is not a degree program.

Applicants must have a 2.0 or higher GPA from their former college or university. For more information

\*Political Science 190, 290, 390, 490, 493, or 499 may be substituted when their topics are appropriate. Political Science 435 may be used to meet either the International relations or the Political thought and theory area but not both.

on the legal studies postgraduate certificate, contact the Center for Adult Education.

Accounting 210; Legal Studies 125, 300, 301, 491; Political Science 143; twelve hours from upper division legal studies courses; Software Application 110 or computer software proficiency

### 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, Professor Deborah Howard.

## Bachelor of Arts or Bachelor of Science with a Major in Sociology and Specializations in Anthropology, General Sociology, Gerontology, or Preprofessional Social Work

The Department of Law, Politics, and Society offers Bachelor of Arts and Bachelor of Science degrees in sociology with specializations in anthropology, general sociology, gerontology, or preprofessional social work. The department also offers a certificate in gerontology.

Sociology and anthropology are behavioral sciences that describe and explain social behavior, while gerontology, and social work are major occupations 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. Anthropology focuses on the development of culture. 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 majors are well-prepared to pursue graduate work in sociology, social work, criminal law, ministry, journalism, business administration, and counseling and health care management.

Students who are planning a career in social work should specialize in preprofessional social work. Career advancement in social work requires a master's degree, and the program is designed to provide students with an excellent knowledge base required by social work graduate programs. Gerontology is an excellent complement to the preprofessional social work specialization.

A representative list of occupations held by departmental graduates is included in the Sociology Student Handbook, available from the department office.

### 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. Students not earning a C- must repeat the course until they earn the required grade.

### Requirements (120 hours)

#### Anthropology Specialization

Designed for students with an interest in non-Western cultures; particularly helpful to students planning to pursue graduate degrees in anthropology

*General education* – 41 hours, including Sociology 450

**Major** – 36 hours

Anthropology 207; Sociology 105, 210, 235, 327, 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** – 37 hours for the Bachelor of Arts  
43 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 and related disciplines; students who plan to enter the job market directly are advised to pursue a business minor.

**General education** – 41 hours, including Sociology 450

**Major** – 39 hours

Anthropology 207; Sociology 105, 210, 230, 235, 327, 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** – 34 hours for the Bachelor of Arts  
40 hours for the Bachelor of Science

**Requirements** (120 hours)**Gerontology Specialization**

Designed for students who plan to work with the elderly population in a wide variety of social settings; prepares students to enter the job market directly or pursue a graduate degree

**General education** – 41 hours, including Sociology 450

**Major** – 57 hours

Anthropology 207; Gerontology 401, 402, 403, 404, 405, 406, 407, 408, 409, 410; Sociology 105, 210, 230, 235, 327, 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** – 16 hours for the Bachelor of Arts  
22 hours for the Bachelor of Science

**Requirements** (120 hours)**Preprofessional Social Work Specialization**

Designed to prepare students for graduate work in the social work field

**General education** – 41 hours, including Sociology 450

**Major** – 45 hours

Anthropology 207; Social Work 120, 329; Sociology 105, 210, 230, 235, 327, 330, 335, 337, 344, 390, 438, 460

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

**Electives** – 28 hours for the Bachelor of Arts  
34 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, mass communication, nursing, psychology, political science, pre-law, or pre-theology 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 207 and any five additional anthropology courses

**Criminal Justice Minor** (18 hours)

Criminal Justice 205, 210 plus any four additional criminal justice courses

**Preprofessional Social Work Minor**

(21 hours)

Sociology 105, 330, 335, 337 or 460, 438; Social Work 120, 329

Students planning to attend graduate school in social work are strongly advised to complete the entire pre-professional social work specialization offered by this department.

**Sociology Minor** (18 hours)

Sociology 105 and any five additional 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 Professor Hanns Pieper, director of the Gerontology Center, at dp5@evansville.edu.

Gerontology 401, 402, 403, 404, 405, 406, 407, 408, 409, 410

## Mathematics

Faculty: Azarian, Davis, Dwyer (Chair), Gruenwald, Kimberling, Salminen, Tweddle, Washington

Courses in mathematics are designed to develop quantitative reasoning skills, conceptual understanding, computational skills, and the ability to effectively communicate in mathematics, the language of the natural and social sciences. In addition, it is hoped that through careful study of mathematics, students will gain an appreciation for both its tremendous power and subtle beauty. Students majoring in mathematics may pursue four options – a Bachelor of Arts, a Bachelor of Science with a supporting application area, a Bachelor of Science leading to certification to teach mathematics at the senior high, junior high, or middle school level, or a Bachelor of Science in predoctoral mathematics. Alternatively, students may pursue a minor in mathematics or take mathematics 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. Students in this program are strongly encouraged to participate in undergraduate research and to spend one semester at Harlaxton College.

**Requirements** (120 hours)

*General education* – 42 hours, including Mathematics 221 and 495

*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 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)

*General education* – 42 hours, including Mathematics 221 and 495

*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

For specific requirements of the minor in business administration, see the Schroeder Family School of Business Administration section.

**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 an elective upper division course in economics; Mathematics 330 recommended as one of mathematics elective courses

This option provides the necessary background for entry, without remedial course work, into most graduate programs in economics.

**Environmental Studies Option** – 28 hours

A minor in environmental studies

For specific requirements of the minor in environmental studies, see the environmental studies section.

**Other Options** – 18 hours minimum

A minor in biology, chemistry, 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)

**General education** – 42 hours, including Mathematics 221 and 495

**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 with a Major in Mathematics Education

This program leads to certification at the senior high, junior high, or middle school levels. In addition, the mathematical training received by students pursuing this major can serve as preparation for graduate study or background for a mathematical career outside of education. For detailed requirements, refer to the College of Education and Health Sciences section of this catalog.

### 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, Cordell, Dallinger, Fiedler, Groulx, Jordan, Josenhans (Chair), Malfatti, Rike, St. John, Steinsultz, Truitt, 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 musical arts, 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)

*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)

*General education* – 41 hours, including Music 498; Psychology 121; Sociology 105

*Major* – 81 hours

Interdisciplinary 433; Music 107, 140 or 141, 142, 184, 188, 241, 242, 264, 266, 286, 287, 288, 350, 355, 356, 366, 384, 386, 387, 388, 486, 487; Psychology 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, psychology with extra music courses, music performance). 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 K-12 levels for each chosen discipline.

### Requirements (126 hours)

#### Vocal Music Education K-12

*General education* – 41 hours, including Music 498; Psychology 121

*Major* – 85 hours

Education 100, 200, 363, 435; Music 140 or 141, 142, 241, 242, 255, 346, 350, 355, 356, 370, 371, 372; 12 hours from Music 478 and/or 479; Psychology 226

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 (132 hours)

#### Instrumental Music Education K-12

*General education* – 41 hours, including Music 498; Psychology 121

*Major* – 91 hours

Education 100, 200, 363, 435; Music 140 or 141, 142, 241, 242, 256, 262, 263, 264, 265, 346, 350, 355, 356, 370, 371, 373, 12 hours from 478 and/or 479; two hours selected from Music 260 or 476; Psychology 226

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** (144 hours)

#### **Vocal and Instrumental Music Education K-12**

This degree combines courses required for the vocal and instrumental degrees. The extra course load requires additional semester(s) to complete.

*General education* – 41 hours, including Music 498; Psychology 121

*Major* – 103 hours

Education 100, 200, 363, 435; Music 102, 103, 140 or 141, 142, 241, 242, 255, 256, 262, 263, 264, 265, 346, 350, 355, 356, 370, 371, 372, 373, 12 hours from Music 478 and/or 479; two hours from Music 260 and 476; Psychology 226

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)

*General education* – 41 hours, including Music 498

*Major* – 82 hours

Accounting 210, 211; Economics 101, 102; Finance 361; Law 201; Management 300 or 377, 311; Marketing 325; Music 140 or 141, 142, 255, 256, 390 (5 hours), 391, 392; Quantitative Methods 227; Software Application 110; 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 the 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)

*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; 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 107, 204, 205, 262, 263, 264, 265, 266, or applied minor; Music 155, 156, 158, 184, 190, 243, 259, 345, 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, followed by two semesters of internship 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

## Sacred Music Certificate (15 hours)

The sacred music certificate can be earned through a 15-hour program that studies elements of Christian sacred music and worship (hymnody and sacred song, worship and liturgy, sacred choral literature, and conducting). The program also includes an internship experience in a local church. Any student pursuing a music degree may enroll in this certificate program. Upon completion of the course work, participants receive a sacred music certificate from the University of Evansville.

Interdisciplinary 254; Music 190, 259, 345, 350, 393, 394

## 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, three 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 cam-

pus. 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 and Opera Workshop provide 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 (Program Coordinator), Cullen, Ernsting, Hennon, Lakey, Stamm

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)

**General education** – 42 hours, including Biology 107; Chemistry 118; Mathematics 134 or 221; Philosophy 121 or 416; Psychology 121; Biology 481/482 or Psychology 490

**Major** – 58 hours

Biology 108, 331, 425, 427; Chemistry 240, 341, 370, 371; Psychology 125, 245, 246, 357, 358, 457; additional 12 credits from either the behavioral neuroscience track or the molecular neuroscience track

**Behavioral neuroscience track** – 12 hours

Biology 333, 350; Physics 121, 122; Psychology 259, 355, 366, 450, 466

**Molecular neuroscience track** – 12 hours

Biology 430, 440, 442, 445; Chemistry 360, 473, 474; Physics 210, 211

**Electives** – 20 hours

## Philosophy

Faculty: Beavers, Colter, Connolly

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)

**General education** – 41 hours, including Philosophy 499 (Students who are pursuing philosophy as a secondary major are not required to take Philosophy 499)

**Major** – 30 hours

Philosophy 121, 211, 221, 231, either 301 or 359, and

five additional philosophy courses at the 300 or 400 level, which may include Cognitive Science 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** – 43 hours

### Philosophy Minor (18 hours)

Any six or more courses in philosophy, which may include Cognitive Science 498

## Physics

Faculty: Boone, Braun (Chair), Brown, 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)

**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)

*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

**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, Professor Joyce Stamm.

Suggested curriculum (62/63 hours): Biology 107 or 117, 108; Chemistry 118, 240, 280 or 370/371, 341; Communication 110 or 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, Professor Deborah Howard.

## 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. More information is available from the pre-medicine advisor, Professor Michael Cullen.

Biology 107 or 117, 108, 331, 425, 427, 430, 440; Chemistry 118, 240, 280 or 360 or 370/371, 341; Mathematics 221; 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, Professor 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-theology

Students intending to attend theological school or seminary for ministerial preparation are required by those schools to complete a baccalaureate degree. While a major in religion is not required for entrance, a religion major provides an exceptional foundation for ministry and is the best preparation for graduate work in theology. Course requirements for the religion major are outlined in the "Religion" section of this catalog. Students intending to pursue ministry should be assigned a pre-theology advisor, regardless of major. Assignment of pre-theology advisors is coordinated by Professor Dianne Oliver, who can also provide further information on pre-theology preparation.

## 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 program of study prepares students for graduate study in social work. Admission requirements of graduate social work programs vary, but the courses included in the social work specialization program 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, Professor Noah Gordon.

Biology 107 or 117, 108, 331; Chemistry 118, 240, 280, 341; Mathematics 221, 222; Statistics course; Physics 121, 122; humanities electives (six hours)

## Psychology

Faculty: Becker, Felton, Hennon, Kopta, Lakey (Chair), 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 40 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)

*General education* – 41 hours, including Cognitive Science 111; Philosophy 121, 416, 445, or Religion 201; Psychology 490

*Major* – 38 hours

Psychology 121, 125, 226, 229, 245, 246, 259; 15 hours of psychology courses numbered 300 or above including Cognitive Science 498

*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 for the Bachelor of Arts

41 hours for the Bachelor of Science

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 37 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, 379, 445, 367, 370, 489

**Clinical Social Work Specialization:** Psychology 333, 379, 367, 370, 489; Social Work 120, 329; Sociology 105, 230 or 438, 335, 337 or 460

**Industrial Business Psychology Specialization:** Accounting 210; Economics 101, 102; Finance 361; Management 300 or 377; Marketing 325, 330; Psychology 356

**Forensic Psychology/Pre-law Specialization:** Criminal Justice 205, 354; two from Criminal Justice 342, 360, 370, 410; Legal Studies 125, 300; Philosophy 231, 446; Psychology 320; two from Psychology 333, 366, 367

**Psychology Minor (18 hours)**

Psychology 121 and a minimum of 15 hours in psychology electives selected in consultation with major advisor and psychology minor advisor

**Religion**

Faculty: Gieselman, Oliver (Chair), Stein, Ware

**Bachelor of Arts with a Major in Religion**

The Department of Philosophy and Religion offers a major in religion with two emphases: biblical studies or theological studies. Students focus their course of study by selecting one of these emphases based on their particular interests within the field of religion. Both emphases provide preparation for seminary or graduate study in religion, an excellent foundation for pre-law or pre-medicine, a comprehensive education for work in non-profit areas or other aspects of ministry, and a well-rounded curriculum for those who find religious questions and issues compelling.

Courses are grouped in three broad areas of study:

(1) biblical studies, focused on critical historical and theological engagement with Old and New Testament Scripture; (2) theological and ethical studies, focused on the study of doctrines, beliefs, and ethical implications of religious ideas and practices; and (3) historical and cultural studies, focused on ways that religious traditions have developed and how they engage the contexts in which they are formed and continue to live.

**Area I: Biblical Studies**

Religion 140, 150, 320, 330, 335, 430, 431

**Area II: Theological and Ethical Studies**

Religion 130, 201, 310, 340, 345, 350, 440, 445

**Area III: Historical and Cultural Studies**

Religion 210, 212, 213, 220, 250, 375, 380

**General Courses**

Religion 481, 492, 499

**Requirements (120 hours)**

**Biblical Studies Emphasis**

Biblical studies offers an interdisciplinary, humanities-based curriculum which focuses on the scholarly study of the biblical text. Core courses in both Old and New Testaments concentrate on the use of contemporary methods and tools of biblical exegesis to illumine the text. Students also gain facility in both biblical languages (Greek and Hebrew), which enables them to read and interpret the biblical text and other ancient texts in the original language. Additional courses in theology, ethics, religion, history, archaeology, and philosophy sharpen students' skills in theological reflection and provide a broader perspective on the ancient world in which the biblical authors lived and wrote.

**General education** – 41 hours, including Greek 111, 112; Religion 499

**Major** – 36 hours

At least five courses from Area I (Biblical Studies), including at least two courses in the Old Testament, and at least two courses in the New Testament

At least one course in Greek numbered 300 or above, and at least one course in Hebrew numbered 112 or above

At least three courses from Areas II (Theological and Ethical Studies) and III (Historical and Cultural Studies) at the 200 level or higher, including at least one course from Area II, at least one from a tradition other than Christianity (Religion 212, 213, or some topics taught as Religion 380), and at least one from Religion 210 or 220

At least one course from Archaeology 311, 492; History 312; Philosophy 211

At least one additional course in religion (Area I, II, or III)

*Additional foreign language* – 6 hours: Bachelor of Arts with a major in religion with a biblical studies emphasis requires proficiency in or completion of Greek 211 and 212

*Electives* – 37 hours

Students are strongly encouraged to take upper-division courses in religion in addition to those required. Other courses than those listed above may be substituted upon approval.

## Requirements (120 hours)

### Theological Studies Emphasis

Theological studies focuses on the academic study of religion, centered in the texts and traditions of Christianity. Students gain an understanding of biblical texts, Christian traditions and Christian theological and ethical thinking in their historical and contemporary contexts. Students engage religious issues and questions of faith and the spiritual quest more broadly, including religious traditions outside Christianity.

*General education* – 41 hours, including Religion 499

*Major* – 36 hours

At least three courses from Area I (Biblical Studies)

At least three courses from Area II (Theological and Ethical Studies)

At least three courses from Area III (Historical and Cultural Studies): at least one of which must be in a tradition other than Christianity (Religion 212, 213, or some topics taught as Religion 380) and at least one of which must be Religion 210 or 220

At least three other courses from among the three areas in religion; this area can also include up to two courses in either Hebrew or Greek that are not being counted to satisfy general education requirements

*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

Other courses than those listed above may be substituted upon approval.

## Religion Minor (18 hours)

The department offers a minor in religion with two emphases: biblical studies or theological studies.

### Biblical Studies Emphasis

At least four courses from Area I (Biblical Studies)

At least one course from Area II (Theological and Ethical Studies) or Area III (Historical and Cultural Studies)

At least one course from Archaeology 311, 492; Hebrew 112; History 312; Philosophy 211; any course in Greek numbered 300 or above

### Theological Studies Emphasis

At least one course from Area I (Biblical Studies)

At least one course from Area II (Theological and Ethical Studies)

At least one course from Area III (Historical and Cultural Studies)

At least one course from a tradition other than Christianity, which can also count to satisfy the Area III requirement above (Religion 212, 213, or some topics taught as Religion 380)

Additional courses in religion to total 18 hours

## Theatre

Faculty: Boulmetis, Brewer, Cowden, Kaufman, Lank, Lutz (Chair), McCrory, Meacham, Nelson, Renschler, 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 majoring in theatre must fulfill the following requirements:

*General education* – 41 hours, including Theatre 465

*Core curriculum in theatre and practicum* – 24 hours  
Theatre 110 or 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 in an area other than theatre such as art history or art studio, literature or writing, music history, or music appreciation

An audition for 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 with a Major in Theatre

The Bachelor of Fine Arts degree with a major 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.

*General education* – 41 hours, including Theatre 465

*Major* – 60 hours

Theatre core and practicum; performance core (Literature 350; Theatre 135, 225, 363 or 364, 481; dance elective; voice elective; an elective in an area other than performance such as Theatre 120, 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

*Fine arts elective* – 3 hours in an area other than theatre

*Electives* – 16 hours

### 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.

*General education* – 41 hours, including Theatre 465

*Major* – 63 hours

Theatre core and practicum; design and technology core (Literature 350; Theatre 120, 135, 220 or 320, 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

*Fine arts elective* – 3 hours in an area other than theatre

*Electives* – 13 hours

## Bachelor of Science with a Major in Theatre

The Bachelor of Science degree with a major 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

*General education* – 41 hours, including Theatre 465

*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 electives

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 13 hours

#### Theatre Design and Technology Major

*General education* – 41 hours, including Theatre 465

*Major* – 45 hours

Theatre core and practicum – 24 hours

Design and technology – 21 hours: Theatre 120, 135, 220 or 320, 335 or 336 or 337; 9 hours of theatre electives

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 13 hours

#### Stage Management Major

*General education* – 41 hours, including Theatre 495

*Major* – 54 hours

Theatre core and practicum – 24 hours (Theatre 291 and 391 replace 290 and 390 for the practicum)

Stage management – 30 hours: Accounting 210 or Communication 381 or 382 or 383 or 388; Management 300 or 377; Theatre 120, 135, 220 or 320, 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

#### Theatre Studies Major

*General education* – 41 hours, including Theatre 465

*Major* – 48 hours

Theatre core and practicum – 24 hours

Theatre studies – 24 hours: Theatre 112 or 172, 120, 135, 220 or 320, 335 or 336 or 337, 481, six hours of theatre electives

Associated study or studies – 21 hours from curricula outside of theatre

*Electives* – 10 hours

## 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)

*General education* – 41 hours, including Economics 102, Mathematics 105 or 134, Philosophy 121, Theatre 465

*Major* – 79 hours

Accounting 210; Communication 211, 221; Communication 322 or Theatre 499; Finance 361; Law 201; Management 377; Management 412 or Theatre 499; Marketing 325; Quantitative Methods 227; Software Application 110; 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)

**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 320, 335 or 336 or 337, 481, 9 hours of theatre electives; four hours from Theatre 190, 290, 390

**Professional Education Requirements** – 36 hours

Education 100, 200, 320, 322, 363, 385, 435, 436, 443, 459

**Electives** – 1 hour

## iBASE: Integrating Business with Arts and Sciences Education

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

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

### Course Work

The iBASE 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 iBASE 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 [ibase.evansville.edu](http://ibase.evansville.edu). A certificate will be awarded at the completion of the program.

# Schroeder Family School of Business Administration

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*Stephen Standifird, 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 the University's British campus, 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, Blalock, Fraering, Johnson, Khan, Montgomery, Mousa, Paglis, Rawski, Rosen, Schaefer, Sherman, Zimmer

### Objectives of the Degree Programs

The Schroeder Family School of Business Administration offers degree programs in accounting and business administration.

The principal objective of the accounting and business administration 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 concentrations in economics, finance, global business, management, management information systems, and marketing. The Bachelor of Arts degree with a major in business administration will allow students majoring in other Bachelor of Arts programs the opportunity to earn a double major.

Programs of study in economics are offered through the College of Arts and Science. 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. In addition, as noted above, the Schroeder Family School of Business Administration offers an economics concentration within the business administration degree program.

### 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, Economics 102, one additional economics course, Quantitative Methods 227, and Software Application 110) 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 227) must earn a Bachelor of Science in Accounting, a Bachelor of Science in Business Administration, or a minor in business.
- 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 fourth semester, students may enroll in 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 general education requirements – 41 hours, (2) the Schroeder Family School of Business Administration common core – 45 hours, (3) at least one concentration area – 12 hours or more per area, and (4) free electives for the balance of the 124 hour total.

**General education** – 41 hours, including Interdisciplinary 150; Management 497; Mathematics 134 or 221

Courses in economics cannot be used to satisfy the Human Behavior and Society requirement.

**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 269, 270, 398; Economics 101, 102; Experiential Education 90; Finance 361; Law 201; Management 310, 311, 377; Marketing 325; Quantitative Methods 227; Software Application 110.

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, stu-

dents 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.

**Concentrations** – 12 hours minimum

**Economics:** Economics 345, 346, two or more 300- and 400-level courses in economics

**Finance:** Finance 362, three or more 300- and 400-level courses in finance

**Management:** Management 306, three or more 300- and 400-level courses in management

**Management Information Systems:** Management Information Systems 350, 355; two from Management Information Systems 445, 450, Management 455

**Marketing:** Marketing 330, 492, two or more 300- and 400-level courses in marketing

**Global Business:** Four courses selected from Accounting 347, Economics 425, Finance 426, Management 331, Marketing 477; demonstrated proficiency at second-year level of chosen foreign language

**Electives** – up to 26 hours depending on the selected concentration

No hours of internship are counted as part of the concentration. Only one independent study or special topics course will be counted in the concentration. 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 concentrations and electives.

Double-counting of courses in the business core, majors, and areas of concentration is not permitted.

## Business Administration Minor (21 hours)

Accounting 210; Economics 102; Finance 361; Management 300 or 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 227; and Software Applications 110) 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 general education requirements – 41 hours, (2) the Schroeder Family School of Business Administration common core – 45 hours, (3) the accounting major area – 22 hours or more, and (4) free electives for the balance of the 124 hour total.

**General education** – 41 hours, including Interdisciplinary 150; Management 497; Mathematics 134, 221

Courses in economics cannot be used to satisfy the Human Behavior and Society requirement.

**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 269, 270; Economics 101, 102; Experiential Education 90; Finance 361; Law 201; Management 310, 377; Marketing 325; Quantitative Methods 227; Software Application 110.

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** – 22 hours

Accounting 150, 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** – 16 hours

University policies mandate that all students must complete at least 39 hours in courses at the 300 and 400 levels. Accounting majors should be mindful of these rules when planning their electives.

Double-counting of courses in the business core, majors, and areas of concentration is not permitted.

## Bachelor of Arts with a major in Business Administration

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 business administration. With proper planning, it is possible to complete a Bachelor of Arts degree with a double major in business administration and one of a selected number of other fields.

**Requirements** (124 hours)

**General education** – 41 hours, including Interdisciplinary 150; Management 497; Mathematics 134 or 221

Courses in economics cannot be used to satisfy the Human Behavior and Society requirement.

**Major** – 39 hours

Accounting 210, 211; Economics 101, 102; Finance 361; Law 201; Management 311, 377; Marketing 325; Quantitative Methods 227; Software Application 110; 6 hours of upper division business electives for which the student has satisfied the appropriate prerequisites. No additional hours in business and economics will be counted towards graduation requirements.

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

**Electives** – 38 hours

The Bachelor of Arts degree program permits students to choose a variety of electives for the purpose of broadening their education or furthering their professional aspirations. It is suggested that students consider an additional major in an area of study that will complement their interests. Students consult with their advisor in selecting from among the many disciplines that are well complemented by business administration.



## Economics

Two degree programs are offered with a major in economics. The Bachelor of Arts degree requires a core of economics courses and allows 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 liberal arts and a variety of attractive professional careers. A major in economics develops students' capacities to reason logically and analytically about a wide range of problems that apply to commerce and public policy. Economics majors find rewarding careers in such diverse fields as banking and finance, management, market research, sales, insurance, real estate, and public service. In addition, a degree in economics is an excellent background for graduate school in business administration, health care administration, law, or public administration. A minor in economics is also available. Requirements for the Bachelor of Arts degree, the Bachelor of Science degree, and the minor can be found in the College of Arts and Sciences section of this catalog.

## 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.

## Special Programs

### Engineering Management and Engineering Entrepreneurship Minors

The College of Engineering and Computer Science offers minors in engineering management and engineering entrepreneurship. See the engineering section of this catalog for information.

### Music Management and Theatre Management

The Departments of Music and Theatre offer Bachelor of Science degrees in cooperation with the Schroeder Family School of Business Administration. See the music and theatre sections of this catalog for information.



# College of Education and Health Sciences

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*Lynn R. Penland, Dean*

The College of Education and Health Sciences is composed of the School of Education, the Department of Physical Therapy, the Department of Exercise and Sport Science, and the Dunigan Family Department of Nursing and Health Sciences. Baccalaureate degrees are offered in the professional areas of athletic training, clinical laboratory science, exercise science, health services administration, nursing, teacher education, sport communication, and sport management. Physical therapy majors earn a doctoral degree in physical therapy. An associate's degree is offered in physical therapist assistance. A master's degree is available in health services administration.

All degree programs in teacher education are fully accredited by the Indiana Department of Education and the National Council for Accreditation of Teacher Education. The nursing program is accredited by the National League for Nursing Accrediting Commission and the Indiana State Board of Nursing. Physical therapy programs are accredited by the Committee on Accreditation in Physical Therapy Education/American Physical Therapy Association. The athletic training program is accredited by the Commission on Accreditation of Athletic Training Education.

# Education

Faculty: Bellamy, Ciscell, Gieselmann, Harper, Knoester, Lewis, McBride, Nayden, Taylor, Watson (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 adopted new licensure requirements in 2009 and will adopt new teacher standards, both with respect to content and pedagogy, in early 2011. These principles and standards pro-

vide the basic framework for the requirements that all teacher education students must meet prior to graduation.

## Harlaxton College in Grantham, England

A semester at Harlaxton College in England 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 is developing a program for fall semesters 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 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).

## 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; multi-grade (P-12) education in special education, physical education, health, 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 mild intervention (special education), English language learners, 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.

## 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 from both advisors 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 must 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 in the School of Education office. Admission to teacher education is granted when the following requirements are met.

- Grade of C or better in Education 100, 200, and 320
- Overall GPA of 2.80 or better
- Passing scores (Indiana) on the reading, writing, and mathematics sections of the Praxis I test; this test must be completed during the freshman year or prior to completion of Education 100 (Education 200 for transfer students and other special cases)
- Submission and approval of the Professional Education Portfolio
- Satisfactory interview with Admission to Teacher Education Committee
- Approval by the School of Education faculty

## Performance Expectations and Standards

Our teacher education program is extensively field 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. The significance of successful performance during these field experiences is vitally important because the students' success is tied directly to children's learning and academic achievement. Some field-based courses may not be repeated without prior approval of the School of Education faculty.

Students are also required to obtain an Indiana Substitute Teaching license once they have completed 60 semester hours of course work; the license must also be registered for one of the local school corporations.

## Student Teaching

Students should consult with their advisors concerning the submission of an application for student teaching. Application forms are available in the Multimedia Center 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 senior high, junior high, middle school, 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.

## 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.

This program leads to an Indiana standard 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 laboratory experiences in local school system classrooms. Education courses with practicum components include opportunities for classroom observation and apprentice teaching. During the senior year a student teaching placement with a master teacher is the final laboratory experience.

Elementary education students must complete a minor with additional courses to extend the teaching coverage of the basic elementary education license. Courses in special education may be completed to add licensure in the areas of mild intervention (learning disabilities and mildly mentally handicapped). Completing the minor in English as a new language will provide licensure in English as a new language. Other available minors are fine arts, world languages, physical education, health, language arts, mathematics, reading, life science, physics, chemistry, historical perspectives, psychology, and sociology. Completing any one of these minors and passing the appropriate 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)

*General education* – 41 hours

**American Traditions** (3 hours) One from History 141, 142; Political Science 143

**Creative Dimension** (3 hours) One from Art 105; Interdisciplinary H282/382; Theatre 110; Writing 205

**Foreign Language** (6 hours or demonstrated proficiency)

**Health and Wellness** (1 hour) One from Exercise and Sport Science 111; Health Education 260

**Human Behavior and Society** (3 hours) Psychology 121

**International Perspectives** (3 hours) One from Geography 120; History 112; Interdisciplinary H282/382; Political Science 100

**Mathematical Thought** (3 hours) Mathematics 101

**Philosophical/Spiritual Dimension** (3 hours) One from Interdisciplinary H282/382; Philosophy 111, 121

**Science and Technology** (7 hours) One from Biology 100, 107; one from Chemistry 100, 118, Physics 100, 121

**Senior Seminar** (3 hours) Education 490

**World Cultures and First-Year Seminar Sequence** (6 hours) First-Year Seminar 120; World Cultures 110

*Additional General Requirements* – 15-18 hours

Art 102 or Music 270; Communication 110 or 380; Environmental Studies 103 or Geography 230; Health Education 160 or evidence of completion of CPR and Heimlich maneuver training; Mathematics 202; Psychology 226

*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* – 4-7 hours

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.

## Senior High, Junior High, and Middle School Education (SH/JH/MS)

**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 standard 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 components include opportunities for classroom observation and apprentice teaching. During the senior year a student teaching placement with a master teacher is the final laboratory experience.

The curriculum of the SH/JH/MS education program requires the completion of at least 124 semester hours, including course work in general education, professional education, teaching majors, teaching minors, and electives.

## Requirements (124 hours)

*General education* – 41 hours, including Education 490 unless otherwise specified in the major teaching area requirements

*Additional General Requirements* – 3 hours

Psychology 226

*Professional Education Requirements* – 36-37 hours

Education 100, 200, 320, 322, 363, 385, 435, 436, 443; select one from Art 497 or Education 451, 453, 454, 456, 457, 459, 460, 461

*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***Visual Arts Education Major** – 33 hours

*General education* – 41 hours, including Art 401

*Major* – 30 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

**English Language Arts Major** – 42 hours

Communication 110; Literature 231, 232, 241, 242, 350, 351, 353; Writing 202, 204, 205, 308; two from World Literature 122, 223, 340

**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**

French 211, 212; choose 15 hours from French 311, 312, 314, 315, 316, 317, 333; choose 12 hours from French 415,\* 434, 438,\* Foreign Languages 420

**German**

German 211, 212; choose 15 hours from German 311, 312, 314, 321, 322, 333; choose 12 hours from German 410, 414, 433, 438,\* Foreign Languages 420

**Spanish**

Spanish 211, 212; choose 15 hours from Spanish 311, 314, 316, 320, 321, 333, 350; choose 12 hours from Spanish 410, 433, 438,\* Foreign Languages 420

**Mathematics Major** – 36 hours

*General education* – Mathematics 495 required for senior seminar

Mathematics 221, 222, 323, 341, 355, 365, 370, 420, 466; Software Application 110; one additional computer course as specified by the Department of Mathematics

**Physical Education Major**

See “Multi-Grade Education Programs” for curriculum requirements.

**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, to include Biology 331, 350, and 427, including 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.”

**Social Studies Major** – 51 hours

Social studies licensing requires the completion of the social studies core, plus three areas of concentration. One of the concentration areas must be Historical Perspectives.

*Social Studies Education Core* – 18 hours

Economics 101; Geography 120 or 240; Political Science 143; Psychology 121; Sociology 105; one additional political science course

*Social Studies Education**Content Concentration Areas* – 33 hours

Students must complete Historical Perspectives and two other areas.

**Economics** – 9 hours

Economics 102, 309 or 381, 346

\*Course may be repeated with content change.

**Government and Citizenship** – 9 hours

Political Science 100 or 160; two additional political science courses at the 300 or 400 level

**Historical Perspectives** – 15 hours

Two from History 111, 112, 141, 142; additional history courses (minimum two upper division) to total 15 hours; at least two courses in U.S. history

**Psychology** – 9 hours

Psychology 229, 259, 450

**Sociology** – 9 hours

Sociology 230, 327; one additional sociology course at the 300 or 400 level

**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, 112, 120, 125, 130, 135, 220 or 320, 335 or 336 or 337, 481; 9 hours of 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.

*English as a New Language Minor* – 19-25 hours

Education students who complete the English as a new language minor in addition to another teacher education major are eligible for licensure to teach English as a new language. The minor is also open to students not majoring in education; however, they would not be licensed for classroom teaching.

**Education majors** – 25 hours

Communication 380; Education 320, 325, 326, 327, 417, 433

**Non-education majors** – 19 hours

Communication 380; Education 325, 326, 327, 417; one 300- or 400-level communication elective

*English Language Arts Minor* – 24 hours

Literature 231, 232, 241, 242; World Literature 223; Writing 202, 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; Software Application 110

*Physical Education and Health Minor* – 22 hours

Exercise and Sport Science 222, 315, 352, 383, 452, 453, 482; Health Education 360

*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, 350

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.

### Physical Education P-12

Physical education licensure can be earned for elementary through senior high levels.

The Bachelor of Science degree with a major in physical education provides the student with an undergraduate degree in education and teacher licensure in the developmental education levels for the state of Indiana. The teacher preparation program provides a structured framework to ensure the student a comprehensive curriculum commensurate with INTASC principles. Physical education majors must select a second teaching area or a minor to fulfill graduation requirements.

#### Requirements (126-143 hours)

**General education** – 41-42 hours, including Biology 100 or 201; Exercise and Sport Science 493; Physics 100

**Professional education requirements** – 31 hours  
Education 100, 200, 363 or 443, 385, 418, 432, 435, 436, 457

**Additional general requirements** – 3 hours  
Psychology 226

**Major** – 35 hours  
Exercise and Sport Science 112, 113, 150, 211, 222, 315, 352, 356, 383, 452, 453, 482

**Second teaching area or minor** – 16-32 hours

### Special Education

The multi-grade (P-12) major in special education is the clinical training program in special education. Successful

completion leads to licensure in mild intervention and intense intervention. In addition to teaching positions, graduates may find employment in clinics, agencies, and centers devoted to the care and education of handicapped persons.

**General education** – 41 hours, including Education 490

**Professional education requirements** – 32 hours  
Education 100, 200, 320, 321 or 323, 324, 422, 435, 437, 439

**Major** – 33 hours  
Education 201, 204, 205, 206, 207, 306, 307, 308, 309, 464; Psychology 226

**Subject Matter Area Concentration** – 15-19 hours

Select one from:

**Language Arts** – 15 hours

Education 330; Literature 241 or 242; World Literature 122; Writing 205, one 300-level writing course

**Mathematics** – 16 hours

Mathematics 101, 105, 202, 221, 310 or 355

**Science** – 17-19 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

## Transition to Teaching

The Transition to Teaching program allows adults who have completed a college degree to participate in an individualized, accelerated program to qualify for teacher licensure. To be recommended for licensure, candidates should need the following: appropriate content knowledge in licensure area, professional education course work including field experience, Praxis I and II scores above the pass level as determined by the Office of Educator Licensing and Development, and a satisfactory GPA and/or appropriate professional experience. Candidates should bring their transcripts and summary of appropriate work experience to the coordinator of Transition to Teaching for evaluation. An individualized list of requirements will be developed for each candidate. These requirements will include professional education course work, field experience, and Praxis I and II. In some cases candidates may be required to take additional course work in their content 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 standard 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

Elementary education majors seeking a JH/MS endorsement may choose one or more of the following teacher minor concentration areas instead of a teaching minor.

### *English Language Arts Minor* – 19 hours

Education 422, 428; World Literature 122 or 223; one 300-level Writing course; one from Literature 231, 232, 241, 242; one from Writing 202, 204, 205, 206, 207

### *Mathematics Minor* – 16 hours

Mathematics 101, 105, 202, 221, 310 or 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

### *English Language Learner Minor* – 25 hours

The minor in English for language learners 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 ELL teacher. This minor is open to students in all schools and colleges within the University. It leads to licensure for education majors.

Communication 380; Education 320, 325, 326, 327, 417, 433

### *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 or 371; three hours from applied music, music ensembles, Music 241, 242, 355, 356, 371

### *Elementary Physical Education and Health Minor* – 22 hours

This minor prepares the elementary education student to teach physical education in the elementary school setting. Students earning this minor are licensed to teach physical education in the early childhood and middle childhood developmental areas. This minor is only applicable to elementary education majors.

Exercise and Sport Science 222, 315, 352, 383, 452, 453, 482; Health Education 360

### *Reading Minor* – 19 hours

Education 322, 325, 330, 421, 427, 428

### *Special Education Mild Intervention Minor* – 24 hours

Education 201, 204, 205, 206, 207, 437, 464

### *Visual Arts Minor* – 17 hours

Art 210, 213, 220 or 221, 325; Art History 208 or 209; one from Art 330, 340, 345

## Exercise and Sport Science

Faculty: Collins, Coppus, Hodges, Jensen, Miller, Patel, Rodd, Tilly, Washington, Wilson (Chair)

The Department of Exercise and Sport Science 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 department offers distinct academic majors in athletic training, applied and preprofessional exercise science, exercise science administration, clinical laboratory science, physical edu-

cation, sport communication, 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 National Athletic Trainers' Association Board of Certification (NATA-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 education program is accredited by CAATE. The University of Evansville's athletic training education 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 or the Associate of Science in Physical Therapist Assistance. 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 111, 112, 113, 150, 244 (2 hours); Health Education 160; 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 2.5
- Completion of a physical from the ATEP's medical director
- Completion of the ATEP technical standards
- Completion of a written application
- Personal interview
- 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)

*General education* – 41 hours, including Exercise and Sport Science 111, 493

*Major* – 74 hours

Athletic Training 280, 282, 287, 291, 292, 350, 388, 389, 390, 391, 392, 490, 491, 492; Exercise and Sport Science 112, 113, 150, 221L, 244 (2 hours), 320, 352, 356, 388, 427, 451; Health Education 160, 260; Health Services Administration 406; Physical Therapy 100

*Electives* – 5 hours

## **Bachelor of Science with a Major in Clinical Laboratory Science**

A clinical laboratory scientist or a medical technologist 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)

*General education* – 42 hours, including Chemistry 118; Exercise and Sport Science 111, 493; Mathematics 134; Physics 121

*Major* – 93 hours (includes 32 clinical hours)

Biology 107, 108, 331, 430, 434, 442; Chemistry 240, 341, 360, 370; Exercise and Sport Science 112, 113, 150, 478; Physical Therapy 100; Physics 122; Sociology 344 (or other statistics course); one from Biology 321, 440, 445

## **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.

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 or



medical schools. Students are prepared for careers in preventative and rehabilitative exercise and wellness programs as well as to work with healthy populations in maintaining healthy lifestyles.

The exercise science major has three tracks – the applied track, the preprofessional track, and the administrative 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)

*General education* – 41 hours, including Chemistry 100, 108 or 118; Exercise and Sport Science 111, 493; Physics 100 or 121

#### *Major* – 64 hours

Athletic Training 280; Biology 100 or 107; Exercise and Sport Science 112, 113, 150, 222, 300, 320, 352, 356, 383, 388, 415, 417, 427, 428, 451, 453, 488 (8-12 hours); Physical Therapy 100; Sociology 344

#### *Electives* – 15 hours

### Exercise Science Administration Track

This combined degree is designed for students interested in careers in managerial positions such as wellness administrators capable of having a significant impact on the health and well-being of numerous constituencies. Students gain an understanding of the principles of sound management, cost containment, and accountability for managing facilities, as well as the basic principles and concepts of exercise physiology needed for effective leadership in this area. Students can earn both the undergraduate and DPT degrees in either six or seven years depending on the selected track.

The unique program offers students the opportunity to complete both a bachelor's degree in exercise science administration and a master's degree in health service administration in just five years, or to complete their bachelor's degree only, depending on student interest and professional goals.

### Requirements (145 hours)

*General education* – 41 hours, including Chemistry 100, 108 or 118; Exercise and Sport Science 111; Health Services Administration 490; Physics 100 or 121

#### *Major* – 77 hours

Accounting 210, 211; Economics 101, 102; Exercise and Sport Science 112,\* 113,\* 320, 352, 388, 427, 488 (6 hours); Finance 361; Gerontology (3 hours); Health Services Administration 405, 406, 414, 420; Law 201; Management 300 or 377, 311; Marketing 325; Physical Therapy 100; Quantitative Methods 227; Software Application 110; One additional 300- or 400-level business class

#### *Master's level courses* – 27 hours

Health Services Administration 507, 512, 516, 524, 528, 529 (6 hours), 532, 567

### Preprofessional Exercise Science Track

The preprofessional 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, medical, and podiatry schools.

#### Requirements (120 hours)

*General education* – 42 hours, including Biology 107; Chemistry 118; Exercise and Sport Science 111, 493

#### *Major* – 64.5/68 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; Sociology 344

Four from the following: Athletic Training 280; Biology 110; Exercise and Sport Science 222, 300, 383, 451, 452, 453; Gerontology 401; Health Services Administration 405, 406; Psychology 125, 357

(For students planning to attend medical school, it is recommended to take the following courses: Biology 331, 425, 430, 440; Chemistry 280 or 360, 341)

#### *Electives* – 10-13½ hours

\*Exercise and Sport Science 220 can replace 112 and 113

## 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 out 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 Departments of Exercise and Sport Science and Physical Therapy offers students the opportunity to combine a BS in exercise science (either the preprofessional 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.

### 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, 383, 388, 415, 427, 451, 453

### 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 and Sport Psychology Minor

(20 hours)

Exercise and sport psychology is a rapidly growing sub-discipline 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 Departments of Exercise and Sport Science and Psychology.

Exercise and Sport Science 352, 451, 453; Psychology 229, 357, 470; Exercise and Sport Science 218 or Psychology 226

### Health Minor (25 hours)

The health minor is designed for students interested in the areas of personal, community, environmental, or school health programs. Special attention is given to secular trends in health and wellness and the impact these have on society. This minor also qualifies education majors for a license in teaching health education.

Biology 100 or 107; Environmental Studies 103; Exercise and Sport Science 112, 113; Exercise and Sport Science 320 or Nutrition 304; Health Education 160, 260, 360

## Bachelor of Science with a Major in Physical Education K-12

The Bachelor of Science degree with a major in physical education provides the student with an undergraduate degree in education and teacher licensure in the developmental educational levels for the state of Indiana. The teacher preparation program provides a structured framework to ensure the student a comprehensive curriculum commensurate with Interstate New Teacher Assessment and Support Consortium (INTASC) principles. Physical education majors must select a second teaching area or a minor to fulfill graduation requirements.

### Requirements (126-142 hours)

*General education* – 41-42 hours, including Biology 100 or 201; Exercise and Sport Science 493; Physics 100

*Professional education requirements* – 31 hours  
Education 100, 200, 385, 418, 432, 435, 436, 443 or 363, 457

*Additional general requirements* – 3 hours  
Psychology 226

*Major* – 35 hours

Exercise and Sport Science 112, 113, 150, 211, 222, 315, 352, 356, 383, 452, 453, 482

*Second teaching area or minor* – 16-32 hours

## Elementary Physical Education and Health Minor (22 hours)

The minor prepares the elementary education student to teach physical education in the elementary school setting. Students obtaining this minor are licensed to teach physical education in the early childhood and middle childhood developmental areas. This minor is only applicable to elementary education majors.

Exercise and Sport Science 222, 315, 352, 383, 452, 453, 482; Health Education 360

## Secondary and Middle/Junior High School Physical Education and Health Minor (22 hours)

The minor prepares the secondary and middle school student to teach physical education in this setting. Students earning this minor are licensed to teach physical education in early adolescent, adolescent, and young adult developmental levels. This minor is only applicable for secondary and middle/junior high school education majors.

Exercise and Sport Science 222, 315, 352, 383, 452, 453, 482; Health Education 360

## 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

## Bachelor of Science with a Major in Sport Communication

An ever-increasing number of opportunities exist in the field of sport communication due to the increasing amount of sport-related activity that appears on television, radio, and print communication outlets. The sport communication major is a collaborative academic program with the Department of Communication that provides a well-rounded sport communication background, that allows students to focus on broadcast, print, or web-related areas of specialization. This major provides experiences for students wishing to find

employment as sports information director, sports writer, radio or television reporter or announcer, public address announcer, or with sport-related websites.

## Requirements (120 hours)

*General education* – 41 hours, including Exercise and Sport Science 493

*Major* – 61 hours

Communication 110, 130, 211, 221, 231, 251, 485; 15 hours from Communication 312, 322, 332, 333, 340, 341, 352, 380, 381, 382, 383, 388; Exercise and Sport Science 150, 211, 218, 244, 245, 250, 350, 451, 488 (8-12 hours)

*Electives* – 18 hours

## Bachelor of Science with a Major in Sport Management

The explosive growth of sport at all levels has greatly increased the need for management, marketing, and administrative professionals with sport-specific knowledge and expertise. It is estimated that sport marketing and management represent a \$200 billion national industry. This major prepares students to work in a business-related area of sport, such as a director of athletics, manager of a sporting arena, or owner or director of a fitness center.

## Requirements (120 hours)

*General education* – 41 hours, including Economics 102; Exercise and Sport Science 493

*Major* – 60 hours

Accounting 210; Communication 110; Exercise and Sport Science 150, 211, 218, 244, 255, 350, 451, 488 (8-12 hours); Finance 361; Law 201; Management 300 or 377; Marketing 325; two from Communication 211, 221, 231, 251; four from Accounting 211, Finance 362, Legal Studies 350, Management 430, Marketing 330, 490, 492

*Electives* – 19 hours

## Sport Communication Minor (24 hours)

This minor is designed for students interested in working in one of the growing areas of print, audio, or web-based productions, or television sport communication. Students take part of their major courses through the Department of Exercise and Sport Science with the

remaining courses through the Department of Communication. The curriculum provides fundamental knowledge of the various fields within sport communication, providing students with a broad understanding of this growing field.

Communication 110, 130; Exercise and Sport Science 211, 218, 245, 488 (2-3 hours); two from Communication 211, 221, 231, 251; one from Communication 312, 322, 332, 333, 352

### **Sport Management Minor** (24 hours)

This collaborative minor with the Schroeder Family School of Business Administration 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; Communication 110; Economics 102; Exercise and Sport Science 218, 244, 350, 488 (2 hours); two from Accounting 211, Finance 361, 362, Legal Studies 350, Management 300 or 377, 430, Marketing 325, 330, 490, 492

### **Sport Studies Minor** (20 hours)

The sport studies minor provides students with a broad perspective of sport and promotes understanding of the historical, philosophical, psychological, and sociological implications of sport for the individual and society.

Exercise and Sport Science 211, 218, 244, 245, 350, 451, 488 (3 hours); complete any of the following courses to total a minimum of 20 hours Exercise and Sport Science 250, 255, 491

### **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 Department of Nursing and Health Sciences**

Faculty: Bailey, Blue, Fedor-Bassemier, Hall (Chair), LaMar, Lever, Marshall, Rea, Schaefer, Stroube, Wooton

The Dunigan Family Department of Nursing and Health Sciences prepares health care professionals in nursing and health services administration. All health care practitioners share the goals of restoring, maintaining, and promoting optimal health for their clients 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 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.

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)

**General education** – 42 hours, including Economics 101; Health Education 260; Mathematics 105, 134, 221

**Major** – 63 hours

Accounting 210, 211; Economics 102; Finance 361; Gerontology (3 hours); Health Services Administration 405, 406, 414, 420, 490, 498 (6 hours); Law 201; Management 300 or 377, 311; Marketing 325; Physical Therapy 100; Quantitative Methods 227; Software Application 110; 8 hours selected from Health Education 160, Health Services Administration 499, Nursing 490 or Health Sciences 290, Nutrition 304, Philosophy 416\*, Sociology 337

**Electives** – 20 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 (Quantitative Methods 227 not required in the combined degree program)

## 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 National League for Nursing Accrediting Commission, 3343 Peachtree Road NE, Suite 500, Atlanta, Georgia 30326, [www.nlnac.org](http://www.nlnac.org), 404-975-5000, ext. 153. It is also accredited by the Indiana State Board of Nursing. The Dunigan Family Department of Nursing and Health Sciences 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 2.00 and a nursing cumulative GPA of at least 2.25. 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 280, 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

\*Philosophy 416 cannot be used to satisfy both a general education requirement and an HSA major requirement.



not limited to, immunization, testing and lab fees, criminal background checks, drug screen, professional insurance, 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 (minimum 32GB). 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.

## Admission

Minimum requirements for admission to the program include ranking in the upper one-third of the student's high school graduating class, a minimum of three years of mathematics and English and two years of science (including grades of C or above in two semesters of chemistry), and SAT scores of 1500 or above (critical reading, mathematics, and writing combined) or ACT scores 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 Department of Nursing and Health Sciences for specific admission and transfer policies.

### Nursing at Harlaxton College in Grantham, England

Nursing course work is offered in the fall semester at the University's Harlaxton College near Grantham, England. Students at the senior level in the nursing program may have an opportunity to participate. For details, contact

the Dunigan Family Department of Nursing and Health Sciences.

## RN to BSN Program

The University of Evansville offers registered nurses (RNs) an opportunity for advanced placement in the baccalaureate nursing program. 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 program requires a total of 128 credit hours. RN to BSN students are able to transfer up to 60 credits from other accredited colleges or universities. Twenty-six of these hours are used to satisfy general education and elective credit hours. Upon successful completion of Nursing 351 (Transition to Professional Nursing), RNs from state-approved diploma or associate's degree nursing programs receive credit for 33 hours in nursing and 3 hours for pharmacology. While at UE, RN to BSN students complete a total of 10 nursing courses, which total 33 credit hours. The remaining 35 hours taken at UE include general education courses and other elective hours required by UE and the nursing program for graduation.

## Admission Requirements for the RN to BSN Program

- Admission to the University of Evansville
- Unencumbered current U.S. registered nurse license
- Graduate from state approved diploma or associate degree nursing program
- Minimum cumulative college GPA of 2.5

## Requirements (128 hours)

*General education* – 41 hours, including Biology 110; Chemistry 108 or 118; Nursing 484; Psychology 121, Sociology 105

*Major* – 61 hours

Nursing 160, 165, 261, 262, 264, 271, 272, 361, 362, 363, 364, 371, 373, 374, 385, 466, 467, 468, 476, 477, 478

*Other required courses* – 17 hours

Exercise and Sport Science 112, 113; Health Sciences 205; Nutrition 280; one from Psychology 245, Quantitative Methods 227, Sociology 344

*Electives* – 9



# Physical Therapy

Faculty: Catena, Chambliss, Cunningham, Hahn, Kalb, Kessler (Chair), Kiesel, Martin, McFelea, McGraw, Plisky, Szczepanski, Underwood

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 in the art and science of preventing, restoring, maintaining, and promoting optimal human health and patient function. Both programs are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

Students may participate in the following professionally related associations: 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 interventions. 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 comple-

ment the program include exercise science, athletic training and psychology.

## Requirements (72 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; World Cultures 110 Writing Section

## Clinical Internships

Various clinical facilities are used in the educational preparation of students. The Department of Physical Therapy affiliates with approximately 300 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 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 based on current best evidence. 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 as freshmen. A limited number of direct entry positions are available to high school students who have received either a 27 on the ACT or a combined score of 1800 on the SAT and who apply to the University by November 1.

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 will apply to the DPT program during the summer following their sophomore year (3+3 track) or junior 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 at 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, the United Kingdom, Europe, Australia, and Argentina.

## Prerequisite Courses

Prerequisite courses must be taken prior to beginning the professional program. All science courses must be designed for science majors. Other designs will not be accepted. Online courses are not accepted for Biology 107, Chemistry 118 and 240, Exercise and Sport Science 112, 113, Physics 121 and 122. Once a student has matriculated at the University of Evansville, only 10 credit hours may be completed at another institution. All courses must be approved in advance by the University of Evansville's Office of the Registrar as equivalent to the University's course. All undergraduate courses must be completed with a grade of C- or higher. Four of the following science prerequisite courses must be completed at the time of application: Biology 107; Chemistry 118, 240; Exercise and Sport Science 112, 113; Physics 121, 122. Only two prerequisite courses, with the exception of Medical Terminology, may be repeated. The higher grade will be used to calculate the student's prerequisite science and math grade point average.

### Prerequisite Courses

#### Taken by University of Evansville Students

Biology 107<sup>\*†</sup>; Chemistry 118,<sup>\*</sup> 240<sup>\*</sup>; Exercise and Sport Science 112,<sup>\*</sup> 113<sup>\*</sup>; Mathematics 105<sup>\*\*</sup> (or demonstrated proficiency); Physical Therapy 100; Physics 121,<sup>\*</sup> 122<sup>\*</sup>; Psychology 121<sup>†</sup>

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.

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\* Science or mathematics prerequisite (courses used to calculate the science and mathematics grade point average)

† Meets general education requirement.

‡ Mathematics 105 fulfills the physical therapy prerequisite and the University general education requirement.

## 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.

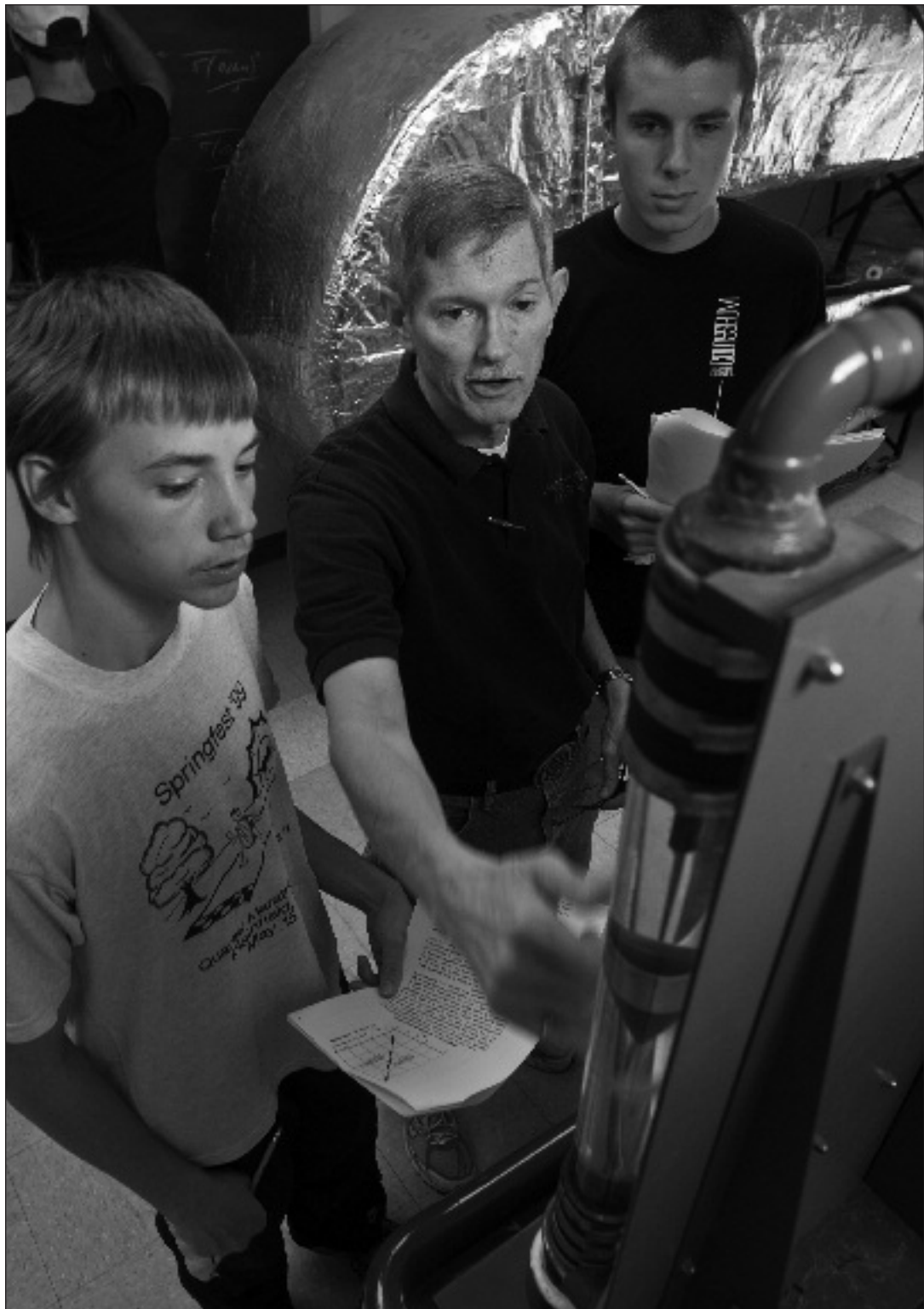
Students on the 3+3 track complete all remaining undergraduate degree requirements during the fourth year and graduate with a bachelor's degree in May of their senior year. The students' fifth and sixth years are devoted to DPT courses. Students on the 4+3 track will enroll in the professional DPT courses in years five, six, and seven. One or two undergraduate degree requirements may be completed during the first year of the professional program. 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 (113 hours) (Subject to Change)

Biology 436; Physical Therapy 411, 413, 417, 421, 422, 431, 432, 434, 441, 442, 451, 452, 522, 523, 524, 526, 531, 533, 541, 542, 543, 544, 551, 552, 561, 626, 627, 628, 631, 632, 642, 651, 661, 662, 663



# College of Engineering and Computer Science

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*Philip M. Gerhart, PE, 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, and computer science. Minors in engineering management and engineering entrepreneurship are offered in conjunction with the Schroeder Family School of Business Administration. Administrative responsibility for the interdisciplinary program in Internet technology lies within the college. The college also offers courses in software application for all University of Evansville students except those in the college. The Department of Electrical Engineering and Computer Science offers the Master of Science in Computer Science and Engineering and 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. Their knowledge 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, world-mindedness, industry, 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, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700. The computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700.

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 is based on standardized test

scores (SAT or ACT) and specific high school course work grades. **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
- Two years of science including at least one year of chemistry with a laboratory and an average grade of B
- Four years of English

Applicants whose native language is not English must achieve a score of 550 on the TOEFL exam.

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

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 six 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 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 10 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.

## Software Application

Faculty: Hughes, Zimmer (Coordinator)

Software application courses perform a service role to all degree programs in the University except those in the College of Engineering and Computer Science. Their purpose is to provide students from all fields of study with computer literacy and a working knowledge of the most widely used software tools.

Although specific course content evolves over time as new software products are developed, software application courses are intended to provide laboratory-based instruction to develop students' ability to become independent learners of new software applications.

## Engineering Management, Engineering Entrepreneurship, and the Energy Engineering Certificate

Program Director: Gerhart

Minors in engineering management and engineering entrepreneurship are 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.

The minor in engineering entrepreneurship is available only to students pursuing a degree in engineering or computer science. The minor is especially appropriate for students who desire to start a business or to develop new business ventures within the context of a larger company.

### Engineering Management Minor (18 hours)

The following courses are required for students whose major is civil engineering, computer engineering, electrical engineering, mechanical engineering, or computer science.

Economics 101\* or 102\*; Engineering 390, 409; Interdisciplinary 150\*; Management 300 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\*

### Engineering Entrepreneurship Minor

(18 hours)

The following courses are required for students whose major is civil engineering, computer engineering, electrical engineering, mechanical engineering, or computer science.

Accounting 210; Economics 101\* or 102\*; Engineering 469, 470; Interdisciplinary 150\*; Marketing 325 or Law 201

### Energy Engineering Certificate

(12 hours)

A certificate in energy engineering is available to students in the engineering programs. Students may earn the certificate by completing the following requirements:

Electrical Engineering 430; 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), 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 three baccalaureate degrees and one master's degree: Bachelor of Science in Electrical Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Computer Science, and Master of Science in Computer Science and Engineering. Both the electrical engineering and computer engineering programs are accredited by The Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700. The computer science program is accredited by the Computing Accreditation Commission (CAC) of ABET, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700. 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, UE's British campus, will follow a modified course schedule and should consult their academic advisor.

### Objectives

The electrical engineering, computer engineering, and computer science programs share the following objectives:

- 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 computer science, either as individuals or in teams.

\* May be used to satisfy general education requirements

† Civil engineering students must take Management 310 because Civil Engineering 324 is required for the BSCE.

- Graduates will be active ethical participants in a local, national, or global society.

These objectives apply to graduates in the three to five years after graduation.

## Master's Degree

The Department of Electrical Engineering and Computer Science offers a master's degree in computer science and engineering. This is a terminal master's degree and is not intended for those who wish to pursue a PhD at a later time. Please refer to the graduate section of this catalog for further information.

## 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).

**General education** – 37 hours, including Chemistry 118; Electrical Engineering 495; Mathematics 221; Physics 210; foreign language proficiency requirement

**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, 413, 421, 430, 454, 470, 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 305, 312, 330, 331, 416, 421, 427, 471; one only of Engineering 213, Mechanical Engineering 362, Physics 213/214; at least 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 413, 430, 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 biomedicine.

## 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 the programming languages such as 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, IT, and ME).

**General education** – 37 hours, including Biology 107 or Chemistry 118; Computer Science 495; Mathematics 221; Physics 210; foreign language proficiency requirement



**Basic level required courses** – 32-33 hours

Computer Science 101, 210, 215, 220, 290; Engineering 390 or Mathematics 365; Mathematics 222, 323, 370; one from Biology 108, 109, 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, 415, 430, 440, 475, 478, 480, 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 110, 382; Philosophy 111, 121, 231, 316, 416

**Free electives** – 18-19 hours

Take free electives to complete 124 hours (not including foreign language 111, 112). 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, software application courses, Information Technology 120, Writing 104, 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

**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 semes-



ter-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).

*General education* – 37 hours, including Chemistry 118; Computer Science 495 or Electrical Engineering 495; Mathematics 221; Physics 210; foreign language proficiency requirement

#### *Basic level required courses* – 40 hours

Computer Science 210, 215; Electrical Engineering 210, 215, 254; Engineering 101; Mathematics 222, 323, 324, 370; Physics 211; at least one of Engineering 390, Mathematics 365

#### *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, 480, 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.

## Mechanical and Civil Engineering

Faculty: Allen, Doane, Gerhart, Layer (Mechanical Engineering Program Director), Selvaraj, Stamps, Swenty (Chair), Tipton, 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, 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012; telephone 410-347-7700. The department also offers courses in support of the minors in engineering management and engineering entrepreneurship and the certificate in energy engineering. The recommended co-op option has course requirements identical to those listed in this section; however, students follow a modified course schedule as described in the “Co-op Program” section under the College of Engineering and Computer Science in this catalog.

Students desiring to study at Harlaxton College, UE’s British campus, follow a modified course schedule and should consult their academic advisor.

### Civil Engineering

Civil engineering is a profession concerned with improving the quality of life. 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. This is accomplished by meeting the following program objectives:

- 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 our British campus, Harlaxton College. A student chapter of the American Society of Civil Engineers (ASCE) is sponsored by the department to support and encourage the professional development of the student. UE's award-winning ASCE chapter has been recognized as one of the best in the nation. Students may also participate in the college-wide chapter of the Society of Women Engineers and Chi Epsilon (the national civil engineering honor society).

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 of civil engineering fundamentals. This is achieved through a set of required core courses in the areas of materials, structural engineering, hydraulic 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, structural design, engineering economics, engineering hydrology, environmental engineering, and special topics such as earth dams, open channel hydraulics, and highway engineering.

Students are introduced to engineering design in the fall of their freshman year in Engineering 101. The small number of freshmen in each section of this course facilitates close interaction with a faculty member who is also the student's advisor. Past freshman projects include the design of balsa wood bridges and retaining walls. Upper-classmen 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 water-powered vehicle in Engineering 366, a steel frame walkway in Civil Engineering 341 and a concrete baseball bat in Civil Engineering 331. Design is heavily emphasized in the 400-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: spreadsheets, AutoCAD, and slope stability software in Civil Engineering 438; structural analysis software to design reinforced concrete and steel structures in Civil Engineering 449; open channel hydraulic software to design channel modifications in Civil Engineering 469, and rainfall runoff modeling software to design sustainable, environmentally sound 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, land developments, and hydraulic structures, which require the design of spillways, roadways, sewer collection systems, water distribution systems, storm water management structures, embankments, and retaining walls. In order to obtain a broad design experience and exposure to practical design criteria, students interact with design professionals and prepare applications for local, state, and federal permits at the completion of the senior project.

After completing the civil engineering curriculum, students have 33 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).

**General Education** – 37 hours, including Chemistry 118; Civil Engineering 495; Mathematics 221; Physics 210; foreign language proficiency requirement

**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, 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, UE’s British campus.

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. Our program objectives include:

- Graduates shall be engaged in professional practice, continuing education, and/or other activities benefiting 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 funding from external sources 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 spon-

sored 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 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 philosophy prepares our graduates to enter the professional practice of mechanical engineering or to further their education in graduate school.

## 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 101, 212, 213, 232; First-Year Seminar 120; Mathematics 221, 222, 323, 324; Mechanical Engineering 197, 297; Physics 210; World Cultures 110.

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).

*General education* – 37 hours, including Chemistry 118; Mathematics 221; Mechanical Engineering 495; Physics 210; and the foreign language proficiency requirement

**Lower division required courses** – 44 hours

Electrical Engineering 210, 215; Engineering 101, 212, 213, 230, 232; Mathematics 222, 323, 324; Mechanical Engineering 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

**Technical electives** – 9 hours

One of Mechanical Engineering 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, or chemistry

**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.

## Internet Technology

Faculty: Morse (Director), Shifflet (Associate Director)

The interdisciplinary program in Internet technology prepares students for careers in Internet project development and advanced study in information technology or computer science. Students in this program learn about the structure and operation of the Internet in an applied context of website development, database management, and computer programming. They also learn conceptual tools for analyzing and evaluating the Internet, both as a vehicle for information exchange and as a tool of commerce. Majors are frequently involved in projects, as individuals and as team members, in an environment that stresses both theoretical understanding and experiential learning.

Internet technology majors take courses in a variety of disciplines – business, computer science, information technology, and communication – to help develop the full range of skills necessary for success in several web development professions. Two major tracks are available, the standard and the intensive tracks. The intensive track requires more work with formal reasoning and mathematics and delves more deeply into the computer science behind the Internet. Students interested in graduate study are strongly encouraged to pursue the intensive track.

Both major tracks are rich in free electives; nine courses in the standard track, eight in the intensive. Students are encouraged to complement their degree by choosing wisely from courses in accounting, communication, computer science, economics, finance, legal studies, management, marketing, mathematics, political science, psychology, sociology, and visual communication. Due to overlapping course requirements between programs, minors in business administration, communication, computer science, and mathematics are easily attainable by adding a small number of courses to the Internet technology curriculum.

In addition to course work, students pursuing both major tracks are required to complete an internship or the co-op program.

To supplement other majors on campus, the Internet technology program offers an 18-hour minor that teaches the basic elements of website design, computer programming, and database management. Though generally applicable to most majors at UE, this minor is particularly useful for majors in business, education, and communication.

## Bachelor of Science in Internet Technology

To earn a Bachelor of Science in Internet Technology, students must meet the general education requirements for baccalaureate degrees, as specified in the front of this catalogue, and the specific requirements listed below.

Note that Information Technology 251 and 352 are cross-listed with Communication 251 and 352. Students who have already taken these courses under their non-information technology numbers may not repeat the courses under their information technology numbers. The approved substitute for Information Technology 310 is Computer Science 475. The approved substitute for Information Technology 445 is Computer Science 440.

### Standard Track Requirements (120 hours)

**General education** – 41 hours, including Economics 102; Information Technology 490 or Computer Science 495 or Communication 487; Mathematics 134 or 221

### **Computer science and information technology courses** – 30 hours

Computer Science 210, 215, 290, 390; Information Technology 251, 310, 352, 445, 490; Information Technology 120 or Computer Science 101

*Statistics courses* – 3 hours

Quantitative Methods 227 (Psychology 245 or Sociology 344 may be substituted for Quantitative Methods 227 with the approval of the student's advisor)

*Other disciplinary courses* – 21 hours

Communication 485; Management 300 or 377, 311; Marketing 325, 490; Philosophy 231; Psychology 121

*Technical electives* – 6 hours

Select two from the following courses: Communication 490; Computer Science 350, 355, 381, 415, 430; Information Technology 499; Mathematics 222; Philosophy 447

*Free electives* – 18-19 hours

Students are encouraged to use these electives for courses that complement the Internet technology degree.

*Other requirements*

Students must complete an internship or co-op experience.

**Intensive Track Requirements** (120 hours)

*General education* – 41 hours, including Communication 487 or Computer Science 495 or Information Technology 490; Economics 102 or Psychology 121; Mathematics 221

*Computer science and*

*information technology courses* – 30 hours

Computer Science 210, 215, 290, 390, 440, 475; Information Technology 251, 352, 490; Information Technology 120 or Computer Science 101

*Mathematics and statistics courses* – 10 hours

Mathematics 222, 370; Engineering 390 or Quantitative Methods 227

*Other disciplinary courses* – 21 hours

Communication 485; Management 300 or 377, 311; Marketing 325, 490; Philosophy 231; Psychology 121

*Technical electives* – 6 hours

Select two from the following courses: Communication 490; Computer Science 350, 355, 381, 415, 430; Information Technology 499; Philosophy 447

*Free electives* – 12 hours

Students are encouraged to use these electives for courses that complement the Internet technology degree.

*Other requirements*

Students must complete an internship or co-op experience.

**Internet Technology Minor** (18 hours)

Computer Science 205 or 210 or Engineering 123; Information Technology 120, 251, 445; Information Technology 352 or Communication 485; Management 311; may substitute Computer Science 101 or Engineering 101 for Information Technology 120, and Computer Science 440 for Information Technology 445



# Harlaxton College

## *British Campus of the University of Evansville*

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Harlaxton College offers students from the University of Evansville and other American universities and colleges an opportunity for a semester of study in “real England,” a magnificent Victorian manor house in the English countryside (adjudged by Simon Jenkins of the *London Times* as one of Britain’s “100 Best” houses), located near castles and cathedrals and great estates, near charming villages and market towns and important historic sites, yet just one hour by train from the excitement of London.

Academic standards at Harlaxton College are high, and work in the classroom is integrated with travel programs through Britain and Europe. Library and computer resources are excellent. The entire historic house has wireless access and high-speed Internet service. Classes are small, faculty members are available, and a full program of sports and music and student life balances intensive studies.

Harlaxton College offers learning through study and learning through experience. Meaningful engagement with other cultures and particularly the local culture is readily at hand. Students and faculty alike call the Harlaxton experience life-changing.

## Course Offerings

All students take, in their Harlaxton semester, 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 outstanding British professors, who over time have created a course that is without peer of its type. The course is taught in the British style: students read large amounts of material, do extensive writing both in papers and on essay examinations, and stretch their powers both in analysis and synthesis of ideas. 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

Many students are drawn to Harlaxton College by the opportunity to travel and see the world, and this is a legitimate motive for coming to Harlaxton.

Travel is integrated, deliberately, with studies. Some travel, at no extra cost, is related to the British studies course – trips to the city of Lincoln with its castle and cathedral and Roman remains, to Southwell Workhouse and London. Other college-sponsored trips, optional and at additional cost, include London, Cambridge, Edinburgh, Oxford-Bath-Stonehenge, Stratford and Coventry, York, Liverpool, North Wales, the Lake District, Ireland, Paris, and Rome-Florence-Venice. Increasingly, students are planning independent travel wherever their fancy leads, taking advantage of the low-fare airlines now operating in Europe and of a culture in Europe that “looks after” students through hostels, student rail cards, and special price breaks.

## Cultural Immersion – with Support

Students today are looking for “cultural immersion,” the opportunity to engage local cultures and meet local people. Harlaxton offers this to the maximum degree that a student will reach out and take it.

The Meet-a-Family Program has British families “adopt” a Harlaxton student for the semester, not to live

in the local home (all students live at magnificent Harlaxton Manor) but to visit for meals, special outings, theatre or sports events, and the like. Friendships are formed that can last a lifetime.

In addition, students compete against local teams in sports, help local youth or in local community programs, attend local churches, participate in local interest groups, and go to local (and London) theatre productions and concerts.

Most faculty and staff members are British (except for eight or nine visiting American faculty members) and so daily life at Harlaxton involves cultural engagement with real Britons going about their daily work.

But, a student is not left on his or her own, as happens in many overseas programs. There is the support network of other students and Americans, and there are the full services of student life programs.

## Student Development

In some overseas programs, students are set down in a strange culture and are left to make the most of it. At Harlaxton, a full range of student life programs and support systems provides the foundation for exploring all that is new and different.

The nearly world-famous Harlaxton Lions compete in local basketball and volleyball leagues (and anyone can play, not just the highly skilled); intra-college matches are held on the football (soccer) pitch; a full fitness center and gymnasium (“sports hall”) is at hand; and British staff members try earnestly to teach the game of cricket to Harlaxton students.

An award-winning British choral director leads the Harlaxton Collegiate Choir. Students direct and act in theatrical performances. A full range of student government activities helps students develop their leadership abilities and create programs that they most enjoy.

Medical and counseling services are available within Harlaxton Manor itself. A student development staff member coordinates all student activities and looks after student well-being. Student government is an active organization. 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.

Nice residential rooms and good meals are augmented by our own in-house coffee shop and pub, the Bistro.

Harlaxton is a good place to live.

## Faculty Life

Faculty members also find Harlaxton a good place to be. Class sizes are small, faculty politics are minimal, administrative and committee work disappear, and professors concentrate on their love of teaching and learning. It is a good place for writing and scholarship or for learning through travel.

Harlaxton is family-friendly, with attractive flats for families with children and handsome state bedrooms for singles and couples. All meals are served in the refectory. Academic support services are without peer anywhere; library and computer resources are excellent, and opportunities for connection with counterparts in British universities are always at hand.

## Library

The Harlaxton library is open 24 hours a day, 7 days a week. It maintains an excellent small collection of 25,000 volumes in addition to online resources. It has an interlibrary loan relationship with the British Library that can provide any book in print in the United Kingdom, often overnight. Research trips are also sponsored, in term, to the libraries of the University of Nottingham. 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 outstanding 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)).

Goals of the Centre for British Studies include the following:

- To continue the development of an outstanding teaching program in British Studies (The British Experience from the Celts to the Present Day – IDH282, IDH382, IDH382H)
- To conduct research in aspects of British and European history and culture, usually with an interdisciplinary perspective
- To produce high quality teaching resources in print and online relating to British Studies, to issues of national identities throughout the British Isles and Ireland, and on the question of “Britishness”
- To cooperate with other British, European and American universities and interdisciplinary centers (e.g., the Centre for the Study of the Country House at the University of Leicester) in improving the Harlaxton College program and in furthering knowledge
- To create a distinctive center of teaching and research for the University of Evansville, heightening even further the University's academic profile
- To offer additional courses and teaching and learning opportunities throughout the year that build on the assets and opportunities presented by the Harlaxton and wider British environments
- To sponsor conferences, lectures, and seminars on distinctive aspects of British and European culture
- To serve as a residence and research base for American faculty on research or study leave
- To foster global citizenship through student engagement with issues concerning the history and culture of the U.K. and the wider world
- To use the opportunities and resources offered by Harlaxton Manor and its surrounding area to provide a unique experiential learning environment



# 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. One master's degree program, two bachelor's degree programs 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 undergraduate evening programs requires a high school diploma or the equivalent and evidence of potential to succeed at the University of Evansville. Previous college work, if applicable, and other qualifications are reviewed as part of the admission process.

Adult Education offers these undergraduate degree programs during the evening: global leadership, organizational leadership, individualized study, and banking.

Admission to a graduate program is a separate process. Please contact the Adult Education staff for information.

### Bachelor's Degrees Global Leadership

The Bachelor of Science degree program in global leadership is designed specifically for the adult learner with five or more years of work experience. Our students are individuals who have the intellectual capacity to attend college but did not do so at the typical age, had an interrupted college experience, or simply want to continue their own personal growth and development. The University of Evansville designed the global leadership program to assist mid-career adult learners who wish to earn a bachelor's degree.

#### Objectives

The primary objectives of the global leadership program are to assist each learner in the following:

- Developing or refining basic communication, interpersonal, and critical thinking skills
- Acquiring knowledge necessary to manage diversity and conflict
- Acquiring knowledge necessary to identify problems and provide solutions
- Developing habits of conscientious and effective leaders
- Acquiring knowledge necessary to understand global issues

An emphasis on liberal studies 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 global leadership program at the University of Evansville is designed to meet this societal need and to assist students in achieving their full potential.

#### Benefits

The global leadership program provides the adult learner an opportunity to learn in an intellectual environment. It also can provide the following benefits:

- Increased self-confidence and self-esteem
- Increased self-expression, both written and verbal
- Increased skills in dealing with people
- Potential for promotion and advancement
- Improved job performance
- Self-fulfillment

#### Curriculum

The global leadership program offers three years of in-depth classroom exploration of a variety of general or liberal studies areas. The curriculum is based on three broad areas of study, each one academic year in length.

The first year students study, through a combination of religion, leadership and cultural exploration, how the individual grows and develops in a global society. In the second year students explore, through a combination of psychology, world leaders, technology, and environmental science, how the individual relates to others and to social institutions. In the final year students examine the ways different cultures express thoughts and feelings through music, art, drama, and literature.

In addition, each student plans and develops an integrated research project. The project engages the student in the scientific method: that of identifying a problem, determining methods of research to solve the problem, performing the research, and documenting the results. The courses, along with an integrated research project, comprise the formal curriculum of the global leadership degree program.

#### Requirements (123 hours)

Global Leadership 400, 410, 411, 412, 413, 414, 415, 416, 420, 421, 422, 423, 424, 425, 426, 427, 430, 431, 432, 433, 434, 435, 436

The degree requires three years of course work. Class sessions meet on Monday evenings. Additional sessions in the evenings or on weekends are scheduled for field trips, such as visits to historical sites, cultural events, lec-



tures, and art exhibits. Workshops are held on topics such as study skills, setting goals, and priorities.

Attendance is required on all additional scheduled activities, events, and class travel. Study time is scheduled by the student according to individual commitments. The student can expect to devote 10 to 20 hours weekly for classroom preparation.

Applicants for the program are mature adults who hold high school diplomas or the equivalent.

## Semester Plan

Three global leadership courses are taken each semester for six semesters. Each course lasts five weeks. Classes are held in the summer following the first and second year as well.

### First Year

Fall	Global Leadership 411, 412, 400
Spring	Global Leadership 413, 414, 423
Summer I	Global Leadership 410
Summer II	Global Leadership 420, 430

### Second Year

Fall	Global Leadership 421, 422, 425
Spring	Global Leadership 426, 415, 416
Summer I	Global Leadership 424
Summer II	Global Leadership 427

### Third Year

Fall	Global Leadership 434, 435, 436
Spring	Global Leadership 431, 433, 432

## Organizational Leadership

The Bachelor of Science degree program 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. Attendance for class is required and students can expect to devote 10 to 20 hours weekly for classroom preparation.

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. Each course lasts five weeks. Classes are held in the summer as well.

### Block One

Spring Organizational Leadership 300, 310, 311, 350

Summer I Organizational Leadership 312

### Block Two

Fall Organizational Leadership 320, 321, 322, 360

### Block Three

Spring Organizational Leadership 330, 370, 410, 411

Summer I and II Organizational Leadership 412, 450

### Block Four

Fall Organizational Leadership 420, 421, 422, 460

## 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. 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 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 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's 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 utilize 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, seminars, institutes, and conferences 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 assist 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 of our international friends who wish to study English as either a new or a second language. The Intensive English Center coordinates the intensive English program, English language credit courses, and customized international programs for the University.

## 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, reading development, and writing analysis. Study in TOEFL preparation is offered as an elective 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. A language laboratory with computer-assisted instruction provides individualized learning for all IEC students.

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 credit courses are also offered 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.

## Custom Designed Programs and University-to-University Agreements

To meet the needs of specific groups or individuals, the Intensive English Center offers programs and seminars. Examples include short- and long-term specially designed programs for the following:

- English Language Development
- Intercultural Experiences and Studies
- Global Awareness
- TOEFL Preparation
- Advanced or Additional English Training in Professional Areas (e.g., bank management, business management, computer science, communication, education)

For additional information or application materials, 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 Principles of Accounting I** (3) Study of the internal and external uses and users of accounting information, including the roles of managers, owners, and creditors. Covers accounting issues involving income and cash flows.

**ACCT 211 Principles of Accounting II** (3) A continuation of Accounting 210 with additional emphasis on the measurement and interpretation of accounting information and its use in appraising past, controlling present, and planning future business operations. Includes accounting for manufacturing companies. 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 150, 210. (Accounting 150 and 310 may be taken concurrently.) 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 budgeting, variance analysis, and other advanced topics. Prerequisite: Accounting 211. Fall.

**ACCT 321 Accounting Information Systems** (3) Focuses on the role of the system of data collection and processing in accounting-management reporting for business and industry. Includes design factors, internal controls, and implementation issues. Student gains knowledge of basic techniques in application of accounting computer software. Prerequisites: Accounting 150, 211. Credit not given for both Accounting 321 and Management 311. Spring.

**ACCT 329 Federal Income Tax I** (3) Studies current federal income tax law concepts of income and deductions for all entities. Prerequisite: Accounting 210. Fall.

**ACCT 330 Federal Income Tax II** (3) Studies other current federal income tax law concepts not included in Accounting 329 for all entities. Concepts relating to partnerships, corporations, trusts, and estates are also examined. Prerequisite: Accounting 329. Spring.

**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 380 Special Topics in Accounting** (3) Covers topics not included in other courses, gives greater depth in certain areas, and explores current accounting topics. Topic varies each offering. Prerequisite: Accounting 211. Offered periodically.

**ACCT 395 Independent Study** (1-3) Independent research in accounting conducted under faculty supervision. Prerequisite: 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. Writing intensive course. 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 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 445 Database Management** (3) Introduces basic database topics, including data modeling, entity relationship diagramming, database normalization, and proper database design. Advanced topics including structured query language, transaction management, and concurrency control covered on a limited basis to demonstrate the challenges organizations face when implementing multi-user databases. Accounting related projects apply course topics to give an idea of how databases are used in accounting systems of business organizations. Prerequisite: Accounting 321. Same as Management 445. Offered alternate fall semesters.

**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. Writing intensive course. Prerequisites: Accounting 398; permission of the internship director of the Schroeder Family School of Business Administration.

### **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, 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. 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 hominid 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, ethnolinguistics, and sociolinguistics. Prerequisite: Anthropology 207.

**ANTH 453 Anthropology of Religion** (3) Explores theories of religious beliefs and behavior in non-Western societies. Covers cosmology, myth, ritual, religious specialists, and dynamics. Prerequisites: Six hours of anthropology; junior or senior standing.

**ANTH 494 Directed Study/Fieldwork** (1-3) See Sociology 494. Prerequisites: Nine hours of anthropology; junior or senior standing; permission of instructor.

## 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 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. May be repeated. 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)** The Murlo Summer Program introduces students to both the practical and theoretical aspects of Etruscan archaeology. The seven-week program of field work is carried out during the summer near Siena, Italy, at the Etruscan site of Poggio Civitate, which dates to ca. 650 BC. Students participate in the actual excavation of the material as well as in the documentation and conservation carried out in the storeroom. The work is conducted under the supervision of a professional staff of archaeologists, conservators, an architect, an illustrator, and a photographer. 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. May be repeated.

**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. May be repeated for a maximum of six hours of credit. 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. Lab fee.

**ART 325 Life Drawing (2)** Drawing from the model as a means of understanding form, shape, and line. Four hours studio. Repeatable. 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. Lab fee. Spring.

**ART 340 Painting (3)** Emphasizes basic painting techniques with investigation of different advanced media. Six hours studio. Repeatable. 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.

**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. 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. 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. 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. 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 up to 12 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.

**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. May be repeated for a maximum of six hours of credit. 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. 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. May be repeated for a maximum of 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. May be repeated for a maximum of six credit hours. 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. A maximum of 12 credit hours earned in Art History 495 may count toward the degree. 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 Department of Exercise and Sport Science.

**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 388.

**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 282.

**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 388.

**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 389.

**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 292.

**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 391.

**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.

**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 392.

**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 491.

### **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 108 General Zoology (3)** Studies major animal phyla with respect to phylogeny, taxonomy, morphology, and physiology. Two hours lecture, two hours lab. Prerequisite: Biology 107 or 117 with a grade of C- or better or permission of instructor. Spring.

**BIOL 109 General Botany (4)** Introduces basic principles of biology and studies major plant groups from a functional, structural, systematic, and evolutionary approach. 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 microorganisms 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 117 Modern Biology: Molecular Perspectives** (3) Designed to give biology majors foundational knowledge and skills for subsequent courses in the major. Seminar-style course introduces basic principles of molecular biology and genetics, and examines societal and ethical issues surrounding use of biotechnology in medicine and agriculture. Prerequisite: Freshmen admission to biology program or permission of the chair of the Department of Biology. Fall.

**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 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. May be repeated. 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. May be repeated. 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 the following areas: (1) microbial environments; (2) detection of microbial activity; (3) impact of microbial activity on the environment in terms of nutrient cycling and pollutant fate; (4) detection and control of pathogens in the environment; (5) 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 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 109 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 117, 108 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, the 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 107 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 107 or 117 with a grade of C- or better or permission of instructor. Recommended: Biology 108 with a grade of C- or better. Fall, spring.

**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 108 with a grade of C- or better or permission of instructor. 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 108 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. May be repeated. 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 109 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 107 or 117, 108, 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 109 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 107 or 117 with a grade of C or better; or permission of instructor. Recommended: Biology 109 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 107 or 117, 108 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 107 or 117, 108, 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. Two hours lecture, two hours lab. Prerequisites: Biology 107 or 117, 108, 440 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 440. 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 117. 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. May be repeated. 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 269 Fundamentals of Entrepreneurship (3)** Introduces the topic of entrepreneurship in a classroom setting. Includes overview of entrepreneurial processes and traits, developing and managing the challenges of operating a new venture, and successful exit strategies. Focuses on development of a business plan for a new venture by student teams. Enrollment limited to students majoring in business or accounting. Business 269 and Business 270 must be completed in consecutive semesters. Corequisite: Accounting 210. Fall semester only.

**BUS 270 Experience in Entrepreneurship (3)** Applied experience in entrepreneurship. Under supervision of a faculty member, student teams initiate and run a new business venture based on the business plan that was reviewed and approved in Business 269. Enrollment limited to students majoring in business or accounting. Business 269 and Business 270 must be completed in consecutive semesters. Prerequisite: Business 269. Spring semester only.

**BUS 350 Global Assistance Project (3)** An introduction to project management and consulting, this course covers basic project scoping, timeline development, proposal writing, and presentation of strategic recommendations to clients. This is an experiential learning opportunity in which students are assigned to project teams that complete real-world consulting projects for active business organizations. Prerequisite: Management 377, Marketing 325, or Finance 361.

**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. Topic varies each offering. 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. Writing intensive course. 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 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. Writing intensive course. 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 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 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. May be repeated. 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, acid-base chemistry, the solid state, and coordination compounds. Three hours lecture, four hours lab. Prerequisites: Chemistry 341, 351, 360. Fall.

**CHEM 490 Chemistry Literature Seminar** (½) Study of the chemical literature. Requires attendance and presentation of seminars. Fall, spring.

**CHEM 493 Short Topics in Advanced Chemistry** (1-1½) Each 4½ 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. 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. 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. Prerequisites: Completion of at least eight hours of college chemistry courses; permission of faculty advisor and faculty internship supervisor. Fall, spring, summer.

## Chinese (CHIN)

Chinese courses are taught by the faculty of the Department of Foreign Languages. All courses are taught in the target language unless otherwise noted.

**CHIN 111, 112 Elementary Chinese** (4 each) Emphasizes practice in speaking and listening. Develops cultural awareness, writing, and reading. Fall (111), spring (112).

**CHIN 175 Introduction to Chinese Culture** (3) Introduces Chinese culture in a historical context. Explores development of Chinese culture from the Qin dynasty (221 BC) to the present through lectures and analysis of relevant documents. Taught in English.

**CHIN 211, 212 Intermediate Chinese** (4 each) Continues practice in speaking and listening. Develops cultural awareness, writing, and reading. Fall (211), spring (212).

**CHIN 275 Topics in Chinese Studies** (3) In-depth examination of aspects of Chinese culture. Topics vary. Course may be repeated with content change. Taught in English.

## 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 general principles of contracting, planning, scheduling, productivity, quantity calculations, cost estimating, and project economics. Includes the use of project management software. A comprehensive project uses plans and specifications from a local project. 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; 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. Corequisite: Engineering 230 or permission of instructor. Spring.

**CE 338 Soil Mechanics and Soil Behavior** (3) Covers mass composition and phase diagrams, soil classification, principles of effective stress, seepage and fluid flow through soil, stress distribution, theory of consolidation, time rate of settlement, shear strength of cohesive and cohesionless soil, compaction, and surcharging. Three hour lecture. Prerequisite: Engineering 232. Corequisite: Engineering 366. Spring.

**CE 339 Soil Mechanics Laboratory** (1) Experiments in sieve analysis, Atterberg Limits, permeability, field density, compaction, consolidation, unconfined compression, and direct shear. Field trips. Corequisite: Civil Engineering 338.

**CE 340 Structural Analysis** (3) Analysis of statically determinate beams and trusses for internal forces and displacements. Moving load effects and influence line theory. Analysis of statically indeterminate structures. 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 structural steel members including tension members, beams and columns. Design of bolted and welded connections. Prerequisite: Civil Engineering 340. Spring.

**CE 342 Design of Concrete Structures (3)** Design of reinforced concrete structural members including rectangular sections for bending and shear. Rebar development length concepts. Design of columns for axial load and bending. Prerequisites: Civil Engineering 331, 340. Fall.

**CE 350 Transportation Engineering (3)** Introduction to the activities of the transportation engineer, including aspects of physical design of facilities (e.g., route location and layout, pavement design, runway design) as well as systems modeling and control (e.g., capacity analysis, urban transportation planning, signalization). Emphasis on land transportation. Prerequisites: Civil Engineering 183; Engineering 213; or permission of instructor. Spring.

**CE 374 Environmental Engineering I (3)** Introduces environmental engineering topics, including water quality, water treatment processes, air quality, solid and hazardous waste disposal, and ground water hydraulics. Includes a study of environmental laws that affect the design and operation of waste treatment, waste disposal, and power generation facilities. Prerequisite: Chemistry 118 with lab. Spring.

**CE 380 Hydraulics Laboratory (1)** Experiments in fluid mechanics and hydraulics, including viscosity, frictional losses in pipes, flow and pressure measuring devices, momentum forces, turbines, and weirs. 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; stability of earth slopes; lateral earth pressures and retaining walls; braced cuts; geosynthetics and precautions associated with construction operations. Prerequisite: Civil Engineering 338. Fall.

**CE 443 Intermediate Structural Analysis (3)** Analysis of statically determinate and indeterminate structures using force and displacement methods such as stiffness method, matrix methods, and finite element method. 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 468 Engineering Hydrology (3)** Study of the hydrologic cycle including precipitation, infiltration, evaporation, overland flow, time characteristics of watersheds, unit hydrographs, stream flow analysis, ground water hydrology, flood frequency analysis, flood hydrograph modeling, and hydrologic design. Prerequisite: Engineering 366.

**CE 469 Design of Hydraulic Structures (3)** Design methods for reservoirs, spillways, outlet works, canals and related structures, conduits, and diversion structures. Water supply design and pipe network analysis. Applications to multipurpose designs involving flood control, water resource economics, irrigation, recreation, and drainage. 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, water treatment plant processes and wastewater treatment plant facilities. Prerequisites: Civil Engineering 374; Engineering 366; or permission of the 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. Prerequisites: 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. May be repeated. Prerequisite will be announced when scheduled.

## **Cognitive Science (COGS)**

Cognitive science courses are taught by the faculty of several departments.

**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 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.

**COGS 498 Seminar in Philosophy, Neuroscience, and Psychology (3)** Explores a specific interdisciplinary topic that is pertinent to the contemporary study of cognition and behavior. (Course may be repeated for credit as topic changes; however, it may be counted only once as a requirement toward the cognitive science major.) 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.

## **Communication (COMM)**

Communication courses are taught by the faculty of the Department of Communication.

**COMM 110 Fundamentals of Public Speaking (3)** Preparation, organization, and presentation of several forms of public speaking. Examination of the basic models and components of public communication. Attention given to research and analytical skills. Examination of the basic models and components of public address discussed from the rhetorical origins of the discipline to current practices.

**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 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 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 251 Basic Web Production (3)** Introduces 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 130 or permission of instructor. Same as Information Technology 251.

**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. Prerequisites: 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 221.

**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 340 Audio Production (3)** Introduction to principles and processes of audio production. Includes examination of general sound theory as well as audio technology including digital editing software. Emphasizes development of writing and storytelling techniques and their application to practical experiences in audio production. Prerequisite: Communication 130 or permission of instructor.

**COMM 341 Video Production (3)** Introduction to principles and processes of video production. Includes preproduction (organizing, scriptwriting, management, budgeting), production (directing, visual and sound recording, lighting, design, field work), and postproduction (visual and sound editing, marketing, exhibition). Conducted professionally, using techniques and practices applied in the film, video, and television industries. Prerequisite: Communication 130 or permission of instructor.

**COMM 352 Advanced Web and Multimedia Production (3)** Advanced techniques in website development, including concept of dynamic HTML. Includes the integration of video and audio as well as working with the Flash application for integrating interactive multimedia elements. Prerequisite: Communication 251.

**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 383 Conflict Management (3)** Examination of the factors that lead to conflicts, and theory and practice in using communication strategies to resolve conflict. 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)** Supervised practical experience in student media or other university information outlets. May be repeated for up to three hours credit. No more than six hours total credit given for Communication 390 and 395 combined.

**COMM 395 Internship (1-3)** Supervised practical experience in an off-campus mass communication-related organization. Application required. May be repeated for up to three hours credit. Prerequisites: one course from Communication 211, 221, 231, 251, 341; GPA of 2.50 or better; 36 hours of completed academic credit.

**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 487 Integrated Communication Campaigns (3)** Senior seminar in communication. Students learn to identify organizational issues, conduct situation analyses, and evaluate communication programs. Examination of the interrelationships between media and international societies and cultures, utilizing diverse perspectives from science, business, art, and humanities. Develop and execute a detailed integrated communication campaign for real-world clients. Prerequisite: Senior standing.

**COMM 490 Special Topics in Communication (3)** Varied topics of periodic interest not covered in regular course offerings. May be repeated. 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. May be repeated twice for up to six hours credit.

## **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: 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. 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 forms, elementary 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 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 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 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 two popular 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 480 Compilers (3)** Theoretical and practical aspects of compiler construction. Covers lexical analysis, parsing, code generation, and code optimization. Includes implementation of a usable compiler. Prerequisites: Computer Science 215; Computer Science 220 or Electrical Engineering 354. Recommended: Computer Science 380.

**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.

**CS 499 Special Topics in Computer Science (1-3)** Study of topics of special interest. Topics will be announced. May be repeated. 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. Prerequisites: Criminal Justice 205 or 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; Sociology 105, 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; Sociology 105, 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 401 White Collar Crime (3)** Examines the varieties of individual crime, corporate deviance, and corruption in the private and public sectors. Prerequisites: Criminal Justice 205; Sociology 105, 210; 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; Sociology 105, 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; Sociology 105, 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 450 Senior Seminar (3)** Students complete an original research paper that uses data gathering and interpretive skills. Course content includes the general topics of social organization, social change, social stratification, social problems, deviance, and crime as they relate to the world cultures courses. Prerequisites: Criminal justice major or minor; Sociology 235, 344.

**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. 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 Office of Career Services and Cooperative Education 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 a general education requirement in human behavior and society.

**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 a general education requirement in human behavior and society. 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. Same as Finance 372. Offered alternate years.

**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. Topic varies each offering. 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 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 Economics (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 426 International Finance (3)** Analyzes foreign exchange, currency futures, and options markets. Aspects of international banking and bond and equity markets examined from the perspective of multinational corporations and institutions. Prerequisites: Economics 101, 102; Finance 361 is highly recommended but not required. Same as Finance 426.

**ECON 470 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 alternate years. (Some students will complete this senior seminar requirement during their junior year.)

## **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 life-long skills) to teach. Fall, spring.

**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 Mental Retardation (3)** Examines perspectives on mental retardation history, definition, assessment, causes, and prevention. Also focuses on characteristics of individuals who have different levels of retardation and topics related to educational services, family concerns, individual and legal rights, institutional and community learning, and current issues.

**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 206 Teaching Students with Learning Disabilities (3)** Historical perspectives, definitions, theories, medical aspects, characteristics, and service delivery models are approached. Gives the student a broad scope of the field: the problem of defining learning disabilities, the diverse characteristics of learning disabilities, manifestations at different ages and stages of life, the prevalence of learning disabled in schools, and the multidisciplinary nature of the field. Assessment and clinical teaching are explored as interrelated parts of a continuous process that involves trying to understand students and help them learn.

**EDUC 207 Clinical Practicum II – Mild Intervention, Middle School/Secondary Level (3)** Practical application of the content in Education 204 or 206 emphasized. 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. Corequisite: Education 204 or 206.

**EDUC 210 Introduction to Special Education and Mild Disabilities (3)** Introduction to educational services for children who 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 seriously emotionally handicapped. 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, and transitions to kindergarten from preschool environment concept of “readiness” for school situations. Laboratory experiences provided. Prerequisites: Education 100, 200. Fall.

**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 265 Role and Application of Computers in Education** (3) Introduction to the roles of computers in education with an emphasis on computer-assisted instruction 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 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, 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. Corequisites: Education 418, 420, 426; or permission of instructor. Fall.

**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: Education 224. Spring.

**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 100, 200, 320; admission to teacher education. Corequisite: Appropriate methods course selected from Education 451-461. 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 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. Gives students opportunity 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, research, 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 330, 403, 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, 224. 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 placed on the discussion of student teaching experiences. Special topics of interest to student teachers presented. Prerequisites: Education 100, 200; or permission of instructor. Corequisite: Supervised teaching – Education 430, 432, 434, 436, 437, or 439.

**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)** Prerequisite: Admission to teacher education. Corequisite: Education 363.

**EDUC 453 Methods of Teaching English in Senior High, Junior High, Middle Schools (2)** Prerequisite: Admission to teacher education. Corequisite: Education 363.

**EDUC 454 Methods of Teaching Foreign Language in Senior High, Junior High, Middle Schools (2)** Prerequisite: Admission to teacher education. Corequisite: Education 363.

**EDUC 456 Methods of Teaching Mathematics in Senior High, Junior High, Middle Schools (2)** 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)** 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 Sciences in Senior High, Junior High, Middle Schools (2)** Prerequisite: Admission to teacher education. Corequisite: 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 464 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 assigned.

**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, and Senior High (1-6)** Teaching, observation, and participation activities under the supervision of a classroom teacher and a University supervisor for students who have teaching experience and/or do not require the seven to 10 hours indicated in other student teaching courses. Prerequisites: Admitted to teacher education; GPA requirements as stated in catalog under School of Education General Requirements Student Teaching. 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.

For graduate-level courses, please refer to the graduate course descriptions in this catalog.

## 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, inductors, diodes, and transistors 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 and analog oscilloscopes. Prerequisite: Mathematics 222. Corequisite: Mathematics 323 or permission of instructor. 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; Mathematics 323. 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, state-vector 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 324. Recommended: 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, bipolar junction transistor (BJT), and field effect transistor (JFET and MOSFET) device characteristics explored in detail. Major topics include diode applications, transistor amplifiers, and digital logic families. Clipping, rectification, regulation, and logic circuits included in the discussion of diode applications. Common transistor amplifier configurations are compared with emphasis on differences in gain, input resistance, and output resistance. Digital logic family coverage includes discussion of CMOS, ECL, and TTL. Several small team projects used to reinforce theory and to develop circuit design skills. Prerequisites: 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 frequency effects, power amplifiers, analog integrated circuits, feedback and stability, the design of operational amplifier ICs, and nonideal effects in operational amplifier circuits. Specific topics include high frequency BJT and FET models, frequency response of transistor amplifiers, Miller effect, Class A/AB/C power amplifiers, thermal modeling, efficiency, current mirrors, active loads, dif-

ferential amplifiers, Nyquist stability criterion, frequency compensation, gain-bandwidth product, op amp slew, op amp offset effects, and compensation. Several small team projects are used to reinforce theory and to develop design skills. Prerequisites: Electrical Engineering 215, 342. Spring.

**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, elementary 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 215; 12 hours of 300-level electrical engineering courses. Spring.

**EE 410 Analog Circuit Synthesis (3)** Lecture/project covers analysis and design of active circuits. Major topics include feedback, instrumentation amplifiers, active filter design, non-linear circuits, signal generators, and voltage regulation circuits. Prerequisites: Electrical Engineering 310, 343.



**EE 413 Random Signals and Noise (3)** Provides a mathematical treatment of random processes as they apply to electrical systems. Topics include probability and random variables, functions of random variables, conditional statistics, correlation functions, power density spectrum, Gaussian white noise, and random signal processing. Prerequisites: Electrical Engineering 310; Mathematics 324; Mathematics 365 or Engineering 390; or permission of instructor. Spring.

**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, 343. Corequisite: Electrical Engineering 413 or permission of instructor. Fall.

**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 pro-

gramming and task scheduling algorithms, mutual exclusion and synchronization methods, and interprocess communication. Real-world experience writing applications for two popular 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 Communication Theory (3)** Communication theory for both digital and analog systems. Emphasis on digital systems. Topics include Fourier analysis, modulation and demodulation theory, digital signaling formats, communication systems design fundamentals, and applications. Probability and random processes introduced and applied to the study of narrow band noise in communication systems. Prerequisite: Electrical Engineering 310. Fall.

**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: 12 hours of 300-level electrical engineering courses. 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.

**EE 499 Special Topics in Electrical Engineering (1-3)** Study of topics of special interest. Topics will be announced. May be repeated. 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 led by faculty (typically the students' academic advisor) complete design projects in a particular discipline. 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. 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. Prerequisite: Permission of instructor.

**ENGR 212 Statics** (3) Includes resolution and composition of forces, moments, principles of equilibrium and application to trusses and jointed frames, friction, center of gravity, and second moments of areas. Uses vector analysis throughout. Corequisite: Mathematics 221. Fall, spring.

**ENGR 213 Dynamics** (3) Covers rectilinear and curvilinear motions, force, mass, acceleration, projectiles, pendulums, 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. Spring.

**ENGR 232 Mechanics of Materials** (3) Covers general principles of stress and strain, including elastic and inelastic behavior, shear, torsion, stresses in beams, and deflection of beams and columns. 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 285 Technical Skills for Archaeologists II** (2) Introduces archaeology students to skills and techniques useful in recording and analyzing field data as well as developing 3-D models of the project site. Topics include technical sketching and utilizing computer-aided (CAD) techniques for development of accurate 2-D drawings as well as 3-D models. Prerequisites: Sophomore standing; Engineering 283. Spring.

**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. 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 469 Introduction to Engineering Entrepreneurship** (3) Introduces entrepreneurship in a classroom setting. Includes overview of entrepreneurial processes and traits, development and management of the challenges of operating a new venture, and successful exit strategies. Focuses on development of a business plan centering on production, marketing, and sale of the product designed for the student's engineering senior project. Prerequisite: Accounting 210. Corequisite: Civil Engineering 495 or Electrical Engineering 495 or Engineering 495 or Mechanical Engineering 495. Class meets with Business 269.

**ENGR 470 Experience in Engineering Entrepreneurship** (3) Under the supervision of one or more faculty members, students initiate and operate a new business venture based on the business plan developed in Engineering 469. Prerequisite: Engineering 469. Corequisite: Civil Engineering 497 or Electrical Engineering 497 or Engineering 497 or Mechanical Engineering 497.

**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 Interdisciplinary Project 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 Interdisciplinary Project 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 Language (EL)

English language courses are taught by the faculty of the Intensive English Center. Enrollment is limited to students whose native language is not 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 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.

**EL 110 Fundamentals of Composition** (3) For students whose primary language is not 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 not 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. May be repeated. 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. May be repeated. Prerequisites announced when scheduled. Fall, spring.

### Ethics (ETH)

Ethics courses are taught by faculty members of the Department of Philosophy and Religion.

**ETH 401 Ethics Integration Project (3)** Required of all minors. Provides opportunity for integration of the academic study of ethics with a specific ethical problem, usually connected to one's major field of study or to a service learning experience, drawing on multiple disciplines to present a response to the problem. Project requires independent study supervised by a faculty member from the Department of Philosophy and Religion. Prerequisites: Philosophy 121; Religion 201; at least two additional 300- or 400-level courses in ethics from those included in the minor.

### Exercise and Sport Science (EXSS)

Exercise and sport science courses are taught by the faculty of the Department of Exercise and Sport Science.

#### Service and Skills

Courses meet the equivalent of two hours per week for each credit hour offered.

**EXSS 101-104 Activity Courses (1 each)** Specific activities are emphasized in each section (outlined in the semester schedule) of the courses which follow. Course numbers may be repeated as the activity designation changes, but the same activity may not be repeated without permission of the department chair.

**101 Team Sports**

**102 Individual Sports**

**103 Conditioning Activities**

**104 Aquatic Activities**

**EXSS 109 Intercollegiate Sports (1)** One hour of credit is given for physical participation in one full season of each intercollegiate sport. Enrollment is limited to NCAA eligibility roster athletes only. Credit earned in any sport may not apply toward the general education requirement. Varsity athletes enrolled in Exercise and Sport Science 109 are not eligible to enroll in the corresponding courses numbered 101-104. No more than two hours may be earned in any one sport.

**EXSS 111 Concept of Human Performance (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.

#### 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 career opportunities available in exercise and sport science. Each student develops a personal profile which includes factors that influence an individual's career choice. Included in this profile is the development of both a personal and professional philosophy, assessment of one's lifestyle preferences, plus a professional research project in one's preferred career choice.

**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 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, and the planning and evaluation of community health interventions. Course provides basic knowledge and skills needed for conducting community needs assessment with diverse populations. Additional topics such as infectious diseases, environmental health, chronic diseases, maternal and child health, and women's health are also covered.

**EXSS 195 Global Health Issues** (3) Provides an overview of important health problems of the world's populations including improving health globally, reducing health disparities, and examining key areas of disease burden. Particular attention will be paid to health status of women, children, and the poor.

**EXSS 200 Epidemiology** (3) Introduces students to epidemiology and epidemiological methods. Students will explore study designs and measures of effect used to study disease in human populations, as well as concepts of causal inference and threats to study validity. This course will prepare students to critically evaluate public health and medical literature based on the major criteria used to assess causality.

**EXSS 211 History of Sport** (3) Using interacting influences of economics, environment, nationalism, norms and values, philosophy, politics, religion, and technology, the evolution of physical activity and sport is investigated. Concentration is placed on Western Civilization and American sports. Special attention devoted to modern Olympic Games.

**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 soci-

ety. 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 222 Practical Experiences in Youth Fitness and Health Awareness** (2) Students apply professional skills working with young people of various ages from the Evansville community. Students participate in interactive educational workshops. The workshops increase knowledge and encourage healthy lifestyle choices in the youth of Evansville.

**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. Prerequisite: Exercise and Sport Science 150 or consent of instructor.

**EXSS 250 Officiating** (1) Covers rules and procedures for officiating and provides opportunities for IHSAA 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 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 112 and 113, or 220.

**EXSS 315 Teaching Games, Gymnastics, and Rhythms (3)** Introduces and provides basic exposure to gymnastics, tumbling, and rhythmical activities that can be used to achieve or improve fitness. This class provides an understanding of developmentally appropriate games that can be implemented in quality physical education programs.

**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: Permission of instructor.

**EXSS 350 Organization and Administration of Sport-Related Programs (3)** Examines basic structure of both sport management and sport communication. The primary focus of this class is on methods utilized in both disciplines in function, skills, decision making, managerial roles, and leadership. This class surveys the specialization areas of economic theory, finance, marketing, sponsorship and sales, event management, and law as they relate to sports. Prerequisites: Minimum third semester standing; 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 112, 113 or 220.

**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 255.

**EXSS 356 Biomechanics (3)** Covers principles of anatomy, physiology, physics, and other related sciences applied to analysis of motion. Prerequisites: Junior or senior standing; Physics 100 or 121.

**EXSS 383 Curriculum Development in Lifetime Fitness Activities (3)** Provides an understanding of the concepts, movements, skills, and abilities needed to teach and participate in various health-related fitness and recreational activities throughout life. Also gives student an opportunity to teach various health-related fitness and recreational activities to diverse populations. Prerequisite: Exercise and Sport Science 112 and 113, or 220.

**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: Permission of instructor.

**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 352; 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 352.

**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 352; 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 352, 388; 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 pathophysiology, patient assessment, medical and surgical disease management, and safety. Concentrates on design implementation and

administration of multidimensional therapeutic cardiopulmonary rehabilitation programs. Prerequisites: Exercise and Sport Science 112, 113, 415; 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; Psychology 121.

**EXSS 452 Adapted Physical Education for Grades K-12 (3)** Provides instruction in appropriate teaching methods and strategies of incorporating appropriate games and activities for children with special needs. Students learn to develop and implement an adapted physical education curriculum for children in elementary through high school. Prerequisite: Junior or senior standing or permission of instructor.

**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 356 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.

**EXSS 482 Curriculum Development in Individual and Team Sports (3)** Provides a comprehensive understanding of the teaching of individual and team sports. Also offers students the opportunity to teach the movements and skills needed to participate in lifetime individual sports, as well as the ability to design and implement lesson plans. Focus of course on secondary physical education. Prerequisites: Exercise and Sport Science 112 and 113, or 220.

**EXSS 488 Internship (2-12)** 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 352, 388, and current CPR for all exercise science majors.

**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. Prerequisite: Junior or senior standing.

**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.

**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: 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 for a total of three experiences. 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 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 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. Same as Economics 372. Offered alternate years.

**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. Theme varies each offering. 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 Finance (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. Same as Economics 426.

**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. 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 World Cultures and First-Year Seminar Sequence is the cornerstone of the General Education Program. The courses are taught by faculty members from all of the University's colleges and schools.

**FYS 120 First-Year Seminar (3)** Topic-based seminars developed by individuals or small groups of faculty members. Engage students in classroom activities that promote the learning goals of the World Cultures and First-Year Seminar sequence. Students select preferred topics during registration and are assigned to sections using these preferences whenever possible. Individual section descriptions are posted on WebAdvisor during registration.

### Foreign Languages (FL)

Foreign languages courses are taught by the faculty of the Department of Foreign Languages.

**FL 401 Language, Culture, and Literature (3)** Capstone course for foreign language and international studies majors. Taught by a team of foreign language faculty who specialize in the cultures of France, Germany, Italy, Latin America, Russia, and Spain. Seminar examines how crucial questions of the human condition are 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. 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).

**FREN 211, 212 Intermediate French** (3 each) Continues practice in speaking, listening, writing, reading, and cultural awareness. Fall (211), spring (212).

**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.

**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 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. May be repeated with content change. Pre-

requisite: 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. Offered alternate years.

**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. Course may be repeated with content change. 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 438 Seminar** (3) Topics vary. Generally covers outstanding French authors and literary works. Course may be repeated with content change. 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. May be repeated for a maximum of 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. May be repeated for a maximum of 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 Department of History.

**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. All courses are taught in the target language unless otherwise noted. Completion of 311 or permission of instructor required for all 300-level courses or above.

**GERM 111, 112 Elementary German** (3 each) Emphasizes practice in speaking, listening, writing, reading, and cultural awareness. Fall (111), spring (112).

**GERM 211, 212 Intermediate German** (3 each) Continues practice in speaking, listening, writing, reading, and cultural awareness. Fall (211), spring (212).

**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 all 300- and 400-level courses. Fall.

**GERM 312 Topics in German Studies** (3) Topics vary. Course may be repeated with content change. Topics range from aspects of German film and the Alps, to crime novels and biographies, to other aspects of Ger-

man culture and society. Prerequisite: German 311 or permission of instructor.

**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. May be repeated with content change. 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 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 438 Seminar** (3) Outstanding German authors and literary works. Topics vary. Course may be repeated with content change.

## 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.

## **Global Leadership (GL)**

Global leadership courses are taught by faculty members in affiliation with the Center for Adult Education staff. These courses apply only to the global leadership degree program.

**GL 400 Professional Writing and Speaking (6)** Prepares students to communicate in an electronic and global professional environment. Emphasizes skills to communicate with diverse audiences using various communication media with a focus on refining writing, speaking, and presentation techniques. Topics include effective correspondence, presentation, e-mail, report and proposal writing.

**GL 410 Research Design in Behavioral Research (3)** Covers major research designs used in behavioral research. Topics include relationship between theory and research, conceptualization, operational methods, hypothesis and model development, and sampling. Specific data gathering techniques and experimental designs reviewed.

**GL 411 World Religions (6)** Examines basic religious concepts of the world focusing on two major quests: humans in quest of faith and humans in quest of community. These quests deal with Judaism, Catholicism, and Protestantism from a historical perspective as well as with contemporary mainline expressions. Studies secondary communal expressions, including Shakers, Harmonists, and contemporary cults.

**GL 412 Religious Perspectives (6)** Explores and analyzes the mystery and meaning of being human and the creation versus evolution controversy. A better understanding of death and of life after death is sought so we may understand better the nature and meaning of life.

**GL 413 World Historical Eras and Leaders I (6)** Surveys major intellectual traditions of civilization from the ancient world through the Renaissance, including the Ancient Near East, Greece and Rome, the Middle Ages, and the Renaissance. Students compare and contrast these intellectual traditions and assess their contribution to the modern mind.

**GL 414 World Historical Eras and Leaders II (6)** Continues study as outlined in Global Leadership 413 with focus on major intellectual traditions of civilization from the Renaissance to the present, including the Enlightenment, Romanticism, Marxism, Liberalism, and Darwinism.

**GL 415 Psychology (6)** Surveys the study of human behavior. Theory and current research data are presented, although thrust of course translates theory into personal and work-related applications. Emphasizes



interpersonal relationships, interpersonal communication, and personal performance and productivity in the personal-social environment.

**GL 416 Human Motivation and Influence** (6) Explores the psychology of perception, learning, motivation, and emotional development. Theory is applied to practice as it relates to work environments, behaviors, and relationships with emphasis of the aspects of human psychology that are attributed to motivating and influencing human behavior.

**GL 420 Practicum in Research Methods** (3) Engages student in the scientific method of identifying a problem, gathering data of the problem, and writing a report to describe the problem and findings. Student conceptualizes the problem and designs the study during this semester.

**GL 421 Geography and Cultural Awareness** (6) Provides basic framework for a better understanding of the world in which we live. Examines concepts of cultural regions, cultural diffusion, cultural ecology, cultural integration, and cultural landscapes. Establishes a sense of urgency in our need to understand and accept cultural differences for the survival of the human race.

**GL 422 Cultural Protocol** (6) Reviews the influence of geography on cultural practices. Promotes understanding and provides insight into the cultural similarities and differences that permeate our world. Exercises provide heightened sense of cultural awareness as an integral aspect of this exploration of taboos and protocols around the world.

**GL 423 Organizational Behavior** (6) Organizational behavior explores human resources and communication within professional organizations. Course provides a foundation for understanding behavior of the individual and groups within organizational hierarchies. Students study theories, models, and issues in the field to understand group dynamics. Emphasizes leadership styles and application of theory to real organizations.

**GL 424 Corporate Strategic and Financial Planning** (3) Examines the fundamental issues in professional management – how organizations work and the role leaders play in corporate success. Explores planning and problem solving, individual responsibility, special issues to consider when working in a global environment, along with major social, political, and cultural forces and their impact on strategic and financial planning.

**GL 425 Environmental Science Concepts** (6) Explores topics in environmental science, including ecological concepts and environmental pollution. Introduces interdisciplinary nature of problems related to the envi-

ronment and emphasizes the biological, chemical, and physical aspects of these problems.

**GL 426 Environmental Science Applications** (6) Explores social, economic, political, legal, and ethical aspects of environmental science issues as they relate to the scientific research and conclusions outlined in Global Leadership 425.

**GL 427 Communication Skills for Leaders** (3) Application of communication skills and tools for organizational success. Topics include information flow, motivation and influence, power, leadership transactions, networks, channels, teamwork, and territoriality.

**GL 430 Technology for Leaders** (3) Teaches specific software applications in an applied setting. A survey of technology tools available to professionals, includes positive and negative attributes of modern technologies with real-world examples.

**GL 431 Art in Society** (6) A chronological survey of the visual arts. Provides understanding of various artistic products of various periods and cultures. Explores styles of fine art that encompass and exemplify ideas and beliefs. Stresses perception and understanding of the common elements of the periods studied. Emphasizes sensitivity for the ever-changing concept of beauty, as well as the development of an arts vocabulary.

**GL 432 World Music Styles** (6) A non-technical approach to the art of listening to and appreciating music. Includes musical styles, influence of music on cultures, and methods by which music has opened appreciation between cultures. Classical music forms as well as modern concepts and trends presented.

**GL 433 American Traditions** (6) Broad survey of uniquely American art forms, including music and visual arts. Explores multicultural influences on art and music, as well as technological influences. Students learn to explore the political, social, religious, and aesthetic functions of art and music.

**GL 434 Literary Leaders** (6) Covers masterpiece works that helped shape cultural concepts and beliefs over time. Explores the influence great writers have on society and how the written word can magnify ideas and influence civilization.

**GL 435 World Literature** (6) Explores some of the world's best dramatic and non-dramatic literature of the classical, medieval, and Renaissance periods. Surveys influence of literature on world concepts and cultural integration. Focuses on reading and understanding dramatic and non-dramatic literature as a mirror to our present society and self concept.

**GL 436 Turning Points in Literature** (6) Examines literary movements as sources of ideas and change in the Western world. Surveys major movements and authors of the 17th, 18th, 19th, and 20th centuries.

### **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 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 as texts and topics change.

### **Health Education (HE)**

Health education courses are taught by the faculty of the Department of Exercise and Sport Science.

**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.

**HE 360 The School Health Program** (3) Examines issues related to school health services, the environment, education, and the teacher's potential role in each of these areas.

### **Health Sciences (HS)**

Health sciences courses are taught by the faculty of the Dunigan Family Department of Nursing and Health Sciences. Courses are open to all University students.

**HS 101 Adult Health and Wellness** (1) Focuses on a holistic approach to a healthy lifestyle. Emphasizes assessment, management, and individual responsibility in promoting personal health. Meets the general education Health and Wellness requirement. Fall, spring.

**HS 205 Pharmacology** (3) Survey course provides a foundation in the basic principles of pharmacology with emphasis on knowledge and interventions needed to maximize therapeutic effects and prevent or minimize adverse effects of drugs. Builds on the knowledge of physiology, chemistry, and psychology to understand the action of drugs in the human body. Prototype drugs used to teach basic principles of select drug classifications and drug action on biologic systems. Placement: Sophomore level. Prerequisites: Chemistry 108 or equivalent; Exercise and Sport Science 112, 113.

**HS 206 Human Sexuality: A Healthy Perspective** (3) Focuses on the full potential for mental and physical health related to human sexuality. Examines personal and social values regarding sexuality, as well as current health concerns arising out of contemporary sexual choices and violent behavior with outlets in inappropriate sexual expressions. Offered irregularly.

**HS 290 Alcohol and Drug Abuse** (3) Uses a historical perspective to analyze attitudes toward alcohol and drug use and abuse. Studies etiological and developmental theories of alcoholism and drug abuse as well as the physiological and social consequences of abuse. Family dynamics and their relationship to alcoholism and drug abuse discussed. Current approaches to prevention detection and treatment of alcoholism and drug abuse analyzed. Offered irregularly.

## Health Services Administration (HSA)

Health services administration courses are taught by the faculty of the Dunigan Family Department of Nursing and Health Sciences.

**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 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. 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.

## 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. 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 bitter and 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 The Great Transformation: Europe in the Nineteenth Century (3)** Explores the impact of the industrial revolution on urban and rural life in Europe, paying particular attention to changes in the distribution of wealth that occurred during this period and the political and cultural responses to those changes. Prerequisite: History 112 or permission of 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 before the Modern Age (3)** Studies the lives of women primarily in western society from ca. 500 to 1700; 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 History 111 or 313 or 314 or permission of instructor.

**HIST 321 The West and the Islamic World in the Middle Ages (3)** Examines the full scope of the relationship between the Christian and Islamic Worlds from the 7th through the 14th centuries. Examines commercial, cultural, intellectual, and scientific exchanges and their long-term impact on both societies. Pays special attention to the theme of conflict, with particular emphasis on the Crusades, their impact and legacy. Prerequisite: Sophomore standing or History 111 or 313 or permission of instructor.

**HIST 322 Old Regime and Revolution: Europe in the Eighteenth Century (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 329 Frontier, Farm, and Plantation: Rural Society in America, 1780-1900** (3) Examines the changing nature of rural society in selected regions of the United States in the 19th century, with particular attention to the Middle West. Studies the impact of the emerging market economy on traditional social structures and value systems and considers the evolution of land policies over the century. Pays special attention to the themes of class, community, and ethnicity. Prerequisite: History 112 or 141 or permission of instructor.

**HIST 341 Class, Community, and Race in Colonial North America, 1607-1783** (3) Examines the economic and social history of British and French America in the Colonial period, partly by the method of regional case studies. Considers the origins and nature of the American Revolution, with particular attention to the dimension of social class in that conflict. Prerequisite: History 112 or 141 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 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: U.S., 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 America in the 1960s** (3) Studies the time period between Brown vs. Board of Education (1954) and the end of the Vietnam War (1975). Considers how well-established traditions, in such areas as governmental policies (domestic and foreign), gender, and race relations, faced new challenges. Examines important people, events, and ideological arguments in this pivotal period of American history. Prerequisite: Sophomore standing or History 142 or 348 or permission of instructor.

**HIST 352 Dictatorship and Democracy in Latin America since 1808: Argentina, Brazil, Chile, Columbia, Peru** (3) Examines complex forces that shaped these five countries from independence to the present day. Uses comparative study to consider issues of nationalism, race, agrarian and labor concerns, relations with the United States, and environmental problems. Prerequisite: Sophomore standing or History 112 or 353 or permission of instructor.

**HIST 353 History of Mexico: Conquest to the Present** (3) Examines Mexico's diverse history, centered on the interaction between the indigenous peoples and European settlers, from 1492 to the present. Pays special attention to the impact of "foreign" ideas, economic demands, and population groups. Special attention to relations between this complex nation and its neighbors, particularly the United States. Prerequisites: Sophomore standing or History 112 or 352 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) Identifies and studies in detail a topic such as immigration, frontier, Russian, or Irish history. May be repeated. Prerequisite: Junior 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 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.

**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 448 The Mexican Revolution, 1911-1917** (3) Studies the complexity of the revolution that profoundly influenced the history of Mexico in the 20th century. Examines the various actors that propelled Mexico into revolution and those who sought to advance particular causes during the upheaval. Uses primary as well as secondary sources and considers the extent to which the ideals of the revolution are still influencing social and political behavior in Mexico today. Prerequisite: History 112 or 352 or 353 or permission of instructor.

**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 inde-

pendence movements. Prerequisite: Junior standing or History 112 or permission of instructor.

**HIST 482 Social Change and Political Conflict in Ireland, 1700-1925** (3) Examines the origins and nature of the independence movement in Ireland. Pays particular attention to the social, economic, and cultural changes (in both town and country) that fueled the movement, including the role played by expanding Irish emigrant communities in America. Prerequisite: History 112 or 317 or 381 or permission of instructor.

**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. May be repeated for a maximum of six hours. 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 interdisciplinary and are taught by faculty members from all the University's colleges and schools. Students in the Honors Program are able to enroll in any honors course regardless of major. Honors classes and activities frequently become arenas of widely divergent and contested ideas with the ultimate goal of a deeper understanding of self and the world in which we live.

**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.

## Information Technology (IT)

Information technology courses are taught by faculty members from across campus, typically as part of the interdisciplinary program in Internet technology.

**IT 120 Introduction to Internet Applications** (3) Introduces basic elements of a standard website, the database and the user interface, using Microsoft's Access and FrontPage software. Also covers basic HTML and a brief



historical overview of the Internet. Same as Software Application 120. Fall, spring.

**IT 251 Basic Web Production (3)** Introduces basic concepts of website development. Utilizes HTML and appropriate text and graphics software applications to build website. Includes overview of basic design, writing, and information architecture principles that apply to website development. Prerequisite: Communication 130 or permission of instructor. Same as Communication 251. Fall, spring.

**IT 310 Internet Networking, Hardware, and Software Applications (3)** Imparts practical working knowledge of the current topologies for networks and web server environments. Provides hands-on experience through laboratory work and classroom lectures. Topics include network topology, routing, IP addressing, name resolution, virtual private networks, and web server farm design. Prerequisite: Mathematics 134 or 221. Fall.

**IT 352 Advanced Web and Multimedia Production (3)** Advanced techniques in website development, including concept of dynamic HTML. Includes integration of video and audio as well as working with the Flash application for integrating interactive multimedia elements into website design. Prerequisite: Communication 251. Same as Communication 352. Spring.

**IT 445 Database Management (3)** Introduces basic database topics including data modeling, entity relationship diagramming, database normalization, and proper database design. More advanced topics (including structured query language, transaction management, and concurrency control) covered on a limited basis to demonstrate the challenges organizations face when implementing multi-user databases. Business related topics including data warehouse and electronic commerce covered to give an idea of how databases are used in modern business organizations. Prerequisite: Management 311. Same as Management 445.

**IT 490 Information Theory and the Internet (3)** Explores the concepts of information and knowledge, along with their representation, from the perspectives of philosophy, cognitive psychology, computer science (particularly artificial intelligence), and mathematics. This is the senior seminar for the interdisciplinary program in Internet technology. Prerequisite: Senior standing. Spring.

**IT 499 Special Topics in Information Technology (3)** Explores in detail a specific issue in information technology. Specific topic may vary each time the course is taught. Prerequisite: Junior standing or permission of instructor.

## Interdisciplinary (ID)

Interdisciplinary courses provide instruction in topics requiring understanding from the perspectives of several disciplines.

**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. Writing intensive course. Satisfies the general education requirement for American Traditions.

**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 Avant-garde, 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 Haillie, Primo Levi, Ethy Hillesum, Richard Rubenstein, and John Roth along with selected films.

**ID 235 British Cathedrals and the Arts (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 campus 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 254 Christian Worship (3)** Provides an overview of Christian worship practices, with special attention to the Western Catholic and Protestant traditions. Topics include the Christian year, liturgical architecture, speaking and singing the Word, the sacraments.

**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 H282/382 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.

**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.

**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.

## **Japanese (JAPN)**

Japanese courses are taught by the faculty of the Department of Foreign Languages.

**JAPN 111, 112 Elementary Japanese (3 each)** Introduction to the fundamentals of modern standard Japanese, placing equal emphasis on listening, speaking, reading, and writing.

**JAPN 114 Business Japanese: Language and Culture (3)** Introduction to the fundamentals of modern standard Japanese, focusing on business practices. Emphasis on understanding Japanese culture related to the Japanese business field.

**JAPN 211, 212 Intermediate Japanese (3 each)** Continuation of Japanese 111 and 112. Equal emphasis on listening, speaking, reading, and writing with more advanced grammar.

**JAPN 311, 312 Third-Year Japanese (3 each)** Continuation of practice in written and spoken Japanese, focusing on complicated expressions.

**JAPN 333 Japanese Culture (3)** Introduction to modern Japanese culture, focusing on Japanese history, socialization, class stratification, labor, business, education, religion, ritual practices, gender, minorities, modern literature, and contemporary culture. Knowledge of Japanese is helpful but not required.

**JAPN 438 Seminar (3)** Topics vary. Generally covers outstanding Japanese authors and literary works. Course may be repeated with content change.

## **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 as text and authors change.

## 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. 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.

## **Literature (LIT)**

See also World Literature (WLIT).

Literature courses are taught by the faculty of the Department of English.

**LIT 231 Masterpieces of English Literature I (3)** Studies major works of English literature from Beowulf (750) to Blake (1780). Includes such authors as Chaucer, Marlowe, Donne, Milton, and Swift.

**LIT 232 Masterpieces of English Literature II (3)** Studies major works of English literature from 1780 to the present. Includes such authors as Austen, Wordsworth, Byron, Keats, Eliot, Dickens, Wilde, Yeats, and Lawrence.

**LIT 241 Major American Writers I (3)** Focuses on major American works from 1620 to 1865 with emphasis on the central figures of the American Renaissance including Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson.

**LIT 242 Major American Writers II (3)** Major American works from 1865 to the present. Includes important post-Civil War and modern writers such as Twain, James, Frost, Cather, O'Neill, Eliot, Pound, Faulkner, Fitzgerald, Hemingway, Hughes, and O'Connor.

**LIT 300 Early English Writers (3)** Studies The Canterbury Tales and other major works of late medieval literature including Gawain and the Green Knight, Morte D'Arthur, The Pearl, Piers Plowman, plus some drama and lyric poetry.

**LIT 310 The Renaissance (3)** Studies Renaissance English literature emphasizing works by Sidney, Spenser, Marlowe, Bacon, Jonson, and others.

**LIT 320 Seventeenth Century (3)** Covers prose, poetry and drama of the post-Renaissance period through the Restoration with special focus on works of John Milton.

**LIT 330 Special Topics in Literature (3)** Focuses in-depth on particular writers or a particular literary movement, subject or period. Topics vary and may include: Melville and Faulkner, Hemingway and Fitzgerald, Contemporary British Poetry, or American Drama.

**LIT 350 Shakespeare (3)** Studies 12 of Shakespeare's greatest works, including the histories, the comedies, and the tragedies.

**LIT 351 The English Novel (3)** Focuses on major English novelists including Defoe, Fielding, Austen, Dickens, Hardy, Conrad, Joyce, and Lawrence.

**LIT 353 The American Novel (3)** Studies major American novelists including Melville, Twain, Crane, Dreiser, Fitzgerald, Hemingway, and Faulkner.

**LIT 370 The Age of Enlightenment (3)** Studies such figures as Pope, Swift, Johnson, Boswell, Sheridan, and Goldsmith.

**LIT 375 The Romantic Movement (3)** Covers major English works from 1789 to 1837. Emphasizes those by Wordsworth, Coleridge, Byron, Shelley, and Keats.

**LIT 380 The Victorian Period (3)** Includes English literature from 1837-1900. Emphasizes the Victorian writer as poet, sage, and novelist.

**LIT 385 The Twentieth Century (3)** Focuses on such writers as Conrad, Yeats, Eliot, Joyce, Lawrence, and Thomas.

**LIT 399 Independent Study in Literature (1-3)** Provides opportunity to do independent study in English language literature.

**LIT 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.

### 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. Topic varies each offering.

**MGT 300 Principles of Management (3)** Examines the primary functions of management including planning, organizing, staffing, and leading. Focuses on learning

fundamental principles and theories associated with these management functions and then applying learning through the analysis of various management situations and problems. Prerequisite: Satisfaction of leveling policy. Credit not given for both Management 300 and Management 377.

**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: 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: Software Application 110. Credit not given for both Management 311 and Accounting 321.

**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. Topic varies each offering. Prerequisite: Management 300 or 377. Offered periodically.



**MGT 395 Independent Study (1-3)** Independent research in management conducted under faculty supervision. Prerequisite: Permission of the instructor.

**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)** Builds conceptual knowledge and practical skills related to leadership at the individual, team, and organizational level through reading, discussion, exercises, and projects. Prerequisite: Management 300 or 377.

**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: Management 300 or 377.

**MGT 445 Database Management (3)** Introduces basic database topics including data modeling, entity relationship diagramming, database normalization, and proper database design. More advanced topics (including structured query language, transaction management, and concurrency control) covered on a limited basis to demonstrate the challenges organizations face when implementing multi-user databases. Business related topics including data warehouse and electronic commerce covered to give an idea of how databases are used in modern business organizations. Prerequisite: Accounting 321 or Management 311. Same as Accounting 445, Management Information Systems 445, Information Technology 445. Offered alternate years.

**MGT 450 Knowledge Management (3)** Broad, cross-disciplinary field that encompasses cognitive science, expert systems, artificial intelligence, groupware, document management, decision support systems, databases, and organizational behavior. Knowledge management defined as performing the activities involved in discovering, capturing, sharing, and applying knowledge so as to enhance, in a cost-effective manner, the impact of knowledge on the organization's goals. Prerequisite: Accounting 321 or Management 311. Same as Management Information Systems 450. Offered alternate years.

**MGT 455 Global Supply Chain Issues in Manufacturing (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 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. Writing intensive course. Prerequisites: Finance 361; Management 377; Marketing 325; senior standing. Senior seminar course.

### Management Information Systems (MIS)

Management information systems courses are taught by the faculty of the Department of Accounting and Business Administration and the Department of Electrical Engineering and Computer Science. 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.

**MIS 350 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, aggregate, and user-defined data types. Introduction to object-oriented design and recursion. Same as Computer Science 210. Fall, spring.

**MIS 355 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. Prerequisite: Management Information Systems 350. Same as Computer Science 215. Fall, spring.

**MIS 445 Database Management (3)** Introduces basic database topics including data modeling, entity relationship diagramming, database normalization, and proper database design. Advanced topics (including structured query language, transaction management, and concurrency control) covered on a limited basis to demonstrate the challenges organizations face when implementing multi-user databases. Business related



topics including data warehouse and electronic commerce covered to give an idea of how databases are used in modern business organizations. Prerequisite: Accounting 321 or Management 311. Same as Accounting 445, Management 445, Information Technology 445. Offered alternate years.

**MIS 450 Knowledge Management** (3) Broad, cross-disciplinary field that encompasses cognitive science, expert systems, artificial intelligence, groupware, document management, decision support systems, databases, and organizational behavior. Knowledge management defined as performing the activities involved in discovering, capturing, sharing, and applying knowledge so as to enhance, in a cost-effective manner, the impact of knowledge on the organization's goals. Prerequisite: Accounting 321 or Management 311. Same as Management 450. Offered alternate years.

### 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. Spring.

**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. Topic varies each offering. Prerequisite: Marketing 325. Offered periodically.

**MKT 395 Independent Study** (1-3) Independent research in marketing conducted under faculty supervision. Prerequisites: Marketing 325; permission of the instructor.

**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.

**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. Fall, spring.

**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. May be repeated. 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. May be repeated. 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 dis-

covered, 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.

**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 2011.

**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 2011.

**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. 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.

**MATH 373 Numerical Methods** (3) Covers numerical computer-based methods for solving transcendental equations, systems of linear equations, interpolation, approximation, numerical integration and differentia-

tion, 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 2013.

**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. May be repeated. Prerequisite: Mathematics 222; any additional prerequisites will be announced when scheduled.

**MATH 420 Advanced Calculus** (3) Provides more formal treatment of topics in elementary calculus, including limits, continuity, differentiability, integrability, and infinite series, with emphasis on precise definitions and proofs of theorems. Prerequisite: Mathematics 323. Fall 2012.

**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 2012.

**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 2013.

**MATH 466 Statistics** (3) Develops standard topics in mathematical statistics, including sampling distributions, estimation, hypothesis testing, analysis of variance, regression, and correlation. Prerequisite: Mathematics 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. 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. May be repeated. 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. 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 197 Integrated Design I** (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: Engineering 101 with a grade of C- or better or permission of the instructor. May be repeated. 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. Develop skills in mathematical computer modeling and analysis of engineering problems. Prerequisites: Engineering 212; Physics 210. Corequisites: Electrical Engineering 210 or permission of instructor; Mathematics 324.

**ME 297 Integrated Design II (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. May be repeated. 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 230, 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. Exergy and irreversibility. 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 (3)** Includes the statistical analysis of experimental data, error analysis, and uncer-

tainty 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; Mechanical Engineering 344; Engineering 366. May be repeated. Spring.

**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 Advanced Fluid Mechanics** (3) Advanced topics in fluid mechanics selected from: compressible flow, viscous flow, turbulence, boundary layer theory, potential flow theory, computational fluid dynamics. 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, combustion pollutants, 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) Introduces concepts of a “total quality” approach to projects and deliverables and associated skills such as project and time management, teaming, and negotiations. Projects assigned to reinforce lecture material. External speakers discuss topics pertinent to engineers in modern society. A formal proposal is written for the Mechanical Engineering 497 project. Prerequisites: Engineering 366; Mechanical Engineering 344. Corequisite: Mechanical Engineering 368 or permission of instructor.

**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.

**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. May be repeated. Prerequisites announced when scheduled.

## 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. 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 105, 205, 305, 405 English Horn** (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)



## UNDERGRADUATE COURSE DESCRIPTIONS

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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, Latin, German, and French. Combines lecture, oral readings, and practice 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 107, 108 Voice Techniques I, II (1)** Vocal instruction in a group setting for students without previous vocal training. Covers vocal technique, limited languages, and styles including musical theatre.

**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. Students also participate in University Band and Aces Brass as part of this course. Audition required each semester for entrance and seating placement.

**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.

**MUS 113, 213, 313, 413 Jazz Ensemble (Section 01: Big Band) (½ each)** Full size band, performs on campus each semester. Other activities include performances with guest artists, jazz festivals, and regional tours. Audition required.

**MUS 113, 213, 313, 413 Jazz Ensemble (Section 02: Lab Band) (½ each)** Full size band, performs on campus each semester. Audition not required.

**MUS 114, 214, 314, 414 Saxophone Ensemble (½ each)**

**MUS 115, 215, 315, 415 Clarinet Ensemble (½ each)**

**MUS 116, 216, 316, 416 Woodwind Chamber Ensemble (½ each)**

**MUS 117, 217, 317, 417 Flute Ensemble (½ each)**

**MUS 118, 218, 318, 418 Small Jazz Ensemble (½ each)**

**MUS 119, 219, 319, 419 Guitar Ensemble (½ each)**

**MUS 120, 220, 320, 420 University Symphony Orchestra (1 each)** Select 60 member ensemble that presents several concerts each semester featuring standard orchestral repertoire. Open to both music majors and non-majors from across the University community. Audition required.

**MUS 122, 222, 322, 422 String Chamber Ensemble (½ each)**

**MUS 125, 225, 325, 425 Brass Ensemble (½ each)**

**MUS 127, 227, 327, 427 Percussion Ensemble (½ 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. It has toured extensively. Audition required

**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.



**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.

**MUS 132, 232, 332, 432 Kantorei** (½ 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.

**MUS 136, 236, 336, 436 Opera Workshop** (½ each) Covers fundamentals of opera performance and develops skills in operatic acting through classroom performance projects of operatic excerpts.

**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.

**MUS 139, 239, 339, 439 Keyboard Accompanying** (½ each) Instruction in the technique and art of musical collaboration on the piano, organ, and harpsichord.

**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 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 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 190 The Church and Music** (2) Overview of the history and key concepts of sacred music.

**MUS 204, 205 Basic Piano III, IV** (1 each) Advanced 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 241 Introduction to Form** (3) Introduces fundamental designs, processes, and structures of music of the 18th and 19th centuries. Continues aural skills and sight singing training. Prerequisite: Music 142.

**MUS 242 Twentieth Century Theory** (3) Divided into broad categories of neotonality and atonality, covers elements of 20th century 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 pro-

gression 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 259 Christian Hymnody (3)** Historical survey of the poetry and tunes that Christians have sung from earliest times to the present. Areas of emphasis include plainsong, Genevan psalms, English and American hymns, and global hymnody.

**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 (1)** Develops practical and pedagogical knowledge of flute, single reed and double reed instruments with emphasis on performing skills. Covers understanding and application of various facets of woodwind playing. Prerequisite: Music major or minor or permission of instructor.

**MUS 263 Brass Techniques (1)** Develops practical and pedagogical knowledge of the four major brass instruments with emphasis on performing skills. 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, 365 String Techniques I, II (1 each)** Develops proficiency in one stringed instrument. Emphasis on heterogeneous classroom teaching techniques for beginning string students. Prerequisite: Music major or minor or permission of instructor.

**MUS 266 Guitar Techniques and Recreational Music (1)** Develops proficiency to play chords, basic strumming, and picking patterns Introduces teaching techniques. Builds skills to play traditional, folk, and popular songs. 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.

**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 programs implement structured music therapy sessions, and document progress. Prerequisite: Music 184 or permission of instructor.

**MUS 340 Counterpoint (3)** Composition in strict 18th century contrapuntal style in two, three, and four voices; analysis and composition of ostinato variations, canons, inventions, and fugues. 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 Gregorian Chant to 21st century music. Prerequisite: Music 241 or permission of instructor.

**MUS 345 Sacred Choral Literature (2)** Survey of sacred choral literature from the 16th century to the present. Covers general issues related to music selection and

involves working from a lectionary. Prerequisite: Music 142, 350; 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 (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 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 366 Introduction to Music Therapy Improvisation (1)** Introduces techniques and develops facilitation skills used in improvisation with emphasis on percussion, keyboard, or mixed media improvisation exercises. Prerequisite: Music 184 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, Kodaly, Orff, and other approaches. Prerequisite: Music 142 or permission of instructor.

**MUS 371 Secondary Methods and Materials in General Music (3)** Examines theoretical, performance, pedagogical, technological, and integrative skills applied in secondary music education. Introduces strategies for teaching and designing both performing and non-performing music courses. Investigates approaches to curriculum development, computer-assisted instruction, assessment of standards and lesson planning. 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 Music Therapy Professional Issues and Advanced Techniques (3)** Develops knowledge of the AMTA Code of Ethics, reimbursement, administrative responsibilities, counseling skills, and song composition for clients. Prerequisite: Music 286 or permission of instructor.

**MUS 386 Psychology of Music (3)** Examines the psychoacoustical parameters of music; the perception of melody, harmony, rhythm, and form; affective responses to music; musical preference and ability; neurophysiology and musical behavior; functional music; 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 paper or presentation in an area of interest and mock job application. 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. Prerequisites: Music 142; Software Application 110; or permission of instructor.

**MUS 393, 394 Sacred Music Internship** (1 each) Practical sacred music experience in local churches. Students work as assistants to church music directors with supervision by University faculty members. Prerequisite: Music 190.

**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** (6) 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** (6 or 12) Observing and teaching daily under supervision of the critic teacher and the University supervisor for length of semester.

**MUS 486 Influence of Music on Behavior** (4) Examines the effect of music on physiological, social, aesthetic, and academic behaviors, emphasizing and critically examining the research literature. Clinical research techniques studied. Culminates with the creation of an individual research project proposal. Prerequisite: Music 286 or permission of 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 120; World Cultures 110.

**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.

### Nursing (NURS)

Nursing courses are taught by the faculty of the Dungan Family Department of Nursing and Health Sciences.

**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).

**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. Corequisite: Nursing 262. Fall.

**NURS 262 Nursing Modalities: Healthy and Vulnerable Adults** (2) 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 (6 clock hours). Prerequisites: Exercise and Sport Science 112, 113; Chemistry 108. Corequisites: 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 program.

**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 or 165, 261, 262, 264; Biology 110; Nutrition 280. 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 or 165, 261, 262, 264; Biology 110; Nutrition 280. Corequisite: Nursing 271. Spring.

**NURS 351 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 Program.

**NURS 361 Dynamic Integration: Transition Related to Common Illness Phenomena (3)** Focuses on vulnerable individuals and families across the life span with an emphasis on pediatric clients, 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, gastrointestinal disorders, 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 includ-

ing 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 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.

**NURS 395 Special Topics in Health Care and Nursing (2-6)** Specific health care and nursing topics. Classroom and experiential learning experiences appropriate.

**NURS 466 Professional Leadership I (2)** Focuses on principles of leadership and management as practiced in a community setting. Emphasizes concepts of client advocacy, change, power, and politics (2 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN program. Corequisite: Nursing 468.

**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 program. 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 program. Corequisite: Nursing 467.

**NURS 476 Professional Leadership II (2)** Focuses on the principles of leadership and management as they are practiced in an institutional setting. Concepts of organizational behavior, and transformational and transactional leadership emphasized (2 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN program. Corequisite: Nursing 478.

**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 program. 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 program. 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 presentation required (3 clock hours). Prerequisites: All 300-level nursing courses or admission to the RN to BSN program.

**NURS 490 Seminar on Alcoholism and Substance Abuse (2)** Examines psychological and physiological aspects with emphasis on current theories and practices in the prevention, detection, and treatment of alcoholism and substance abuse (2 clock hours). Summer.

### **Nutrition (NUTR)**

Nutrition courses are taught by the faculty of the Duni-gan Family Department of Nursing and Health Sciences.

**NUTR 280 Nutrition in Health and Disease (3)** Provides a knowledge base for assessing client needs for basic nutrition and for implementing appropriate nursing action. Diet therapy principles applied to general health problems. Prerequisites: Exercise and Sport Science 112, 113; Chemistry 108 or equivalent. Fall.

**NUTR 304 Nutrition Concepts and Controversies (3)** Focuses on basic nutrient requirements and how they are used by the human body throughout the life cycle. A holistic approach with emphasis on physiological factors influencing eating habits (social, economic, cultural, etc.). Current controversies in the field of nutrition discussed and class activities are coordinated to stimulate thought and judgment on selected topics. Provides a basic understanding of nutrition for application to one's own lifestyle. Meets the general education health and wellness requirement. Spring.

### **Organizational Leadership (OL)**

Organizational leadership courses are taught by instructors in affiliation with the Center for Adult Education staff. These courses apply only 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. Writing intensive course.

**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 Freshman Seminar in Philosophy** (3) Develops and enhances critical thinking skills through the analysis and discussion of perennial philosophical problems. Emphasis on developing critical reading and discussion skills, writing expository and evaluative analysis of extended argument prose, and constructing argumentative essays. 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. Emphasis on the works of Descartes, Spinoza, Leibniz, Locke, Berkeley, Hobbes, Hume, and 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 301 Selected Topics in Philosophy (3)** Studies selected 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 311 Phenomenology and Existentialism (3)** Studies themes in phenomenology and existential philosophy from Kant to the present day. Specific thinkers include Kierkegaard, Nietzsche, Husserl, Heidegger, Sartre, and Merleau-Ponty. Prerequisite: Junior or senior standing, or permission of instructor.

**PHIL 316 Environmental Ethics (3)** Examines some of the main ethical choices required in making environmental policy choices from an individual, social, and historical perspective. Critically examines the ethical attitudes towards issues that have influenced modern society such as land use, biodiversity, population control, and wilderness preservation.

**PHIL 324 Epistemology (3)** Focuses on philosophical problems in determining what, if anything, should be regarded as real and when we are entitled to claim to know something to be true. Emphasis on 20th century writings. Prerequisite: Junior or senior standing, or permission of instructor.

**PHIL 340 Philosophy of Religion (3)** Examines the nature of religious experience, religious language, claims to religious knowledge, and the relation between faith and reason. Prerequisite: Junior or senior standing, or permission of instructor.

**PHIL 359 Philosophical Classics (3)** In a seminar setting, studies selected philosophical classics or texts destined to become classics. May be repeated for credit as the selection of texts changes. Prerequisite: One course in philosophy or religion, or permission of instructor.

**PHIL 416 Bioethics (3)** Considers selected problems in medical and environmental ethics from biological, philosophical, and religious perspectives. Topics include abortion, euthanasia, and genetic engineering. Prerequisite: Junior or senior standing, or permission of instructor.

**PHIL 445 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 junior or senior standing in natural or social science.

**PHIL 446 Philosophy of Law (3)** Presents treatment of different theories of the nature of law (e.g., legal positivism, legal realism, natural law, analytical jurisprudence), the justification of punishment, and the relation between morality and law. Prerequisite: One course in philosophy, political science, or legal studies.

**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 491 Directed Study in Philosophy (1-3)** Offers research in special problems or persons under the direction of a member of the philosophy faculty. May be repeated for 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 Seminar in Philosophy (3)** Required of all senior philosophy majors. Affords the student the opportunity to work independently in the preparation of an extended paper and to present this paper in a seminar to other majors in philosophy, religion, and pre-theology. Prerequisite: Senior standing.

## **Physical Therapy (PT)**

Physical therapy courses are taught by the faculty of the Departments of Physical Therapy and Exercise and Sport Science.

**PT 100 Medical Terminology (1)** Utilizes guided independent student learning activities to teach the basic prefixes, suffixes, and roots of medical terms. Assists student in utilizing medical terminology appropriately in both written and verbal forms. Fall, spring.

**PT 101 Basic Modalities and Techniques for the PTA I**

(3) Includes basic procedures fundamental to physical therapy: safe body mechanics, patient handling, positioning, and transfers. Instruction includes the principles and techniques of massage. Students explore the principles and physiologic responses of the following physical agents: heat, cold, water, light, electrical stimulation, mechanical traction, intermittent compression, and pressure garments, as well as indications and contraindications to the use of these modalities. Students 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. Course includes introduction to documentation. Lecture/lab. Fall. Prerequisite: Admission to PTA program.

**PT 102 Basic Modalities and Techniques for the PTA II**

(4) Emphasizes management of musculoskeletal dysfunctions. Builds on first semester techniques and integrates these with exercise in the treatment of orthopaedic-based impairments. Units include stress management, mobility training, principles of therapeutic exercise, and the effects of exercise on body systems. Students learn various modes of exercise, extremity proprioceptive neuromuscular facilitation patterns, EMG biofeedback, and tissue healing. This course includes management of orthopaedic conditions including pathology, exercise prescription and progression, and the use of exercise equipment. Other topics include industrial medicine and the effect of aging on body systems. Assignments reinforce appropriate communication between the 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) Introduces skills of goniometry and manual muscle testing. Includes gross 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) Introduces physical therapy through observations at clinical facilities and by reading appropriate articles. Student accom-

panies a physical therapist or physical therapist assistant at a 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. Student may assist in simple procedures as selected by the clinical supervisor and has opportunity to improve communication skills. Provides introduction to other health care professionals and to the role of the administrator of physical therapy services. Prerequisite: Admission to the PTA program. 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 physical therapist. Students will be in the facility full time, five days a week for 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. Students expected to explain the etiology, signs, symptoms, clinical course, and primary medical interventions of disorders presented. Students also expected to understand how different disease processes affect the patient's ability to participate in physical therapy and achieve an optimal functional outcome. Prerequisites: Exercise and Sport Science 112 and 113 or 220/221L; Interdisciplinary 356; Physical Therapy 102. Summer.

**PT 210 Basic Modalities and Techniques for the PTA III**

(4) Student expected to demonstrate manually and in written form treatment techniques for adult patients with amputations, burns, cardiopulmonary disorders, peripheral vascular disorders, traumatic brain injuries, and wounds. Units on proprioceptive neuromuscular trunk patterns and techniques and women's health issues are presented. Students experience and demonstrate application of these techniques during simulated patient situations in the laboratory setting. Lecture/Lab. Prerequisites: Physical Therapy 102, 111, 200. Fall.

**PT 249 Clinical II**

(5) Student is placed in the clinical setting (40 hours per week for six weeks) to become an active participant in the health care team. Actively involved in the care of patients under the supervision of a PT. Experience develops therapeutic interventions and patient care skills. Prerequisites: Physical Therapy 111, 210, 251. Spring.

**PT 250 Clinical III (5)** Final six-week clinical experience continues to develop interventions, techniques, and patient care skills. Upon completion of this course, students are expected to be able to practice as entry-level physical therapist assistants. Prerequisite: 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, 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 patient's 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 (2)** Lecture-seminar course discusses current, professional issues that affect the practice of physical therapy and the role of the PTA. Students examine various ways in which a PTA functions as a member of the health care delivery team. Addresses the role of the assistant in department activities, specialized areas of practice and the American Physical Therapy Association. 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 411 Basic Physical Therapy Skills (3)** Introduces basic skills necessary for practice in the profession of physical therapy to include body mechanics, exercise techniques (flexibility, range of motion, strengthening), proprioceptive neuromuscular facilitation, transfers, and vital signs. Additional information includes the effects of inactivity, infection control, patient equipment, patient positioning, patient safety, total joint arthroplasty, and wound care. Principles from *Guide to Physical Therapist Practice* incorporated into these skills. Written documentation utilized for specific lab activities in format suggested by guide. Students participate in initial observational clinical experiences in a long-term

acute care setting, inpatient rehabilitation, and pediatric facility. Lecture/Lab. Prerequisites: Physical Therapy 431, 441. Fall.

**PT 413 Modalities for the Physical Therapist (3)** Encompasses physical agents used in rehabilitation which produce specific local and/or systemic physiological responses. Agents addressed include massage, heat, cold, compression, hydrotherapy, aquatic therapy, the diathermies, electrical stimulation, traction, biofeedback, and relaxation techniques. Each agent discussed in terms of rationale and contraindications for use, instrumentation, application, and desired physiological response. Includes related concepts of patient positioning, basic body mechanics, and pain to facilitate clinical problem-solving. Laboratory experiences enhance student learning and clinical application. Foundational principles of therapeutic exercise and manual therapy introduced. Prerequisites: Physical Therapy 431, 441. Fall.

**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 and hand-held dynamometers introduced. Opportunity to learn about isokinetic testing at local outpatient clinics. Prerequisites: Biology 436; Physical Therapy 411, 413, 432, 434, 442, 451. Spring.

**PT 421 Patient Management I (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. Addresses concepts and techniques related to proprioceptive neuromuscular facilitation. Medical documentation integrated into laboratory activities and assignments. Experiential opportunities included. Prerequisites: Biology 436; Physical Therapy 411, 413, 432, 434, 442, 451. Corequisite: Physical Therapy 417. Spring.

**PT 422 Patient Management II (3)** Applies principles of rehabilitation science to patients with disorders of the cardiovascular or pulmonary systems. Topics include pathophysiology, patient assessment, medical and surgical management of disease, and safety aspects. The course emphasizes the design, implementation, and administration of a team-based approach to cardiovascular and pulmonary rehabilitation and disease preven-

tion. Prerequisites: Biology 436, Physical Therapy 411, 413, 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)** Introduces elements and principles basic to the study of human movement. Includes principles of basic biomechanics as well as biomechanical behavior of biological tissues. 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, 441. 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, immune system, 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, 441. Fall.

**PT 441 Clinical and Professional Issues I (2)** First in series of clinical and professional issues courses. Provides introduction to professional practice expectations of physical therapy. Provides orientation and strategies for success in the professional program. Introduction to American Physical Therapy Association. Students explore the practice of physical therapy utilizing the *Guide to Physical Therapist Practice* and the core values of the profession. Introduction to professional ethics and communication required in professional relationships. Prerequisite: Admission to the DPT program. Summer.

**PT 442 Clinical and Professional Issues II (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, 441. Fall.

**PT 451 Scientific Inquiry I (2)** This is the first in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in the areas of diagnosis, prognosis, intervention, and harm. Prerequisites: Physical Therapy 431, 441, or permission of the instructor. Fall.

**PT 452 Scientific Inquiry II (2)** This is the second in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in the areas of diagnosis, prognosis, intervention, and harm. Prerequisites: Biology 436 and Physical Therapy 411, 413, 432, 434, 442, 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 (½)** 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. 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 (½)** 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. Course may be repeated for additional credit.

**PHYS 495 Special Topics in Physics and/or Technology (1-3)** Advanced special topics in physics and/or technol-

ogy that are not offered regularly. Offered depending on interest or demand. 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. May be repeated.

**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. May be repeated. 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 U.S. Foreign Policy (3)** Introduction to the U.S. 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 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, non-governmental 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. May be repeated.

**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. May be repeated. 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. May be repeated for credit. 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 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; general education mathematics requirement. Fall.

**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 305 Special Topics in Psychology (3)** Examines specific topics in psychology through a seminar or workshop format. Prerequisite: Psychology 121 or permission of instructor.

**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, 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, mental health settings, and other social situations. Operant, respondent, and cognitive techniques reviewed in terms of doing therapy, increasing self-control, and improving productivity in industry. Focus 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, 226, 333. 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. May be repeated for a maximum of 9 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. 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 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 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 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, 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. 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.

### 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 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. Topic varies each offering. 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 130 Christian Thought (3)** Introduces themes of Christian thought in historical and contemporary perspectives.

**REL 140 Introduction to the Old Testament (3)** Introduces the Old Testament, its background, content, and major themes. Emphasis on the history and culture of ancient Israel and other peoples of the ancient Near East insofar as they illumine the Old Testament text.

**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 Christian Ethics (3)** Provides an introduction to Christian moral thinking, paying attention to the basis, nature, content, and consequences of Christian thought and traditions for various ethical issues. Includes a close reading and discussion of various approaches to Christian ethics as well as analysis of selected moral issues such as violence and war, euthanasia, abortion, sexuality, and racism.

**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: World Cultures 110.

**REL 213 Introduction to Judaism (3)** Introduction to the beliefs, practices, institutions, and literature of Judaism. Emphasis on the historical development of Judaism as well as on the Jewish faith as a living world religion. Prerequisite: World Cultures 110.

**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 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 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 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: One course in philosophy or religion, 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: One course in philosophy or religion, 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 Historical and Cultural Studies (3)** Specific topic varies each time course taught. Prerequisite: One course in religion or permission of instructor.

**REL 430 Topics in Biblical Studies (3)** Specific topic varies each time course taught. 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 440 Topics in Theological and Ethical Studies (3)** Specific topic varies each time course taught. 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. May be repeated for up to nine hours. Prerequisite: Permission of instructor.

**REL 492 Religion Internship (1-3)** Supervised field experience in church or other house of worship, non-profit organization, or similar area of direct relevance to a religion major.

**REL 499 Senior Seminar (3)** Required of all senior religion majors. Opportunity to work independently in the preparation of an extended paper and to present this paper in a seminar to other majors in religion. Prerequisite: Senior standing.

## Russian (RUSS)

Russian courses are taught by the faculty of the Department of Foreign Languages.

**RUSS 111, 112 Elementary Russian (3 each)** Emphasizes practice in grammar, speaking, listening, writing, reading, and cultural awareness.

**RUSS 211, 212 Intermediate Russian (3 each)** Continues practice in grammar, speaking, listening, writing, reading, and cultural awareness.

**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.

**RUSS 330 Independent Study in Russian (1-6)** Topics and credit hours must be prearranged with instructor. May be repeated with content change.

**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.

### **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.

**SW 121 Introduction to Social Agencies** (½) Introduces majors to avenues used in our society to assist people and the agencies in which sociologists and social workers frequently find employment. Should be taken during first semester as a department major and retaken during consecutive semesters until two hours of credit are earned. Student may choose from a variety of agencies and clientele characteristics. Prerequisite: Declared major in the Department of Law, Politics, and Society.

**SW 310 Introduction to Counseling** (3) Covers the concepts of counseling pertinent to social work, interpersonal communication, and criminal justice. General topics covered include an overview of counseling, theories of counseling, the counseling relationship, the counseling process, an overview of counseling specialties, and professional issues in counseling. Prerequisite: Social Work 120 or Sociology 105 or Criminal Justice 205.

**SW 329 Advanced Social Work Seminar** (3) Focuses on various levels of human interaction and various dimensions of human diversity. Levels include individuals, families, groups, organizations, communities, and societies. Prerequisites: Social Work 120; Sociology 105.

### **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 210 Deviance and Crime** (3) Examines deviance and crime through a number of sociological, psychological, and criminological perspectives.

**SOC 215 World Population Growth and Its Implications** (3) Focuses on the three basic population processes of growth, decline, and migration. Special emphasis on the social, economic, and political consequences of population change. Offered as independent study.

**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 Research Design in Behavioral Research** (3) Covers major research designs used in behavioral research. 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, case studies, projective techniques, diaries, secondary analysis, simulations, unobtrusive measures, sociometric and experimental techniques.

**SOC 301 Special Topics in Sociology** (3) Topics chosen on the basis of programmatic need or student interest. Prerequisite: Economics 101, Geography 240, Political Science 100, Psychology 121, or Sociology 105.

**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: Economics 101, Geography 240, Political Science 100, Psychology 121, or Sociology 105.

**SOC 335 Marriage and the Family** (3) Studies marriage and the American family, both dominant and subcultural patterns, its structure and relationships, with particular attention to parent and child roles. Prerequisite: Sociology 105 or permission of instructor. Offered as independent study.

**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 (3)** 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.

**SOC 350 Popular Culture (3)** Provides critical analysis of the sociological impact of the popular culture, including film, mass media, art forms, and literature. Offered as an independent study.

**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, utilitarianism, critical structuralism, conflict theory, feminism, symbolic interactionism, post-modernism, and integrated theories. Conceptual consideration given to agency, rationality, structure, system, culture and ideology, power, gender, and stratification. Prerequisites: Sociology 105; junior or senior standing; or permission of instructor.

**SOC 420 Social Policy Analysis (3)** Examines the relationship between social policy and social structure. Examines key social policies and their impact. Prerequisite: Economics 101, Geography 240, Political Science 100, Psychology 121, or Sociology 105.

**SOC 438 Minority and Ethnic Group Relations (3)** Studies the sociology of United States and global minority 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 Advanced Sociology Seminar (3)** Students complete an original research paper that uses data gathering and interpretive skills. Course content includes the general topics of social organization, social change, and social stratification as they relate to the world cultures courses. Prerequisites: Sociology major or minor; senior standing; Sociology 235, 344.

**SOC 460 Aging: The Individual 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 the elderly in the familial, religious, political, and economic institutions. Prerequisite: Permission of instructor or junior/senior standing.

**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.

### Software Application (SA)

Software application courses are taught by the faculty of the College of Engineering and Computer Science.

**SA 110 Introduction to Software Applications (3)** An introduction to computers and information processing. Emphasizes extended applications of Microsoft Excel and basic applications of Microsoft Access. Additional topics include advanced features of Microsoft Word and construction of web pages. Fall, spring.

**SA 120 Introduction to Internet Applications (3)** Introduces the basic elements of a standard website and the database and user interface using Microsoft's Access and FrontPage software. Also covers basic HTML and a brief historical overview of the Internet. Same as Internet Technology 120. Fall, spring.

### Spanish (SPAN)

Spanish courses are taught by the faculty of the Department of Foreign Languages. All courses are taught in the target language unless otherwise noted. Prerequisite: Completion of Spanish 311 or permission of instructor for all 300-level courses or above.

**SPAN 111, 112 Elementary Spanish (3 each)** Emphasizes practice in speaking, listening, writing, reading, and cultural awareness.

**SPAN 211, 212 Intermediate Spanish (3 each)** Continues practice in speaking, listening, writing, reading and cultural awareness.

**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.

**SPAN 314 Business Spanish (3)** Studies the specialized vocabulary of commercial Spanish.

**SPAN 316 Spanish Conversation (3)** Includes oral practice, free and directed composition, and review of syntax.

**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) Introduces outstanding literary works from Spain and Latin America.

**SPAN 330 Independent Study** (1-3) Course content and credit hours determined in consultation with the instructor. Course may be repeated with content change. 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 350 Medical Spanish** (3) Introduces medical Spanish and teaches how to conduct medical interviews.

**SPAN 410 Spanish Practical Phonetics: Pronunciation and Variation** (3) Introduction to theory and practice of Spanish pronunciation, including dialectal and historical variation.

**SPAN 433 Hispanic Civilization** (3) Studies history and culture of Spain and Latin America. Taught in Spanish.

**SPAN 438 Spanish Seminar** (3) Topics vary. Generally covers outstanding Hispanic authors and literary works. Course may be repeated with content change.

**SPAN 450 Spanish Advanced Grammar and Linguistics** (3) Focuses on linguistic analysis of Spanish grammar, specifically morphology (the study of word formation) and syntax (the analysis of sentences), and its dialectal, historical, social, and contextual variation.

## 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. Fall, spring.

**THTR 111, 112 Fundamentals of Acting** (3 each) Introduces 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 con-

struction, 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 which 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 Acting I: Process Awareness** (3) Examines the fundamentals of the acting process through exercises and scene study. Students participate in exercises designed to strengthen such skills as trust, relaxation, imagination, concentration, ensemble, and observation. Prerequisite: Theatre majors only. Fall.

**THTR 172 Acting II: Voice and Speech** (3) Explores the vocal and physical demands placed on an actor. Techniques are learned for finding physical neutrality and acquiring a basic knowledge of how the voice works. Addresses American Stage Standard and developing a personal vocal and physical regimen. Prerequisites: Theatre majors only; Theatre 171. 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. May be repeated. Fall, Spring.



**THTR 220 Production Techniques II (3)** Develops advanced theoretical and practical application of concepts begun in Theatre 120. Students investigate advance scenic construction techniques in carpentry, metalworking, and rigging. Spring 2012 (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 (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. 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, 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. Fall, spring.

**THTR 291 Theatre Practicum for Stage Managers (1)** Through practical experiences, involves students in the area of stage management. Prerequisite: Theatre 190. Fall, spring.

**THTR 320 Production Techniques III (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 it is used in theatrical production. Prerequisite: Theatre 120. Spring 2013 (offered alternate years).

**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 120, 135. Spring 2012 (offered alternate years).

**THTR 332 CADD for Theatre II (3)** Develops advanced level techniques using computer applications for a variety of purposes in the theatre. Emphasis on use

of software such as Vectorworks 3D, Google Sketchup 3D, and Adobe Creative Suite to enhance skills for portfolios, presentations, and rendering. Prerequisite: Theatre 130, 331. Spring 2013 (offered alternate years).

**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 120, 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 320. Spring 2013 (offered alternate years).

**THTR 361, 362 Theatre History I, II (3 each)** Examines social, religious, political, and artistic forces that have contributed to the development of theatre in the West from its origin through the present. 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 110 or 160; junior or senior standing. Fall, spring.

**THTR 363 Period Styles for the Theatre I (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 2013 (offered alternate years).

**THTR 364 Period Styles for the Theatre II** (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 2012 (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, Sophocles, Ibsen, 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 and junior or senior standing. Fall.

**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. 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. 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. May be repeated for a maximum of six credits. 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: Permission of instructor. Spring 2013 (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. Indi-

vidualized 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. May be repeated for a maximum of six 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. Prerequisites: 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. Fall 2012 (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: Theatre 400. Spring 2012 (offered alternate years).

**THTR 465 Senior Seminar in Theatre** (3) Encourages students to consider their own values and goals as they prepare to embark on a career in theatre. Emphasis on integration of independent research and creative practice through writing and presentations. Capstone general education requirement for theatre majors. To be taken in the senior year. 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 students the opportunity to demonstrate research, analytical, artistic, and technical skills, culminating in a formal presentation. Prerequisite: Theatre 372. 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. Entrance by 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. May be repeated for a maximum of six 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, property construction, and dialect coaching may be included. Prerequisite: Permission of instructor. May be repeated for a maximum of six hours. Fall, spring.

**THTR 499 Internships in Theatre (3-12)** 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.

### World Cultures (WC)

The World Cultures and First-Year Seminar sequence is the cornerstone of the General Education Program. The courses are taught by faculty members from all of the University's colleges and schools.

**WC 110 The Ancient World to the Reformation (3)** Studies period from the emergence of civilizations to the Reformation. Topic areas include the Middle East, China, Greece, Rome, and the role of the Renaissance and Reformation periods in Western Europe. Selected readings include *Gilgamesh*, *the Dialogues of Plato*, *Genesis*, readings from the *Qur'an*, *The Prince*, Dante's *Inferno*, and Shakespeare's *Hamlet*.

### World Literature (WLIT)

World literature courses are taught by the faculty of the Department of English.

**WLIT 122 Modern World Literature (3)** Covers poetry, short fiction, novel, and drama of the 20th century. Favors literature originally written in English but includes translations as well.

**WLIT 223 World Classics (3)** Explores some of the world's best imaginative literature from the age of Homer through the 19th century. Specific works vary from section to section.

**WLIT 340 Contemporary World Literatures (3)** Explores contemporary literatures (fiction, poetry, drama) in English from around the world.

**WLIT 343 Norse Myth, Saga, and Legend (3)** Studies the Eddas and sagas of Norway and Iceland plus related works of the 13th century from elsewhere in northern Europe.

**WLIT 344 Masterpieces of Russian Literature (3)** Explores the great works of 19th and 20th century Russian literature with focus on such writers as Pushkin, Gogol, Turgenev, Dostoyevsky, Tolstoy, and Chekhov.

**WLIT 348 Woman's Literature (3)** Focuses on feminine authors and criticism. Emphasis varies depending on instructor. Prerequisite: One literature course or permission of instructor.

**WLIT 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.

### Writing (WRTG)

Writing courses are taught by the faculty of the Department of English, except Writing 104 and 106, which may be taught by department faculty members or staffed under the supervision of the director of writing.

**WRTG 104 Exposition (3)** Focuses on writing skills, plus the larger elements of the expository essay: development of a central thesis, organization of material, and responsible use of supporting detail. Does not apply to Department of English major or minor requirements.

**WRTG 106 Principles of Effective Writing (1)** Focuses on basic writing skills plus larger elements of the expository essay: development of a central thesis, organization of material, and responsible use of supporting detail. Different expository modes examined and different techniques and strategies for effective writing explored. Discussions, lectures, and writing assignments used to pursue these ends. Does not apply to Department of English major and minor requirements.

**WRWG 202 Survey of the English Language (3)** Deals with the nature and history of the English language, with particular emphasis on grammar and syntax. Includes basic linguistic and semantic principles.

**WRWG 204 Copy Editing (3)** Introduces the profession of writing and publishing, focusing on craft fundamentals (grammar and mechanics), publishing and copy editing, resources for writers, literary analysis, and submission procedures.

**WRWG 205 Introduction to Imaginative Writing (3)** Introduces basic experience and techniques of description, characterization, poetry, and narration.

**WRWG 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.

**WRWG 207 Introduction to Short Story Writing (3)** Teaches elements of short story writing. Concentrates on plot construction with attention to character, dialogue, and setting. Prerequisite: Writing 205 or permission of instructor.

**WRWG 306 Short Story Writing (3)** Teaches techniques for creating characters and turning experiences into short stories. Prerequisite: Writing 207 or permission of instructor.

**WRWG 307 Poetry Writing (3)** Teaches techniques of great poets. Provides opportunity for students to write poems. Prerequisite: Writing 206 or permission of instructor.

**WRWG 308 Creative Nonfiction (3)** Teaches the techniques of great essayists and creative nonfiction writers. Provides opportunity for students to write essays and creative nonfiction.

**WRWG 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, form and theory of fiction.

**WRWG 390 Screenwriting (3)** Teaches the techniques of screenwriting. Allows students to initiate their own screenplays. Prerequisite: Writing 207 or permission of instructor.

**WRWG 490 Writing Workshop (3)** Opportunity to write short stories, poems, essays, and plays with weekly discussion and criticism in a small group. May be taken three times. Prerequisite: One course in creative writing at the 300 level or permission of instructor.

**WRWG 494 Writing Internship (1-6)** Opportunity for on-site experience in various settings for writing experience.

**WRWG 495 Creative Writing: Independent Study (1-9)** Opportunity for independent work on writing projects with criticism and assistance. May be taken three times.

# Graduate Programs

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The University of Evansville offers the following graduate programs: Master of Arts in Teaching (MAT), Master of Business Administration (MBA), Master of Science (MS) in education, Master of Science (MS) in public service administration, Master of Science in Computer Science and Engineering (MSCSE), Master of Science in Health Services Administration (MSHSA), 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 all high school and previous university work, official TOEFL scores, and a Proof of Financial Guarantee form. International applicants must score at least 500 on the paper-based TOEFL or 79-80 on the Internet-based TOEFL. Students who do not receive the minimum TOEFL score may choose to start at the University of Evansville with the Intensive English Center. For more information, contact: *Coordinator of International Admission*, University of Evansville, 1800 Lincoln Avenue, Evansville, Indiana 47722 U.S.A., 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 their first term. Placement in appropriate English language improvement 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.

## Schroeder Family School of Business Administration Executive Master of Business Administration Program

The Schroeder Family School of Business Administration, which is AACSB International accredited, offers an executive-style program that leads to a Master of Business Administration (MBA) degree. This program welcomes executives, managers, and professionals who have a minimum of five years of progressive professional experience from private, nonprofit, and public sector organizations.

The Executive MBA Program is a cohort program; all students proceed through the program as a class group. It is designed to meet the needs of individuals of diverse educational backgrounds.

The program is intended to enhance the student's capacities to:

- lead in organizational situations;
- apply knowledge in new and unfamiliar circumstances through a conceptual understanding of relevant disciplines; and
- adapt and innovate to solve problems, to cope with unforeseen events, and to manage in unpredictable environments.

## Application Requirements

- A completed and signed application form
- Official transcripts of degrees earned from regionally/nationally accredited programs
- A minimum of five years of progressive professional experience
- GMAT or GRE scores may be required at the discretion of the admission committee
- Two letters of recommendation, submitted directly to the Executive MBA Program office
- \$75 nonrefundable application fee, made payable to the University of Evansville

## Curriculum and Course Sequence

The Executive MBA Program's curriculum represents the depth of business skills and tools necessary for effective leadership. The distinctive curriculum has a global perspective with local applications and is delivered in five consecutive terms with classes held on alternate weekends (Friday evening and Saturday scheduling). In addition to the core courses, the weekend sessions include informal instruction and learning exercises that emphasize global themes, such as cultural awareness. The weekend sessions also include invited speakers and opportunities for students to exchange ideas and engage in learning outside of the classroom.

### Term 1:

Executive Master of Business Administration 510 (12 hours)

### Term 2:

Executive Master of Business Administration 521, 522, 523 (9 hours)

### Term 3:

Executive Master of Business Administration 531, 532, 533 (9 hours)

### Term 4:

Executive Master of Business Administration 541, 542, 543 (9 hours)

### Term 5:

Executive Master of Business Administration 551, 552, 553 (9 hours)

## Requirements (48 hours)

Executive Master of Business Administration 510, 521, 522, 523, 531, 532, 533, 541, 542, 543, 551, 552, 553

## Center for Adult Education

# Master of Science, Public Service Administration

Carla Doty, Coordinator

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, nonprofit organizations, and governmental agencies.

## Application Requirements

Applicants must have a bachelor's degree from a regionally accredited institution and at least five 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 reference

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](http://www.evansville.edu).

## 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 12-18 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 for four semesters. All classes meet on Tuesday evenings. Each newly admitted cohort will be provided with a calendar for their semester of classes at the beginning of the semester. It is a program requirement that when more than two classes are missed in a single course, a grade of F will be assigned and the student must retake that course for the course to count toward degree requirements.

## Requirements (36 hours)

Public Service Administration 505, 506, 507, 508, 512, 514, 516, 520, 528, 534, 567, 590

**College of Engineering  
and Computer Science**

## **Master of Science in Computer Science and Engineering**

Dick Blandford, Director

The Department of Electrical Engineering and Computer Science offers a Master of Science in Computer Science and Engineering (MSCSE). This is a terminal master's degree and is not intended for those who wish to pursue a PhD at a later time. The degree requires 32 hours of credit comprising a minimum of four hours of thesis and a minimum of 20 hours of course work.

The well-prepared entering student will have a bachelor's degree in either computer science, computer engineering, or electrical engineering with a minimum grade point average of 2.8.

A typical graduate course in this program is a four credit hour course that consists of a three-hour upper level undergraduate course plus a substantial project which typically results in a publication or presentation. Approved graduate courses are listed in this catalog. Other courses which consist of a 300- or 400-level undergraduate electrical engineering or computer science course with a significant project will be considered based on the student's educational background.

All students are expected to complete a thesis which must be published or presented at a regional or national conference. A student's plan of study must be preapproved by a graduate advisory committee prior to starting the program and the program must be completed in a maximum of five calendar years. For further information contact Dick Blandford, chair of the Department of Electrical Engineering and Computer Science, or see the website at [eecs.evansville.edu/mscse](http://eecs.evansville.edu/mscse).

**College of Education and Health Sciences**

## **Master of Science in Education**

Charles R. Watson, Department of Education Chair

The Master of Science in Education is designed for professional teachers who are committed to improving student achievement for all students. Course work and

experiences are designed to improve instructional practices, use research-based strategies, create and use classroom-based research, inquiry, and assessments for continually examining student performance and practices. For further information, please contact the School of Education or visit our website at [www.evansville.edu/areasofstudy/education/graduate.cfm](http://www.evansville.edu/areasofstudy/education/graduate.cfm).

Unique aspects:

- Classroom and application based – the skills and projects are designed to help experienced teachers gather, examine, and use multiple forms of assessment data to inform instruction for all children.
- Classes scheduled with the teaching professional in mind, combining in-class and on-line activities as well as summer and weekend experiences. We consider the “rhythms” of the school year.
- Opportunity to participate in a 10-day summer session in educational leadership, collaboration, and international perspectives at Harlaxton.
- Classes begin in June each summer with cohort program completion scheduled for completion at the end of the following summer. Cohorts are limited to 20 students.

Application requirements:

- A combined score of at least 1000 on the GRE or a scaled score of at least 400 on the Miller Analogies Test (MAT)
- A bachelor's degree from a regionally accredited college or university
- A 500-word statement of educational purpose
- An undergraduate GPA of at least 3.00
- A current, valid teaching license
- An interview with School of Education graduate faculty

### **Requirements (38 hours)**

Education 510, 511, 512, 514, 516, 524, 525, 528, 530, 540

## College of Education and Health Sciences

# Master of Arts in Teaching

Charles R. Watson, Department of Education Chair

The University of Evansville also offers Master of Arts in Teaching as an option for those students wishing to pursue an Indiana teaching license through the Transition to Teaching program. Since this program varies with each individual, students wishing to pursue this option should contact the School of Education or visit the website at [education.evansville.edu/students/transition.cfm](http://education.evansville.edu/students/transition.cfm)

## College of Education and Health Sciences

# Master of Science in Health Services Administration

Bill Stroube, Director

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 the utilization of 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. A 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 Requirements

- Bachelor's degree from a regionally accredited college or university; a degree in a 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 (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

# Doctor of Physical Therapy

Mary Kessler, 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) of the American Physical Therapy Association (APTA). 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.

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\*Science prerequisite

†Meets general education requirement



## 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 at 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 325 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 in the Netherlands, Australia, England, and Argentina.

## Preprofessional Requisite Courses

- One semester general biology with lab
- One year anatomy and physiology with lab
- One year general chemistry with lab
- One year general physics with lab
- One semester college algebra or demonstrated proficiency
- One semester introduction to psychology
- Medical terminology

Prerequisite courses must be taken prior to beginning the professional program. All science prerequisite 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,\* 240\*<sup>†</sup>; Exercise and Sport Science 112,\* 113\*<sup>†</sup>; Mathematics 105<sup>†</sup>; Physical Therapy 100; Physics 121,\*<sup>†</sup> 122\*<sup>†</sup>; Psychology 121<sup>†</sup>

Once established as a University of Evansville student, only 10 credit hours may be completed at another institution. All science courses must be designed for science majors. Other designs will not be accepted. A grade of C- or higher is required for all undergraduate course work. Four of the following seven science courses must be completed at the time of application (Biology 107, Chemistry 118, Chemistry 240, Exercise and Sport Science 112, Exercise and Sport Science 113, Physics 121, Physics 122). Only two prerequisite courses may be repeated. The highest grade will be used in the calculation of the science and math prerequisite grade point average.

Mathematics 105 fulfills the physical therapy prerequisite and the University general education requirement.

## Application

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. The professional program consists of all courses with a PT prefix and Biology 436. It is the responsibility of the student to successfully complete each course 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

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. Upon retake, the higher grade will be reflected on the student's transcript. If an additional grade of C+ (or lower) is earned, the student will be dismissed from the program.

### Requirements (113 hours)

Biology 436; Physical Therapy 411, 413, 417, 421, 422, 431, 432, 434, 441, 442, 451, 452, 522, 523, 524, 526, 531, 533, 541, 542, 543, 544, 551, 552, 561, 626, 627, 628, 631, 632, 642, 651, 661, 662, 663

# Graduate Course Descriptions

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## Computer Science (CS)

Enrollment is limited to students admitted to the Master of Science in Computer Science and Engineering program. Students are required to complete a project which is expected to be presented or published in a public forum as part of the course requirements.

**CS 515 Cryptography (4)** Introduces conventional and public-key cryptography, cryptosystems such as DES and RSA, and applications of cryptography to network and system security.

**CS 520 Computer Architecture (4)** 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.

**CS 530 Artificial Intelligence (4)** 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.

**CS 540 Databases (4)** 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.

**CS 555 Computer Graphics (4)** 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.

**CS 570 Operating Systems (4)** Components of operating systems. Tasking and processing, process coordination and scheduling, memory organization and

management, device management, security, networks, distributed and real-time systems.

**CS 575 Networks (4)** Digital data communication systems in hardware and software, synchronous and asynchronous communication, standards, protocols, network configurations, network applications.

**CS 580 Compilers (4)** Theoretical and practical aspects of compiler construction. Covers lexical analysis, parsing, code generation, and code optimization. Includes implementation of a usable compiler.

**CS 590 Software Engineering (4)** 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.

**CS 597 Thesis (1-4)** Students complete a project to be presented or published in a public forum.

**CS 598 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.

**CS 599 Special Topics in Computer Science (1-4)** Study of topics of special interest. Topics will be announced. May be repeated. Prerequisites will be announced when scheduled.

## Education (EDUC)

**EDUC 510 Advanced Educational Perspectives and Foundations (4)** Course cultivates understanding of the evolving contexts within which traditions of education purposes, policies, and practices have become institutionalized over time. This exciting course provides an intellectual foundation for all subsequent course work in the program and results in the selection of a research area of study. Summer.

**EDUC 511 Graduate Education Research and Inquiry (1-3)** This is a repeatable course within which topics will vary widely as the research and inquiry projects associated with the MS in Education Program are also wide and varied, ranging from classroom-based projects that examine relationships among various instructional strategies and student achievement to writing and evaluating grant-funded projects that examine the use of technology and learning.

**EDUC 512 Teaching and Learning: Advanced Critical Explorations in Schools (4)** Course presents an examination of the historical and theoretical bases of current K12 teaching and learning; the course focuses on curriculum planning. The overall intent of this course is to provide opportunities for students to carefully review and examine the research related to best practices as defined by recent and emerging research in the field of instruction. In addition, the course will review the most current research on effective contemporary classroom management and the link between learning and classroom climate and behaviors. Summer.

**EDUC 514 Applied Educational Inquiry and Classroom Research (4)** Course is designed to develop research application skills, including the use of inquiry and research in classrooms. Students will develop initial research project outlines and learn how to use a variety of forms of classroom-based inquiry tools and strategies. Teachers who complete the course will be engaged in using these techniques to solve classroom problems, apply formative and summative assessment techniques, and use the generated information to inform future and further instruction. Prerequisites: Full admission to graduate program, Education 510, 512, or permission of instructor. Fall.

**EDUC 516 Advanced Educational Technology and Applications (3)** Course develops technology skills aimed at improving practice and student achievement, including strategies related to on-line and social networking applications. The course provides opportunities for students to learn (1) advanced applications used primarily for inquiry-based data analysis (SPSS basics, Microsoft Office advanced applications, ethnography, etc.), (2) advanced classroom instructional strategies, (using smart phones, blogs, and other web-based technologies, etc.) and (3) other advanced technological applications that are commonly used in local schools (NWEA, DIBELS, Acuity, handheld applications, etc.). Summer.

**EDUC 520 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. Examination of current research related to instruction and application of the research required. Prerequisite: Permission of instructor. Fall, spring.

**EDUC 521 Teaching Social Studies (3)** Examines methods of teaching the social sciences using current materials and basic concepts. Unit planning and inquiry methods of teaching emphasized including the knowledge and use of learning resources. Examination of current research related to instruction and application of the research required. Prerequisite: Education 520 or permission of instructor. Spring.

**EDUC 522 Teaching Reading and Language Arts in the Elementary School (4)** Explores processes, 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. Examination of current research related to instruction and application of the research required.

**EDUC 523 Teaching Science, Conservation, and Ecology (3)** The discovery approach to teaching science emphasized. Examination of current research related to instruction and application of the research required. Prerequisites: Two general science courses; Education 520. Spring.

**EDUC 524 Advanced Study in Curriculum, Standards, and Data-Driven Instruction (4)** Course is designed to help students understand the relationship among standards, curriculum, instruction, and the use of assessment data to drive instruction and improve curriculum. The course provides extensive study and opportunity to learn how to consistently analyze, use, and deliver assessment and other student data to improve learning and achievement. The essential question for this course is "how can I best use assessments of my students and my teaching to improve student learning?" Prerequisites: Full admission to graduate program, Education 514, 528, or permission of instructor. Spring.

**EDUC 525 Educational Collaboration and Leadership in the Global Society (4)** Course provides perspectives on educational leadership, collaboration, and understandings of cultural and educational issues facing educators in the U.S. and other nations. The primary purpose of this course is to provide intensive study of teacher practice, collaboration, and leadership needed in education for an increasingly global economy and soci-

ety. The course will also provide opportunities for additional study of how educational effectiveness and the strategies learned in the program can be understood in particular cultural contexts, with particular focus on the U.S. and England. This course may be taken at Harlaxton in England. Prerequisites: Full admission to the graduate program, Education 524, 530, or permission of instructor. Summer.

**EDUC 526 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. Examination of current research related to instruction and application of the research required. Prerequisites: Education 522 or permission of instructor. Fall, spring.

**EDUC 527 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. Examination of current research related to instruction and application of the research required. Prerequisite: Education 522. Spring.

**EDUC 528 Advanced Study in Assessment (4)** Course is designed to present current assessment theory and practice, especially as they relate to utility in classroom settings. Students will become familiar with the array of commonly used standardized and formative tests as well as many other different forms of classroom and student assessment. Prerequisites: Full admission to graduate program, Education 510, 512, or permission of instructor. Fall.

**EDUC 529 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 522 or permission of instructor. Fall.

**EDUC 530 Advanced Study in Diversity and Special Needs (4)** Course provides experiences to enhance multicultural and cultural competence. Students will gain extensive knowledge and understanding of the diverse nature of contemporary classrooms as well as a wide range of strategies that are useful and effective in helping all students to be successful in school. Diversity in this course will be broadly defined to include cultural, economic, racial, and other factors known to exist in schools.

Prerequisites: Full admission to graduate program, Education 514, 528, or permission of instructor. Spring.

**EDUC 534 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. Examination of current research related to instruction and application of the research required. Prerequisites: Education 520; passing scores on Praxis I Mathematics.

**EDUC 535 Supervised Teaching Seminar (1)** Emphasis placed on the discussion of student teaching experiences. Special topics of interest to student teachers presented. Prerequisites: Completion of all Transition to Teaching requirements except student teaching. Corequisite: Education 597.

**ED 540 Research and Inquiry Capstone (3)** Course provides extensive study and opportunity to publicly demonstrate and present, in a cumulative fashion, the data, work and research gathered and used throughout the program and within the students' respective classrooms. Some examples of public demonstrations and dissemination might be written and submitted articles to a refereed journal, presentations made at national and regional conferences, grant proposals, and presentations made to local groups in the educational communities. This course will also provide opportunities for students to begin or continue collaborations. Prerequisites: Full admission to graduate program, Education 525 or permission of instructor. Summer.

**EDUC 543 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. Examination of current research related to instruction and application of the research required. Field placement included. Additional internship required. Prerequisites: Education 520; admission to Transition to Teaching program.

**EDUC 545 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. Examination of current research related to instruction and application of the research required. Laboratory experiences are provided.

**EDUC 563 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. Examination of current research related to instruction and application of the research required. Additional internship hours required. Prerequisites: Education 520; admission to Transition to Teaching program. Corequisite: Appropriate methods course selected from Education 451 through 461. Fall, spring.

**EDUC 581 Basic Sign Language I (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 582 Intermediate Sign Language (3)** Expands sign vocabulary and ability to utilize the manual alphabet. Emphasizes use of conceptually appropriate signs in conversation; further develops receptive skill. Prerequisite: Education 481 or 581 or permission of instructor.

**EDUC 597 Supervised Teaching and Observation in Elementary, Middle School, Junior High, and Senior High (1-6)** Teaching, observation, and participation activities under the supervision of a classroom teacher and a University supervisor for students who have teaching experience and/or do not require the seven to 10 hours indicated in other student teaching courses. Prerequisites: Admitted to Transition to Teaching program; GPA requirements as stated in catalog under School of Education General Requirements Student Teaching. Fall, spring.

**EDUC H598 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.

## Electrical Engineering (EE)

Enrollment is limited to students admitted to the Master of Science in Computer Science and Engineering program. Students are required to complete a project which is expected to be presented or published in a public forum as part of the course requirements.

**EE 511 Linear Systems and DSP (4)** 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.

**EE 513 Random Signals and Noise (4)** Provides a mathematical treatment of random processes as they apply to electrical systems. Topics include probability and random variables, functions of random variables, conditional statistics, correlation functions, power density spectrum, Gaussian white noise, and random signal processing.

**EE 521 Photonics I (4)** 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 communication. Examples of current applications and laboratory demonstrations provided.

**EE 522 Photonics II (4)** 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.

**EE 554 Digital Systems (4)** 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 used throughout course. Several different microcontrollers used for projects to illustrate concepts. Assembly language and C used for class projects.

**EE 555 Microcontroller Applications (4)** 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.

**EE 556 Small Computer Software** (4) Introduction to the graphical user interface provided by the Windows™ operating system using C# .NET. Topics include the console applications, windows forms, elementary graphics, ASP.NET web forms, ADO.NET, TCP/IP connection between computers, and dynamic-link libraries (DLLs) and/or device drivers.

**EE 558 Embedded Systems and Real-Time Programming** (4) 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 inter-process communication. Real-world experience writing applications for two popular embedded operating systems.

**EE 565 Digital Control Systems** (4) 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.

**EE 597 Thesis** (1-4) Students complete a project to be presented or published in a public forum.

**EE 598 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.

**EE 599 Special Topics in Electrical Engineering** (1-3) Study of topics of special interest. Topics will be announced. May be repeated.

### **Executive Master of Business Administration (EMBA)**

Enrollment is limited to students admitted to the Executive Master of Business Administration Program. EMBA 510 is a prerequisite for all other EMBA courses.

**EMBA 510 Executive MBA Foundations** (12) Dedicated to foundation knowledge in the functional areas of business. Assures that all matriculants gain the fundamental knowledge necessary for success in the MBA core curriculum. Prerequisite: Admission to the Executive MBA Program.

**EMBA 521 Quantitative Methods and Modeling** (3) Three modules which respectively focus on regression modeling, constrained optimization and linear programming, and decision analysis. Applications include demand analysis, forecasting, quality assurance, market research, production planning, and risk analysis. All modules include laboratory exercises that utilize the model-building capabilities of Microsoft Excel.

**EMBA 522 Strategic Cost Accounting** (3) Prepares executives to participate in strategic decision-making based on contemporary accounting techniques. Topics include cost behavior, cost-volume-profit analysis, costing approaches, use of standards, analysis of available information, and preparation of reports.

**EMBA 523 Organizational Behavior and Leadership** (3) Examines individual, group, and organizational level influences on workplace behavior and attitudes. Special emphasis on leadership, distinguishing it from management, and exploring theories that address some of the factors that drive effective leadership.

**EMBA 531 Global Marketing Strategy** (3) Emphasis is placed on identifying and solving global marketing problems: customer analysis, competitor analysis, environment analysis, performance assessment, and strategy identification, selection, and implementation. Examines the effects of pancultural, culture-specific, and regulatory influences on global marketing strategy.

**EMBA 532 Microeconomics and Strategy** (3) Addresses the analytical foundations of economic decision making and market strategy. Principal objective is to develop managerial insights necessary for achieving the objectives of the business organization in the most efficient manner possible, and to develop a disciplined approach to analysis of markets and prices.

**EMBA 533 Law, Ethics, and Corporate Social Responsibility** (3) Examines potential leadership dilemmas and challenges in creating shareholder value and fulfilling the firm's obligations to the larger community of stakeholders. Examines legal and ethical parameters of decision making as well as the broader principles of integrity in corporate governance.

**EMBA 541 Corporate Financial Policy: A Global Perspective** (3) Examines the financing, investment, and payout decisions of firms in the global context with emphasis on the nuances associated with corporations domiciled in North America, the European Union, and Asia. Special topics in this course include mergers and takeovers, management of exchange rate exposures, and compliance with international regulatory standards.

**EMBA 542 Production and Operations Management: A Strategic Approach** (3) Explores strategic issues in global manufacturing. This course addresses the concepts in manufacturing strategy, lean manufacturing, global supply chain management, quality control, and global outsourcing.

**EMBA 543 International Macroeconomics (3)** Examines global forces that determine the employment, prices, and economic output of nations. Primary consideration is devoted to effects of government fiscal and monetary policy, exchange rate regimes, and trade policies. Emphasizes analytical foundations of macroeconomics and global interdependence of nations' economies.

**EMBA 551 Global Capital Markets (3)** Studies forces governing the interaction of capital markets around the world. In addition to analyzing the continuous evolution of traditional stock and bond markets, reviews developments in derivative markets, investment banking, project finance, international banking, and emerging markets.

**EMBA 552 Global Strategic Management (3)** Examines the special nature of the international environment and its impact on firm strategy and operations, with attention to the financial, cultural, political, and economic complexities of foreign commerce. Special topics include global opportunity analysis, multinational strategies and structures, foreign direct investment, strategic alliances, outsourcing, and other issues that arise in cross-border operations.

**EMBA 553 International Business Seminar (3)** Three modules: (1) class sessions and readings addressing business and economic issues relevant to a selected region of the world; (2) class trip to location of interest consisting of site visit, seminars, and region-specific learning experiences; and (3) a concluding research paper to be completed after class trip.

### **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.

## Physical Therapy (PT)

Enrollment is limited to students admitted to the physical therapy doctoral degree 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 522 Wellness in Physical Therapy (2)** Addresses issues related to wellness, health promotion, health maintenance, and fitness and how these concepts can be incorporated into physical therapy practice. Areas of learning include primary health theory, needs, epidemiological factors, principles of exercise and physical fitness, effects of fitness and nutrition on wellness, principles of motivation and behavior modification in health promotion, assessment techniques, and identification of a specialized wellness program. Prerequisite: Physical Therapy 561. Fall.

**PT 523 Patient Management III (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, 422, 561. Fall.

**PT 524 Pediatric Physical Therapy (3)** Studies developmental disabilities that impact infants and children's posture and movement across the life span. Presents examination and evaluation of infants and children with specific congenital and acquired disorders. Physical therapy management including handling and positioning, developmental activities, use of adaptive equipment, and orthoses presented in lecture and lab format. Actual patient and video demonstrations used when possible for reinforcement along with experiential learning, case studies, and treatment planning activities. Prerequisites: Physical Therapy 434, 533, 561. Spring.

**PT 526 Patient Management IV (7)** Studies physical therapy management of the patient with neurologic dysfunction, including stroke, traumatic brain injury, spinal cord injury, and multiple progressive 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 results using the Guide format. Students are also expected to provide a rationale for all decisions made as part of this patient management process. 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 531, 561. Spring.

**PT 531 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 mod-

els 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 discussed. Prerequisite: Physical Therapy 561. Fall.

**PT 533 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 given. Views motor behavior across life span within a social and psychological context. Prerequisite: Physical Therapy 561. Fall.

**PT 541 Ethical Decision Making in Health Care (2)** 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 individuals utilized to represent topics discussed. Topics intended to develop and heighten awareness of dilemmas faced by health care providers and their patients. Lecture. Prerequisites: Physical Therapy 441, 442, 561. Fall.

**PT 542 Clinical and Professional Issues III (1)** Designed to promote importance of political and social advocacy. Content related to professional education, outcomes assessment, and consultation addressed. Students explore profession's core value of social responsibility and provide evidence of their own involvement in the community and political arena. Prerequisite: Physical Therapy 541, 561. Spring.

**PT 543 Health Policy and Management (3)** Introduction to general management practices and administrative issues which are specific to physical therapy and rehabilitation. Students actively involved in processes of planning, organizing, directing, coordinating, supervising, and balancing human and fiscal resources within health care environments. Concept of the team heavily emphasized. Second part of course introduces health policy and its current trends. Prerequisites: Physical Therapy 541, 561. Spring.

**PT 544 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 531, 561. Spring.

**PT 551 Scientific Inquiry III (2)** This is the third in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in the areas of diagnosis, prognosis, intervention, and harm. Prerequisites: Physical Therapy 452 and 561 or permission of the instructor. Fall.

**PT 552 Scientific Inquiry IV (2)** This is the fourth in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in the areas of diagnosis, prognosis, intervention, and harm. Prerequisites: Physical Therapy 522, 523, 531, 533, 541, and 551 or permission of the instructor. Spring.

**PT 561 Clinical I (5)** Active participation in this full-time clinical course 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. Prerequisites: All 400 level physical therapy course work; completion of undergraduate degree. Summer.

**PT 570 Special Topics in Physical Therapy (1-3)** Students pursue an area of special interest within health care or the physical therapy profession. Areas may include, but are not limited to, research, clinical education, administration, and classroom or community teaching. Students responsible for contacting the designated faculty member to discuss and plan the experience. This experience culminates in a formal written document, product or reflection paper.

**PT 626 Patient Management V (5)** Builds on previously acquired examination and intervention skills related to musculoskeletal patient management. Emphasis on examination and subsequent evaluation leading to the physical therapy diagnosis for the adult and athletic population. Covers, in detail, evidence-based interventions emphasizing manual therapy and therapeutic exercise in lecture and laboratory sessions. Includes examination and intervention models utilized in contemporary clinical practice such as functional movement training, and McKenzie. Specific techniques include muscle energy, neural mobilization, trigger points, joint mobilization/manipulation, and segmental stabilization for the spine. Therapeutic exercise and sport-specific progressions addressed in rela-



tion to commonly encountered physical impairments. Master clinicians and physicians share expertise through classroom and laboratory presentations related to each topic covered. Students learn to utilize these concepts and techniques to develop comprehensive patient management programs. Students may participate in an athletic event coverage observational experience. Prerequisites: Physical Therapy 526, 661. Fall.

**PT 627 Community Health (4)** Expands the students' knowledge and experiences in the areas of health promotion, wellness, and autonomous care. Assists the student in analyzing and identifying community health needs. Areas of learning include physical therapist's role in community wellness programs, continued participation in the legislative and political processes as advocates for health and wellness needs of their communities. Additionally, students examine health-related issues for individuals of varying races and ethnicities, national origin, and sexual orientation. Students develop and implement a community-based health promotion, prevention, or wellness program for a specific segment of the population based on a needs assessment. Prerequisite: Physical Therapy 661. Fall.

**PT 628 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. Questionnaires to be used as a guide in history-taking and inter-practitioner communication. Prerequisite: Physical Therapy 661. Fall.

**PT 631 Rehabilitation Pharmacology (2)** Presents basic aspects of the mechanism of action of drugs commonly employed in the practice of rehabilitation. Fundamental principles of drug action are followed by an in-depth discussion of specific drugs used. Topics include pharmacokinetics, pharmacodynamics, pharmacoeconomics, drug interactions, polypharmacy, and adverse drug reactions. Prerequisite: Physical Therapy 661.

**PT 632 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 661. Corequisite: Physical Therapy 626. Fall.

**PT 642 Clinical and Professional Issues IV (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 661. Fall.

**PT 651 Scientific Inquiry V (2)** This is the fifth in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in the areas of diagnosis, prognosis, intervention, and harm. Prerequisites: Successful completion of all previous courses in the DPT program or permission of the instructor. Corequisites: Physical Therapy 662, 663.

**PT 661 Clinical II (5)** Full-time clinical experience 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 addressed. Prerequisites: All 500-level course work. Summer.

**PT 662 Clinical III (5)** Full-time clinical experience 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. Prerequisites: Physical Therapy 626, 627, 628, 631, 632, 642. Corequisites: Physical Therapy 651, 663. Spring.

**PT 663 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 500 level physical therapy courses; Physical Therapy 661. Corequisites: Physical Therapy 651, 662. Spring.

## 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 Service Administration (PSA)

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 534 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.

# Faculty, Administrators, Trustees

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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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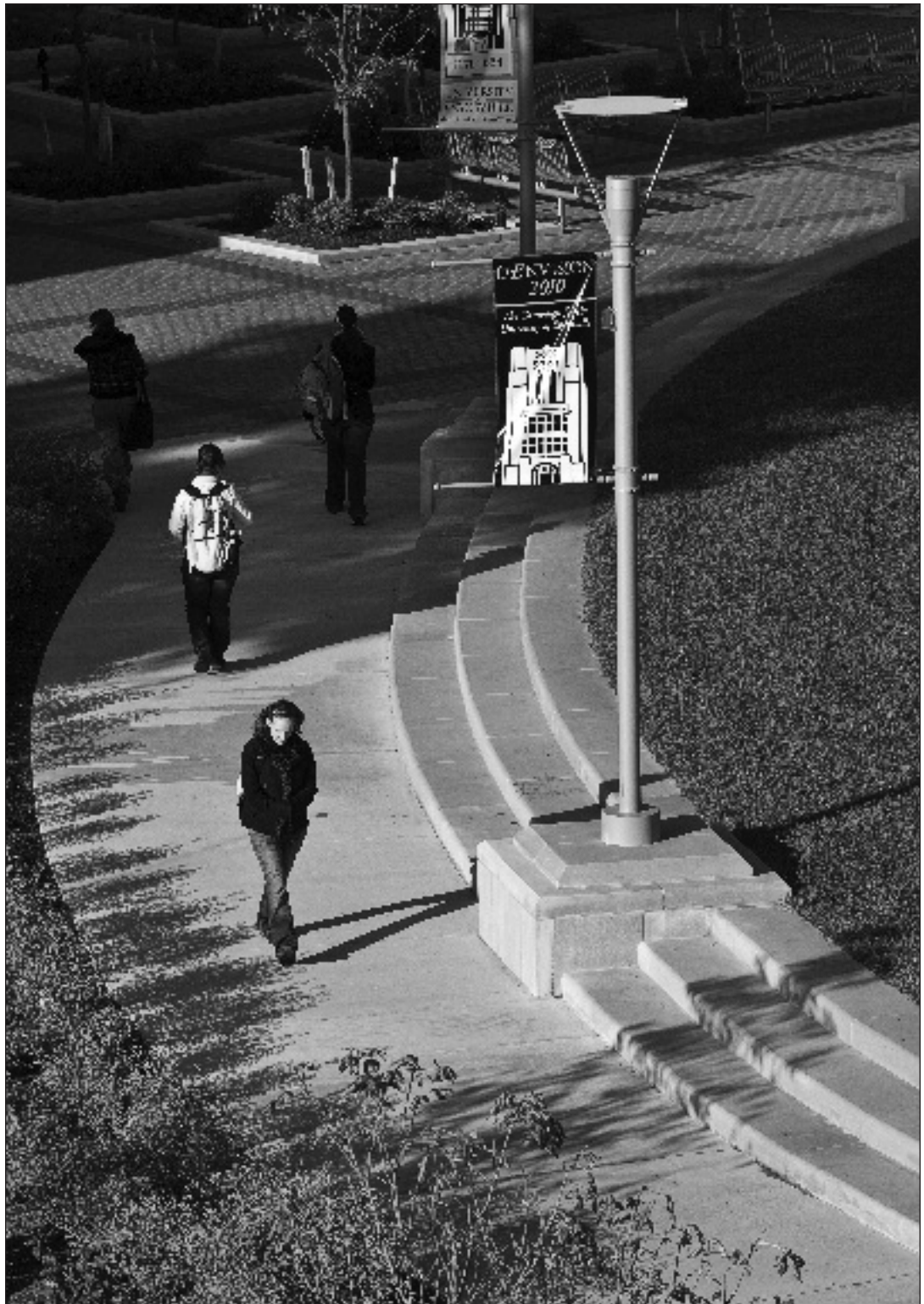
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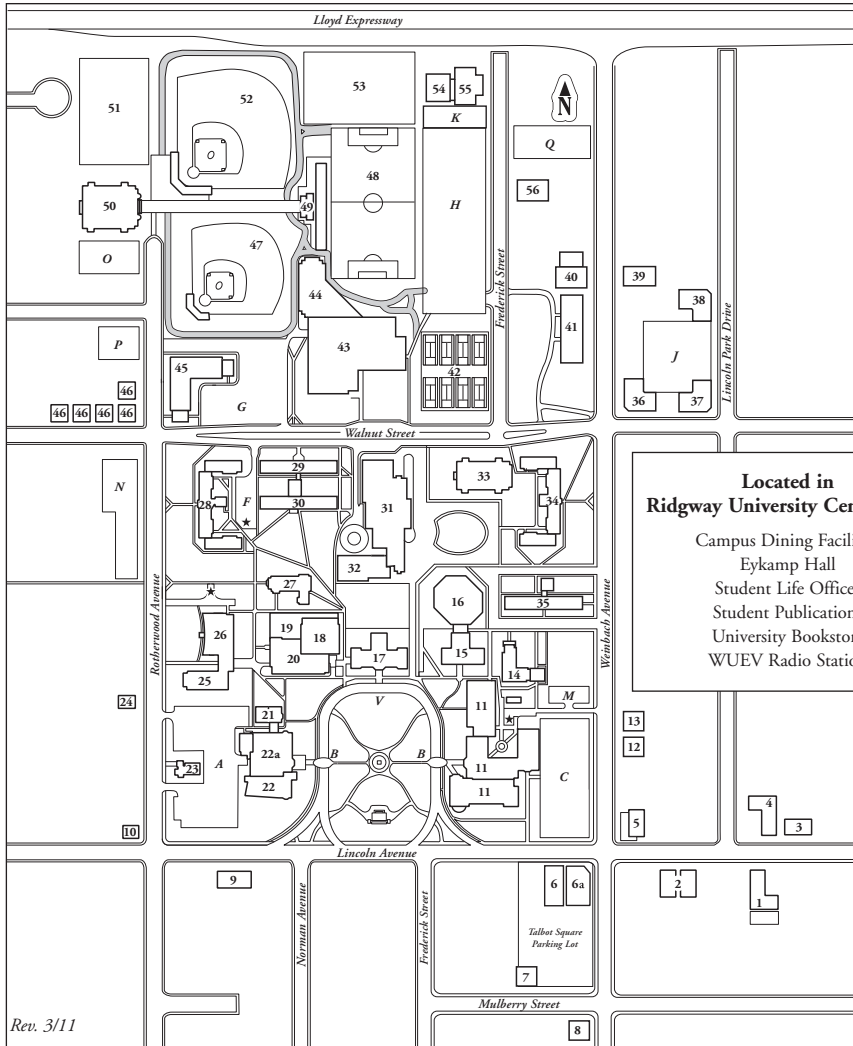


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