Course Descriptions

Scheduling Codes: Scheduling codes are primarily for day classes during Semester I and II; they may not reflect the scheduling of evening, summer, or accelerated classes.

Note: These codes are a guide for projected scheduling of courses; departments reserve the right to modify course offerings when special circumstances arise. Consult the appropriate department for details.

Y ......... Every year  
N ......... May not be offered every year  
SI ......... Semester I every year  
SII ....... Semester II every year  
A ......... Every semester  
O ......... Every other year  
D ......... On sufficient demand  
O/SI .... Every other year Semester I  
O/SII ... Every other year Semester II

Course prerequisites and fees are subject to change. See online schedules of classes by term for current details.

Accounting Courses

Accounting courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

ACCT-210 Financial Accounting (3) A
The first course in a six-hour sequence, it introduces the basic principles and theories of accounting. This course focuses on the financial accounting system, which supports the needs of external decision makers. It includes an introductory study of the regulatory environment of accounting, the format and content of general purpose financial statements, the accounting cycle, and the impact of transactions on the financial statements and its elements.

ACCT-212 Managerial Accounting (3) A
The second course in a six-hour sequence, it introduces the basic principles and theories of accounting. This course focuses on the managerial accounting system, which supports the needs of internal decision makers. It includes an introductory study of cost behavior, alternative approaches to product costing, the use of cost-based accounting in managerial decision-making, and performance management issues. Prerequisite: ACCT-210.

ACCT-310 Intermediate Accounting I (3) SI
The first course in a six-hour sequence providing an in-depth study of the strategic components of financial accounting, including the theoretical framework underlying financial reporting, the accounting cycle, and the makeup of general purpose financial reports. Additionally, this course studies particular financial statement elements by looking at valuation, classification, and disclosure issues. Prerequisite: ACCT-212.

ACCT-311 Intermediate Accounting II (3) SII
The second course in a six-hour sequence, it provides an in-depth study of the strategic components of financial accounting. This course continues with the study of financial statement elements begun in ACCT-310, specifically focusing on valuation, classification, and disclosure issues associated with investing, long-term financing,
equity transactions, and other related issues such as cash flows. Prerequisite: ACCT-310.

**ACCT-312 Cost Accounting (3) D**
This course extends the study of cost and managerial accounting begun in ACCT-212. It includes a more focused exploration of product costing systems using both traditional and activity-based approaches and a more advanced treatment of the use of cost-based and other information to support management decision making and performance management at operational, tactical, and strategic levels. Prerequisite: ACCT-212.

**ACCT-314 Accounting Information Systems (3) SII**
Course examines issues relevant to the accounting information system of any type of organization. A business process approach is used to illustrate how accounting information flows through an organization and its effect on information system integration and internal control. This course considers the use of technology and its value-creating potential. Prerequisite: ACCT-310, COMP-150 and CIS-151.

**ACCT-321 Financial Statement Analysis (3) D**
This course studies general purpose financial statements (Balance Sheet, Income Statement, Statement of Cash Flows, Statement of Stockholders’ Equity, and supporting footnotes) from the perspective of those who use the information found in them. In this course, the primary users of accounting reports are assumed to be informed decision-makers who are not employed by the company being analyzed—bankers, investors, and government regulators. After studying a corporation’s major business activities (financing, investing, and operating), the course will concentrate on prospective analysis, credit, and profitability, designed to allow decision-makers the ability to use general purpose financial statements in an effective and informative way. Prerequisite: ACCT-210 and 212.

**ACCT-412 Advanced Accounting (3) SI**
This course studies complex financial accounting topics dealing with the equity method, consolidated financial statements, foreign currency translation, governmental and not-for-profit accounting, and accounting for partnerships. Prerequisite: ACCT-311.

**ACCT-418 Auditing (3) SII**
This course explores the theories, principles, and procedures underlying the attest function. Topics studied include the basic audit report, fundamental issues of internal controls, documentation of audit evidence, and the requirements of professional ethics. Prerequisite: ACCT-412.

**ACCT-419 Individual Income Tax (3) SI**
Study of federal (U.S.) income tax for individuals. Course includes computation of gross income, deductions, property transactions, and tax credits available to the individual taxpayer. Prerequisite: ACCT-212.

**ACCT-465 Corporate, Partnership, Estate, and Trust Taxes (3) SII**
Course involves advanced study of current tax laws and related filings for corporations, partnerships, estates, and trusts. Prerequisite: Senior standing.
Anthropology Courses

Anthropology and Archeology courses are offered through the Department of Anthropology. Information about the department and its majors and minors can be found in the section entitled Academic Units.

ANTH-100 Cultural Anthropology (3) A
Introduction to culture, the basis of all anthropological thought. The course looks at how culture dictates many areas of societal behavior, both materially and intellectually, and concentrates on the universals and variables of “the human way of life” as illustrated by comparing lifestyles across the world.

ANTH-110 Archeology Method and Theory (3) O/SI
Introduction to archeology, the study of material remains and a subfield of anthropology. The course examines contemporary theory and analytical and field methods, relationships between material and nonmaterial culture, and applications of archeology to a greater understanding of our past and present.

ANTH-130 Monkeys, Apes, and Humans (3) SII
Introduction to scientific analysis by way of biological anthropology. Topics of study include the scientific method, primate anatomy, heredity, and primate behavior. Topics include an introduction to DNA, anatomy, social behavior, ecology, ecotourism, human-animal interaction and deforestation. (Cross-listed as BIOL-130.)

ANTH-137 Biological Anthropology (3) SII
This course studies the organismal aspect of human beings. Course topics include fundamentals of human anatomy, evolutionary theory and DNA, primate evolution, hominin evolution, and bioarcheology. It is an advanced version of ANTH/BIOL-130 and is required for Archeology and Anthropology majors.

ANTH-200 Global Problems (3) SII
Consideration of dimensions surrounding the basic human problems of overpopulation, environmental issues, indigenous peoples, violence, international tensions, drugs, food, and related concerns. Frequent comparisons with diverse cultures show students the shared problems of humankind and a variety of responses, familiar and unfamiliar, that cultures develop.

ANTH-205 Human Biological Variation (3) SI
Study of the pattern and nature of human biological variation, including population genetics, adaptation to the environment, growth and development, race, gender and determinants of behavior. (Cross-listed as BIOL-210.) Prerequisites: Mathematics proficiency through MATH-105 and English proficiency.

ANTH-210 The Eskimo World (3) O/SI
Focus on awareness of Eskimo (Inuit and Yupik) lifeways, filling in myriad details about how they carried on from day to day, what they believed, where they lived, and why they thrived so ingeniously in such seemingly severe environments. Students will learn about these cold-adapted peoples through books, films, photography, artworks, and artifacts.
ANTH-211 Anthropology of Health (3) O/SI
The Anthropology of Health is a broad and vibrant research tradition that draws on the four traditional subfields of anthropology-cultural, biological, linguistic, and archaeology-to examine the biocultural basis of health and the sociopolitical and cultural dimensions of illness experience and treatment. This introductory course examines major theoretical frameworks and key areas of empirical research in the Anthropology of Health. We will focus on three broad topics: (1) the biocultural basis of health; (2) healing systems in global sociopolitical and cross-cultural perspective; and (3) applications of anthropology in medicine and public health.

ANTH-220 North American Archeology (4) O/SI
This course introduces students to the humans of prehistoric North America, their ways of life, tools, architecture, subsistence habits, and cultural achievements. It includes site analysis and the manners by which archeologists address archeological questions scientifically. There are weekly hands-on opportunities and laboratory experiences.

ANTH-251 Classical Archeology (3) D
Introduction to the specialized field of archeology that studies the material cultures of the Old World, particularly the Mediterranean and ancient Greece and Rome. Topics include art, architecture, numismatics, writing, daily life, and religion.

ANTH-275 Urban Anthropology (3) O/SI
This course examines how an anthropological perspective can provide unique and uniquely useful insights into life in contemporary cities around the world. Through course readings, films, lectures, and class discussions, we examine ethnographic realities of urbanization and pinpoint ways in which “cities” come to be understood as distinctive from suburban and rural life-ways and conditions. We will consider such questions as: “Are cities cultural centers of all that is post-modern, new, and exciting or are they decaying and dangerous remnants of an industrial age whose time has passed?” and, “How do we link the lives of wealthy elites and middle-class ‘urbanites’ with the working poor, the homeless, and shanty town dwellers?” “What are the connections between cities and urban conditions around the world?” This course thus investigates anthropological perspectives on why cities are places of opportunity for some and places of deprivation, discrimination, and violence for others. Topics include: regional histories, globalization, immigration, racial segregation, suburbanization, public policies, and the impact of social movements on cities and their inhabitants.

ANTH-290 Images of “Indians” (3) O/SII
A critical look at Euro-American perceptions of American Indians, focusing on long-term trends in how “Americans” have depicted “Indians,” how some of those representations have changed through time, and how others have remained (or disappeared and later reemerged). The heart of this course is an introspective and reflective look at views of American Indians, along with attempts to identify widespread social attitudes that such viewpoints reflect.

ANTH-310 Religion and Magic (3) D
Review of traditional practices of non-mainstream religions, providing a cross-cultural perspective on such topics as spirit beings, natural and supernatural forces,
taboos, magic, witchcraft, sorcery, divination, healing, shamanism, totemism, death, ghosts, afterworlds, and revival cults. (Cross-listed as REL-350.)

**ANTH-325 Historical Archeology (3) O/SI**

Historical archeology (or post-Medieval archeology) is the study of the modern world from ca A.D. 1500 to the present. In North America, this time period generally coincides with the discovery and colonization of North America by European powers. Spanning the 16th through the 20th centuries, this course covers the archeology of Spanish America, early Colonial archeology, 18th through 20th century rural and urban archeology, antebellum plantation archeology and the African American experience, industrial archeology, maritime archeology, public archeology, and the archeology of landscapes and memory. Through a combination of hands-on lab activities and lectures, students develop historical artifact identification skills and methods of analyzing and interpreting artifact distributions. Weekend field trips are required.

**ANTH-335 Global Health (3) O/SII**

Medical anthropologists confront contemporary challenges of culture and social difference through the lenses of illness, disease, and health. This course is designed to teach a medical anthropological perspective on the local and global contexts, giving rise to definitions and experiences of human health. Through readings, lecture, film, and discussion, students are invited to reflect on the social and cultural conditions of sickness and healing, with particular emphasis on the role of global processes of inequality in structuring local avenues of health care access and health disparities. Drawing on material from the United States and beyond, we will address a variety of topics, including: the relationships among economic globalization, inequality, poverty, and health; biological citizenship in post-Soviet Ukraine; sickle cell disease and racialization; the relationships between neoliberal policy and disparities in health; and the gendered politics of “aid” in developing countries. Students will be brought to bear on their own disciplinary perspectives and interests concerning health. **Prerequisite:** ANTH-100.

**ANTH-345 Human Evolution (3) SII**

Broad study of aspects of human evolution, including evolutionary theory; fossil and archeological evidence; aspects of comparative anatomy, behavior, and ecology; and the genetics and variation of modern human populations in order to reconstruct our species’ biological and cultural prehistory. (Cross-listed as BIOL-345.) **Prerequisites:** BIOL-165 or ANTH-205/BIOL-210.

**ANTH-350 Internship in Anthropology (1-4) SII**

Field placement designed to expose methods used in actual practice, help merge classroom theory with practice, and aid in career exploration and planning. The student is supervised by a professional at the internship site, often a museum, as well as by a faculty member. **Prerequisites:** Junior or senior standing; major or minor in anthropology or archeology; GPA of 2.3 or above, or consent of instructor.

**ANTH-365 Mortuary Archeology (3) O/SI**

This course combines elements of cultural anthropology and archeology to survey mortuary treatments around the globe. It begins with the earliest known burials that date to around 60,000 years ago and ends with a discussion of historic period cemeteries. The course introduces students to mortuary theory and explores the
similarities and idiosyncrasies in human treatment of the dead with particular emphasis on cremation, mummification, and dismemberment.

ANTH-370 Archeology Laboratory Methods (4) O/SI
Introduction to the tools and techniques of handling and processing archeological artifacts and reporting the results. Various skills include classifying, analyzing, and cataloging diverse materials; cartography, line drawing, report layout, and graphics arrangement; preservation and conservation; and assembling the results for publication.

ANTH-375 Archeology Field Methods (4) O/SI
This course introduces students to the basic skills and background necessary to do many kinds of field recording and excavation, including laying out units, digging, mapping, site sampling, research design, artifact identification, curation, and artifact conservation. Labs focus on learning to use basic archeological field equipment, total station mapping, and field and lab artifact identification and analysis. Projects and discussions introduce students to archeological ethics, including issues involving the Native American Graves Protection and Repatriation Act (NAGPRA), the Section 106 process, geophysics, and archeological research design and budgeting. This course is primarily taught as a ‘hands-on’ course designed to teach practical skills, but some lecture and discussion are included. Some weekend field trips are required. Lab fee: $75.

ANTH-380 Field Archeology (4) O/Summer
Field archeology is a field immersion course that introduces students to current archeological survey (Phase I) and testing (Phase II) methods. Students are taught the basics of total station mapping, field site recording, and how to assess site significance. The course is conducted off campus and may require extended periods of group living and/or camping. Sustained periods of outdoor activity (40 hrs/week, 5 days/week) is required and may involve hiking, climbing, lifting, digging, working in the direct sun, and other mildly strenuous activities. This course is offered only during the summer. Lab fee: $100.

ANTH-405 Technical Photography (3) O/SI
Concentrating on color photography, the course covers digital equipment, and operation; controlling and calculating light and focus; lighting, magnification, filters, and color enrichment; advanced techniques; critical image analysis; and problem solving. Special emphases on close-focus and close-up work, general scientific uses and principles of photography, and outdoor photography. Prerequisite: Junior or senior standing, or consent of instructor. Fulfills the general education core Fine Arts applied requirement.

ANTH-408 Archeology of Gender (3) O/SII
The archeology of gender is one component of modern ‘processual-plus’ archeology that has gained a large following among researchers worldwide. Consistent with the multi-vocal orientation of modern archeological practice, gender studies in archeology originate from a variety of theoretical perspectives and research goals. This course is designed to introduce students to this broad literature and situate the development of ‘gender archeology’ both theoretically and historically. The course is a seminar format where students are asked to directly engage the literature on this subject.
ANTH-410 Ethnographic Techniques (3) O/SII
Introduction to field techniques for exploring cultures firsthand, including such topics as life histories, interviewing, photography, proxemics (spatial analysis), map-making, participant observation, gift-giving rules, organization analysis, folklore, ethnosemantics, and material culture. Suitable for anyone planning to work with people from cultural settings foreign to their own, those expecting to travel or live outside the United States, and even those who simply want practical training in how to learn quickly about people's cultures. Recommended follow-up course is ANTH-475. Prerequisite: ANTH-100.

ANTH-411 Human Biology and Culture (3) D
A study of the interactions of biology and human culture. Topics may include human sociobiology, human ecology, nutrition, reproduction, demography, and disease. (Cross-listed as BIOL-411.) Prerequisites: Mathematics proficiency through 105 and English proficiency; BIOL-210 recommended.

ANTH-420 The Encultured Body (3) O/SII
This course is designed as an introduction to the body from a feminist anthropological perspective. Students will explore different ways that bodies are socially and historically constructed. Course content emphasizes bodies as socially meaningful, with particular attention to how historically-based ideas about health, disease, and medicine shape contemporary notions of social difference and conditions of inequality.

ANTH-425 Dental Science (3) O/SII
Teeth are a very significant component of any analysis of a skeleton from any context, including archeological, paleontological, and forensic. Designed for those interested in dentistry and other health sciences, anthropology, and biology, this course intensively studies the anatomy, histology, use, and evolution of teeth. (Cross-listed as BIOL-425.) Prerequisite: ANTH-137 (or ANTH-130).

ANTH-430 Special Topics (3) N
Study of a particular area of anthropology not covered comprehensively in one of the other advanced courses. The topic for a given semester is announced prior to registration for the semester and is responsive to student needs and interests. A student may receive credit more than once for ANTH-430 if a different topic is covered each time.

ANTH-442 Bioarcheology (3) SI
This course investigates the theoretical and methodological foundations of the study of ancient human remains. Specifically, it addresses biological profiles, skeletal metrics and non-metrics, dental anthropology, and paleopathology. It is intended for advanced undergraduates with some exposure to biological anthropology theory and practice.

ANTH-450 Human Osteology (4) O/SII
In-depth examination of the anatomy and physiology of the human skeletal system. Functional aspects will be considered for each bone or bone complex in the body. In addition, such issues as paleopathology, paleodemographic reconstruction, forensic anthropology, and osteoarcheology will be addressed. Three lectures and one two-
hour laboratory period per week. (Cross-listed as BIOL-450.) Prerequisite: BIOL-165 or ANTH-205/BIOL-210.

ANTH-460 Archeology of Eastern North America (4) O/SII
Although considerably diverse at the scale of the micro-region, from a macroscalar perspective the regions in eastern North America are characterized by similar technologies, adaptive strategies, and political organizations throughout the approximately 14,000 years that Native peoples occupied the area prior to European contact. Designed as an advanced discussion course, we use lectures to briefly introduce the nature of these changes throughout each of three major temporal divisions. Students then engage one another in class discussions and writing assignments concerning a broad range of topics (e.g., gender, mobility, material culture) about each temporal division. Readings of primary sources from the professional archeological literature structure these discussions. (Cross-listed as ANTH-560.) Prerequisite: ANTH-110.

ANTH-470 Issues in Anthropological Theory (3) O/SII
Course examines concepts and trends in anthropological theory, giving some attention to historical foundations of anthropological thought, but the primary focus is on contemporary theorists and concerns in the field. The goal is to learn about major topics of theoretical relevance and debate, as well as the conceptual tool-kit which anthropologists use to interpret data. Prerequisite: ANTH-100 and Junior or Senior standing, or consent of instructor.

ANTH-475 Ethnographic Writing (3) O/SI
Focus on anthropological field skills by finding and studying a micro-culture (a “culture in miniature”). Methods involve intensive aspects of interviewing, analysis, and interpretation, culminating in each student’s ethnographic description of her/his targeted micro-culture. Related topics include anthropological ethics, critical thinking, and academic writing. Students who have taken ANTH-410 are well positioned to pursue a micro-culture they have previously explored. Prerequisite: ANTH-100 and Junior or Senior standing.

ANTH-480 Advanced Field Archeology (4) O/Summer
Advanced field archeology is a field immersion course that introduces students to current archeological excavation methods. Students are taught standard archeological unit and feature excavation and recording techniques and how to use archeological field equipment. The course is conducted off campus and may require extended periods of group living and/or camping. Sustained periods of outdoor activity (40 hrs/week, 5 days/week) is required and may involve hiking, climbing, lifting, digging, working in the direct sun, and other mildly strenuous activities. This course is offered only during the summer. Prerequisite: ANTH-380. Lab fee: $100.
Art Courses

Art courses are offered through the Department of Art and Design. Information about the department and its majors and minors can be found in the section entitled Academic Units.

ART-100 Art Experience (2) A
Exploration of studio art skills and media for the general education requirement. Content varies. Each section concentrates on a single discipline such as drawing, ceramics, or color and design, etc. May be repeated for credit in different media, and simultaneous enrollment in two sections (in different media) is allowed. Does not count toward art major or minor.

ART-102 Introduction to Studio Art (3) A
This course is the exploration of studio art skills and media for the general education requirement. Content varies. Each section concentrates on a single discipline, such as drawing, ceramics, or color and design, etc. Does not count toward art major or minor.

ART-103 Introduction to Art Appreciation (3) A
Exploration of the visual arts with emphasis on media, design principles, and the place of art in human society, past and present. Does not count toward art major or minor.

ART-104 Community Immersion in the Arts (1-3) A
Provides an experience beyond the classroom by interacting with the local community through art service-learning activities. Students will work with a local community agency/organization to identify needs, conduct research, design, analyze, and implement art projects to benefit the agency/organization and/or the community at large. The students will work with specific agencies and will gain insight into community personality and the diversity therein. Prerequisite: Consent of instructor; students must have completed coursework in project-related media.

ART-105 Freshman Experience in Art (1) SI
Orientation for freshmen to the University in general and the Department of Art & Design in particular. Course is designed to meet the unique needs of art and design students and includes a guest artist/field trip component to introduce central Indiana organizations and institutions that support the professional development of student artists.

ART-110 Art Appreciation (2) A
Exploration of the visual arts with emphasis on media, design principles, and the place of art in human society, past and present. Does not count toward art major or minor.

ART-120 Fundamentals of Two-Dimensional Design (3) SI
Study of the organization of art forms and the principles of design and color in two dimensions.

ART-130 Beginning Drawing (3) SI
Introduction to basic drawing media, techniques, and formal issues. Emphasis on drawing from still lifes, nature, and imagination.
ART-140 Fundamentals of Three-Dimensional Design (3) SII
Exploration of common materials with emphasis on creative construction in three dimensions.

ART-150 Beginning Painting (3) SII
Introduction to painting, media, techniques and formal issues. Emphasis on painting from still lifes, nature, and imagination.

ART-160 Introduction to Art Therapy (3) SII
Survey of the fundamental concepts, history, and uses of the visual arts in a therapeutic context.

ART-161 Point & Shoot Photography (3) A
This course introduces composition, camera controls, and image editing for compact and sub-compact digital cameras. The course does not apply towards a major or minor emphasis in art or a minor in photography for non-art majors; those students should begin with ART-261. This course fulfills the applied fine arts course requirement for general education core.

ART-171 Digital Photography I (3) A
Introduction to the digital lens reflex (DSLR) camera and image manipulation techniques as well as issues with photography as fine art. Assignments require that the student find creative photographic solutions to problems in form and content. Students must have a digital single lens reflex camera equipped with a zoom lens. No prerequisite.

ART-174 Ceramics I (3) A
An introduction to basic hand building and wheel throwing techniques. Students will become familiar with various clays, slips, glazes, and kiln firing.

ART-185 Printmaking I (3) SI
An introduction to the basic processes and materials of printmaking. Emphasis on exploring technical aspects of various printmaking techniques and approaches including intaglio, relief, and silkscreen. Recommended: ART-130.

ART-200 Painting II (3) SII
Further exploration of oil painting techniques and compositional structure. Emphasis on the figure and contemporary conceptual issues. Prerequisite: ART-150.

ART-219 Mold Making I (3) SI
Plaster and non-plaster molds are introduced as tools for ceramic construction and to investigate the role of the cast object and casting materials as means for the execution of functional ceramic vessels. Emphasis will initially be placed on functional objects, building a variety of skills that can lead to individual interpretations, both functional and sculptural. Prerequisites: ART-174 or consent of instructor.

ART-269 Introduction to Wood & Mixed Media Sculpture and Construction (3) SII
This course is an introduction to the materials, hardware, joinery, carving and construction techniques used to create non-functional (such as sculpture) and functional (such as furniture) structures.
ART-271 Digital Photography II (3) A
Continuation of ART-171 with further development of aesthetic and technical expertise. Emphasis is on production of exhibition-quality work. Students must have a digital single lens reflex camera equipped with a zoom lens. Prerequisites: ART-171 or consent of instructor.

ART-272 Introduction to Commercial Photography (3) SII
Introduces the capabilities, applications, and uses of photography studio equipment. Includes an introduction to the current basic software packages used in the field of commercial photography. Students must have a digital single lens reflex camera equipped with a zoom lens and a graphics tablet. Prerequisites: DSGN-101 and ART-171, or consent of instructor.

ART-274 Ceramics II (2–3) SII
Continued skill development in hand building and wheel throwing. Students will continue to explore various clays, slips, glaze materials, and firing processes. Prerequisite ART-174.

ART-280 Teaching of Elementary School Art (3) SII
Preparation for the teaching of art in elementary grades. Basic skills, techniques, and materials are discussed, evaluated, and handled so that the student becomes acquainted with suitable forms of expression in art and its relationship to the total curriculum.

ART-281 History of Western Art I (3) SI
Visual analysis of selected works from the history of Western art. This semester defines terms, processes, and principles of architecture, painting, sculpture, and graphics from prehistoric to Renaissance periods.

ART-282 History of Western Art II (3) SII
Visual analysis of selected works from the history of Western art. This semester examines style and subject matter from the early Renaissance to the 20th century.

ART-285 Printmaking II (3) SII
Further exploration of printmaking media, techniques, and compositional structure. Emphasis on multi-layer prints and contemporary conceptual issues. Prerequisite: ART-185.

ART-290 Drawing II (3) SI
Further exploration of drawing media, techniques, and compositional structure. Emphasis on the figure and contemporary conceptual issues. Prerequisite: ART-130.

ART-297 Sophomore Portfolio Review (0) SII
All art majors are required to present a portfolio of their work to a committee of the faculty after completing 45 hours. Students will receive a satisfactory grade or an unsatisfactory grade. Any student receiving an unsatisfactory grade may be required to correct deficiencies in the portfolio with additional coursework.
ART-305 Painting III (3) A
Exploration of media and aesthetic issues in contemporary painting. Students are encouraged to try techniques not covered in other painting courses and/or develop an individual style. Prerequisites: ART-200 or consent of instructor.

ART-319 Mold Making II (3) N
Plaster and non-plaster molds are introduced as tools for ceramic construction and to investigate the role of the cast object and casting materials as means for the execution of sculptural art strategies. Discussion of contemporary issues in ceramics such as the reproduction, the multiple and modular construction. Exploration of various materials to be used in casting; clay, paper clay, and concrete. Prerequisite ART-219.

ART-322 Commercial Photography II (3) SI
Continuation of ART-272 with greater emphasis in commercial photography and the human form. Prerequisite: ART-272 or permission of instructor.

ART-335 Jewelry and Metalwork (3) N
Exploration of basic techniques in forming and constructing decorative metal objects and jewelry.

ART-351 Art Methods for Elementary Classroom Teachers (2) A
Designed for the classroom teacher, an introduction to art fundamentals with methods, materials, and rationale for integrating art into the elementary curriculum. Must be taken concurrently with student teaching.

ART-361 Digital Photography III (3) A
Continuation of ART-271. Prerequisite: ART-271.

ART-369 Wood and Mixed Media Sculpture and Construction (2-3) SII
This course will further explore the materials, hardware, and construction techniques used to create functional (such as furniture) structures and non-functional sculptures in wood or other related materials. Prerequisite: ART-269.

ART-374 Ceramics III (2–3) A
Student’s choice to focus on hand building or wheel throwing techniques; goal to develop individual solutions and integration of form and surface. Continued exploration in various clays, slips, glazes, and firing processes. Prerequisite ART-274.

ART-384 Art Since 1900 (3) SI
This course introduces the vocabulary of visual arts in the 20th century. Major movements are briefly introduced with characteristic works in painting, sculpture, photography, printmaking, computer graphics, video, and environmental and performance art.

ART-385 Printmaking III (3) SI
Continuation of Art 285. Students are encouraged to try various combinations of techniques with emphasis on starting to develop a personal style and conceptual approach. Prerequisite: ART-285.
ART-387 History of Photography (3) SI
Survey of photography beginning with the Renaissance and moving through traditional and digital photography. Emphasis is on 20th century photography.

ART-389 Women in Art (3) SII
A survey of the role of women in the visual arts from prehistory to the present.

ART-391 Drawing III (3) A
Continuation of ART-290. Prerequisite: ART-290.

ART-422 Commercial Photography III (3) SII
Continuation of ART-322 with greater emphasis in commercial photography in magazines, advertisements and electronic media. Prerequisite: ART-322 or permission of instructor.

ART-425 Intermediate Studio (1–4) A
This class enables students to develop their artistic skills to a higher level. Students work in an already established class in either drawing, ceramics, painting, photography, printmaking, or 3-D extended media. An appropriate amount of production at an increasingly advanced level is expected for each hour of credit. May be repeated up to eight credit hours. Prerequisite: Department approval required before registering.

ART-430 Advanced Studio (1–4) A
This class enables students to develop their artistic skills to a more professional level. Students work in an already established class in either drawing, ceramics, painting, photography, printmaking, or 3-D extended media. An appropriate amount of production at an increasingly advanced level is expected for each hour of credit. May be repeated up to eight credit hours. Prerequisite: Intermediate Studio or department approval required before registering.

ART-432 Commercial Photography Portfolio (3) SI
Students are required to submit a proposal for a major project to showcase their commercial photography skills. This course will also enable students to compile their portfolio on both traditional and digital media platforms. Prerequisite: ART-422 or permission of instructor.

ART-440 Internship in Museum Work (1–4) A
Introduction to museum functions through observation and participation. On-site experiences may include work in exhibition installation, conservation, curatorial research, or other specialties. Prerequisite: Department approval required.

ART-470 Senior Portfolio (1) A
Capstone senior experience in which the student is required to develop a professional portfolio based on the requirements defined by his or her specific major or discipline and mount an exhibition of representative work. Bachelor of Science in Visual Communication Design students must present a portfolio of their work.

ART-471 Senior Thesis (2) A
Capstone senior experience for studio art majors. The student is required to create a coherent body of work (in conjunction with an advanced studio class), write a
research paper related to body of work, write an artist’s statement, create a slide portfolio, prepare and mount a solo exhibition, prepare a résumé, and enter three off-campus juried exhibitions. **Prerequisite:** Senior-standing requirement for studio art majors.

**ART-473 Community Immersion in the Arts (3) A**  
This capstone class provides additional experience in the community for students completing the pre-art therapy major. The focus of the course is the creation, completion and documentation of an arts-foundation project in a community-based organization. The course requires the work to be jointly determined by the student and the learning placement site, such as a community-based agency or organization. The course encompasses the community service project and credit for grant application, research on related topics, assigned readings, reflective journals and means of documenting service experience. **Prerequisites:** ART-104, ART-160, and appropriate studio course to prepare student.

**ART-475 Gallery Studies (1) A**  
Introduction to gallery functions through observation and participation. Experience includes communicating with artists, installation preparation and processes, gallery maintenance, and curatorial research. **Prerequisites:** Junior standing and consent of instructor.

**ART-480 Special Topics in Art (3) D**  
Study of aspects of art media or history that do not receive focused attention in courses listed above. May be repeated for credit in different topics.

**ART-485 Directed Readings in Art History (1–3) A**  
Selected topics from the history of art intended for students who need additional art history beyond what is normally offered by the art department. **Permission of department required.**

**Athletic Training Courses**  
*Athletic training courses are offered through the Athletic Training Program. Information about the department and the athletic training program can be found in the section entitled Academic Units.*

**ATRG-100 Introduction to Athletic Training (3) SI**  
Course introducing the student to the field of athletic training and covering topics such as the NATA, basic anatomy and injury care, injury documentation, foundations of conditioning, and nutrition as it relates to the physically active individual. Bloodborne pathogen training also is included in the course. Enrollment is limited to pre-athletic training majors. **Corequisite:** ATRG-101.

**ATRG-101 Athletic Training Techniques (2) SI**  
Course covering taping procedures and protective devices used in athletic training. Also included will be athletic training emergency procedures such as spine board application, vacuum splints application, and wound care. Enrollment is limited to pre-athletic training majors. A lab fee will be assessed for this course. **Corequisite:** ATRG-100.
ATRG-102 Clinical Experiences I (1) A
Course designed to introduce clinical proficiencies for skill acquisition. Skill acquisition will be achieved through successful completion and evaluation of clinical proficiencies under the direct supervision of a preceptor. Prerequisite: Admission into the athletic training major.

ATRG-104 Athletic Health Care (2) SII
Course content will include basic anatomy of the musculoskeletal system and the identification and initial management of common injuries seen in the physically active population. Additional information presented for open wounds, universal precautions, emergency plan and situations, injury psychology, environmental-related illness, and concussion. For community health education, exercise science and physical education majors.

ATRG-110 Recognition and Assessment I (4) SII
Course covering an in-depth study of the normal anatomical structures in the lower extremity including joint structure and musculoskeletal/nervous systems. Also discussed are common risk factors and causes of injuries as identified by contemporary epidemiological studies, common injuries to each body part, typical symptoms, and common clinical signs associated with injuries/illnesses with the physically active. A lab covering the assessment techniques for injuries commonly seen in the lower extremities will be included. Three lectures and two one-hour laboratory periods per week. Prerequisites: Admission into the Athletic Training Program.

ATRG-115 Emergency Procedures (3) SII
The course is designed to cover in-depth First Responder and Professional Rescuer Skills. Topics discussed are recognizing emergency situations and professional rescuer response including patient assessment, airway management, triage, and techniques to immediately manage life-threatening and/or severe injury illness. Students will be certified in CPR for the Professional Rescuer through the American Red Cross. Prerequisite: Admission into the Athletic Training Program.

ATRG-201 Clinical Experiences II (2) A
Course designed to introduce clinical proficiencies for skill acquisition. Skill acquisition will be achieved through successful completion and evaluation of new and existing skills/clinical proficiencies under the direct supervision of a preceptor. Clinical experiences will build on clinical knowledge and skills successfully completed in the previous clinical experience course. Clinical experiences may occur on or off campus. Prerequisite: ATRG-102, ATRG-110, ATRG-115, and BIOL-104.

ATRG-202 Clinical Experiences III (2) A
Course designed to introduce clinical proficiencies for skill acquisition that an early-level athletic training student should master. Skill acquisition will be achieved through successful completion and evaluation of new and existing skills/clinical proficiencies under the direct supervision of a preceptor. Clinical experiences will build on clinical knowledge and skills successfully completed in the previous clinical experience courses. Clinical experiences may occur on or off campus. Prerequisite: KINS-249, ATRG-210, and ATRG-201.
ATRG-210 Recognition and Assessment II (4) SI
Course covering an in-depth study of the normal anatomical structures in the upper extremities, head, and spine, including joint structure and musculoskeletal/nervous systems. Also discussed are common risk factors and causes of injuries as identified by contemporary epidemiological studies, common injuries to each body part, typical symptoms, and common clinical signs associated with injuries/illnesses with the physically active. A lab covering the assessment techniques for injuries commonly seen will be included. Three lectures and two one-hour laboratory periods per week. Prerequisite: ATRG-102, ATRG-110, ATRG-115, and BIOL-104.

ATRG-214 Recognition and Assessment III (3) SII
Course covering an in-depth study of normal anatomical structures of the face, thorax, abdomen, and skin. Also discussed are common risk factors and causes of injuries as identified by contemporary epidemiological studies, common injuries to each body part, typical symptoms, and common clinical signs associated with injuries and general medical conditions with the physically active. A lab covering the assessment techniques for the face, head, abdomen, and general medical conditions will be included. Two lectures and two one-hour laboratory periods per week. Prerequisite: KINS-249, ATRG-201, and ATRG-210.

ATRG-215 Muscle Testing and Function (3) SII
Course covering the origin, insertion, and action of muscles and muscle groups of the body with attention to methods to evaluate muscle length and to measure strength using manual muscle or break tests. Postural evaluation techniques and evaluation of muscle function during activities common to sport participation and rehabilitation also are addressed. Prerequisite: KINS-249, ATRG-201, and ATRG-210.

ATRG-300 Therapeutic Modalities (4) SI
Course covering the principles and application of therapeutic modalities. Tissue healing process is discussed along with clinical decision-making concerning therapeutic modalities with the physically active. Laboratory sessions will be included. Three lectures and two one-hour laboratory periods per week. Prerequisite: ATRG-202, ATRG-214, and ATRG-215.

ATRG-301 Clinical Experiences IV (2) A
Course providing a standard for the type of clinical knowledge and skill that an athletic training student should possess by integrating cognitive concepts and skills into progressively higher-level practical application. This integration will be achieved through successful completion of clinical proficiencies under the direct supervision of a preceptor. Clinical experiences will build on clinical knowledge and skills successfully completed in previous clinical experience courses. Clinical experiences may occur on or off campus. Prerequisite: KINS-375, ATRG-214, ATRG-215, and ATRG-202.

ATRG-302 Clinical Experiences V (2) A
Course providing a standard for the type of clinical knowledge and skill that an athletic training student should possess by integrating cognitive concepts and skills into progressively higher-level practical application. This integration will be achieved through successful completion of clinical proficiencies under the direct supervision of a preceptor. Clinical experiences will build on clinical knowledge and skills successfully completed in previous clinical experience courses. Clinical experiences
may occur on or off campus. **Prerequisite:** KINS-245, ATRG-300, ATRG-310, and ATRG-301.

**ATRG-303 Clinical Internship in Athletic Training (1) D**
Clinical internship in the field of athletic training. The purpose of the clinical experience is to provide an opportunity for the student to obtain advanced study through supervised clinical experiences in injury/illness prevention, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation, and organizational and professional health and well-being, or related areas. **Prerequisite:** ATRG-202 and permission of instructor.

**ATRG-310 Pharmacology (1) SI**
Course introducing the student to therapeutic medications commonly prescribed for injury and illnesses associated with the physically active population, both prescription and over-the-counter. Included in the course will be indications, contraindications, precautions, record-keeping procedures, drug classifications, side effects, and governing regulations related to the use of medication with the physically active. **Prerequisite:** ATRG-202, ATRG-214, and ATRG-215.

**ATRG-315 Therapeutic Rehabilitation (4) SII**
Course covering the principles and application of therapeutic rehabilitation along with clinical decision-making concerning rehabilitation from injury. Specific and current rehabilitation techniques will be introduced to the student for specific athletic injuries. Laboratory sessions will be included. Three lectures and two one-hour laboratory periods per week. **Prerequisite:** KINS-245, ATRG-300, ATRG-310, and ATRG-301.

**ATRG-325 Symposium in Athletic Training (2) SII**
Course covering current topics in athletic training and healthcare. Healthcare professionals from a variety of specialties, as well as other professions that support athletic trainers, will discuss current concepts, content, and practice issues as they pertain to athletic training. **Prerequisite:** KINS-245, ATRG-300, ATRG-310, and ATRG-301.

**ATRG-330 Psychosocial Techniques and Intervention (1) SII**
The course is designed to describe psychosocial techniques and intervention commonly used in athletic training. Students will learn to apply communication strategies, management and referral strategies for mental health conditions, and motivation interventions. The course will also address cultural competence in patient care and the role of various mental healthcare providers that comprise the mental health referral network. **Pre-requisite:** KINS-245, ATRG-300, ATRG-310, and ATRG-301.

**ATRG-401 Clinical Experiences VI (2) A**
Course providing a standard for the type of clinical knowledge and skill that an athletic training student should possess by integrating cognitive concepts and skills into progressively higher-level practical application. This integration will be achieved through successful completion of clinical proficiencies under the direct supervision of a preceptor. Clinical experiences will build on clinical knowledge and skills successfully completed in previous clinical experience courses. **Prerequisite:** ATRG-315, ATRG-302, ATRG-325, and ATRG-330.
ATRG-405 Field Experience (3) A
Course designed to transition students into clinical practice. Students will be assigned to off-campus affiliated sites where they will be directly supervised by a clinical preceptor. Students will demonstrate clinical skills in the domains of athletic training. Students will have the opportunity to work with a diverse population of patients. The course will address health appraisal and the development and implementation of a health management plan; professional development; and prepare students to take the Board of Certification Examination. Prerequisite: ATRG-302.

ATRG-410 Organization and Administration (3) SI
Course covering management and supervision of personnel, financial resources, programs, and health care facilities and associated venues with emphasis on factors essential to administration. Legal concerns and insurance will be discussed. Prerequisite: KINS-375, ATRG-315, ATRG-302, ATRG-325, and ATRG-330.

ATRG-415 Athletic Training Capstone I (.5) SI
In this first course of the two-course capstone course sequence taken during the student’s final year, each student will select and develop a topic to study related to athletic training. Each student will select a mentor to provide guidance in planning, coordinating, conducting, and ultimately presenting the project. The project can take different forms including but not limited to: a literature review, systematic review, an original research project, self-study leading to an additional certification or a community service project related to athletic training. This first capstone course will culminate with the student writing and submitting a project proposal to be completed during the second capstone course. Prerequisite: Senior Standing, Semester I.

ATRG-416 Athletic Training Capstone II (.5) S II
In this second course of the two-course capstone course sequence taken during the student’s final year, each student will implement and complete the project developed and approved during ATRG 415: Athletic Training Capstone I. Students will work regularly with their selected mentor to complete their proposed project. The course will culminate with a professional presentation given by the student at the end of the semester. Successful completion of this course is required for the student to complete requirements for graduation. Prerequisite: Senior standing, Semester II.

Biology Courses
Biology courses are offered through the Biology Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

BIOL-100 Elements of Biology (3) N
Introduction for non-science majors to fundamental biological concepts: Scientific inquiry, biological chemistry, cell structure and function, genetics, evolution, classification, diversity of living organisms, and ecology. Two lectures and one two-hour laboratory period per week. Prerequisite: Math proficiency through MATH-090 or concurrent enrollment in MATH-090.

BIOL-101 Nutrition (3) D
Study of digestion, absorption, and metabolism of carbohydrates, proteins, lipids, vitamins, and minerals. Balanced meals, special diets, food sources, and deficiency
conditions are studied. **Prerequisite:** Math proficiency through MATH-090 or concurrent enrollment in MATH-090.

**BIOL-103 Principles of Human Anatomy (4) A**
Survey of the anatomy of the human body systems and tissues. Integrated lecture and laboratory experience. Three lectures and one 80-minute laboratory per week. This course will not count toward the biology or human biology major. **Prerequisites:** Math proficiency through MATH-090.

**BIOL-104 Principles of Human Physiology (4) A**
Introduction to the vital processes of the human body and its tissues, including an introduction to cell biology. Integrated lecture and laboratory experience. Three lectures and one 80-minute laboratory per week. This course fulfills the Natural Science requirement of the General Education Core. This course will not count toward a biology or human biology major. **Prerequisite:** Math proficiency through MATH-090.

**BIOL-112 Biology for Elementary Education (3) A**
Course designed for elementary education majors based on the National Science Education Standards for teaching Life Science. Emphasis will be placed on understanding central life science concepts, tools of inquiry, the basic nature of science, and practical methods for teaching scientific inquiry. Two two-hour laboratory sessions and a one-hour discussion period per week.

**BIOL-130 Monkeys, Apes, and Humans (3) SII**
Survey of living and fossil primates throughout the world. This course provides insight into the complexities of primate interactions and their unique evolutionary pathways. Topics include an introduction to DNA, anatomy, social behavior, ecology, ecotourism, human-animal interaction, and deforestation. *(Cross-listed as ANTH-130.)*

**BIOL-131 Explorations in Biology (3–4) D**
Selected topics in the life sciences presented for non-majors. The emphasis may change each time the course is taught. A student may receive credit more than once for BIOL-131 if a different topic is covered each time. **Prerequisite:** Math proficiency through MATH-105.

**BIOL-155 Introduction to the Diversity of Life (4) A**
An introduction to biological science for science majors focusing on evolution, heredity, population biology, and biodiversity. Laboratory activities concentrate on scientific methodologies, observational skills, hypothesis development, and comparative biology in an evolutionary context. Students will become acquainted with the major groups of prokaryotes, protists, animals, plants, and fungi. Two lectures, one two-hour discussion, and one two-hour laboratory period per week. **Prerequisite:** MATH-105 or its equivalent.
BIOL-165 Introduction to Cell Biology (4) A
A study of the basic processes of living systems, including biological molecules, enzymes, metabolism, transport, and cell structure and function. Laboratory activities emphasize data analysis and scientific writing. Two one-hour lectures, one two-hour discussion, and one two-hour laboratory period per week. Prerequisite: CHEM-103 with a grade of B or better or CHEM-150 with a grade of C or better.

BIOL-200 Medical Terminology (2) A
Medical terminology deals with the identification of the meaning of various roots and terms and combining forms that are components of medical words, including anatomical, physiological and pathological therapeutic terminology, and implications of health literacy. Both clinical and scientific medical terminology will be covered in this course, to enable participants to understand the terms used in the clinical setting, as well as those that are used in relevant literature. This provided a basis of understanding for further education, as well as clinical and scientific relevance. This course may not count as an elective for the biology of human biology major.

BIOL-209 Clinical Microbiology (4) A
Introduction to viruses, bacteria, fungi, and parasites of biomedical importance. Lecture and laboratory exercises on classification and identification of microorganisms, host-agent interactions, and strategies for prevention of infectious disease. This course is intended primarily for students in the nursing program. Two lectures and two two-hour laboratory periods per week. Prerequisite: BIOL-103/104 or BIOL-165.

BIOL-210 Human Biological Variation (3) SI
Study of the pattern and nature of human biological variation, including population genetics, adaptation to the environment, growth and development, race, gender, and determinants of behavior. (Cross-listed as ANTH-205.) Prerequisites: Math proficiency through MATH-105 and English proficiency.

BIOL-220 General Microbiology (4) Y
General survey of microbial life emphasizing the nature of bacterial structure and function, medical aspects of microbiology, microbial diversity, ecological interactions of microbes in the environment, basic principles of immunology, and the use of microbes for industrial and food processes. Students will be expected to locate, review, and evaluate a variety of types of microbiology literature. Laboratory emphasizes techniques in microbiology, experiential learning, and development of an independent research project. Two lectures and two two-hour laboratory periods per week. Prerequisites: BIOL-225, and CHEM-160.

BIOL-225 Introduction to Genetics (4) A
The study of gene structure and function, the role of genes in determining the traits of living organisms, and the role of genes in evolution (microevolution). Transmission (Mendelian) and molecular approaches will be utilized to recognize patterns of inheritance in individuals and populations. Topics will include DNA replication, RNA transcription, protein translation and cell division, and the regulation of gene expression in prokaryotes and eukaryotes. Emphasis will be placed on problem solving and interpretation of experimental data. Two lectures, one two-hour discussion, and one two-hour laboratory session per week. Prerequisite: BIOL-165.
Course Descriptions

BIOL-230 Cell Biology (4) Y
Study of macromolecules and the architecture of the cells, with emphasis on eukaryotic cells. Topics to be covered include the structure and function of carbohydrates, lipids, proteins, RNA, and DNA; the roles of enzymes in metabolism; signal transduction; cell transport; structure and function of eukaryotic cell organelles, and the structure and function of the cytoskeleton. Laboratory exercises include enzyme assays, isolation of cell organelles, analysis of membrane proteins, gel electrophoresis, eukaryotic cell culture, and phase contrast and fluorescence microscopy. Emphasis is placed on quantitative analysis and interpretation of experimental data. Three lectures and one three-hour laboratory per week. Prerequisites: BIOL-225 and CHEM-160.

BIOL-240 Vertebrate Anatomy (4) D
Comparative study of form and structure of representatives from the vertebrate groups. Dissections, histological studies, and a generalized developmental background of the organ systems are emphasized. Two lectures and two two-hour laboratory periods per week. Prerequisite: BIOL-165.

BIOL-245 Ornithology (4) Y
An introduction to the biology and identification of birds. Most class time is spent on field trips observing birds and learning to identify species by sight and sound. Lecture component focuses on structure and function as they relate to avian evolution, physiology, anatomy, reproduction, behavior, and conservation. Some personal travel to field sites is required. Available to majors and non-majors. This course fulfills the Natural Science requirement of the General Education Core.

BIOL-265 Ecology (4) A
Study of interactions between organisms and their physical and biological environments. Includes study of physical factors, biogeochemical cycles, population dynamics, population interactions, and ecosystems. Students will design and complete an independent research study. Three lectures and one three-hour laboratory period per week. Students may take BIOL-265 to fulfill the Writing and Speaking requirement of the General Education Core. (Cross-listed as ESCI-265.)

BIOL-270 Immunology (3) Y
Study of the organization and function of the vertebrate immune system. Topics covered include types of immunity, serology, molecular, cellular, and biochemical properties of the immune system. immunoglobulin structure, organs of the immune system, immunogenetics, immune surveillance, immunological therapies, autoimmunity, immunodeficiency, and immunology of tumors. Emphasis will be placed on problem solving, case study evaluation, primary literature analysis, writing a review of immunological literature, and presenting and explaining immunological research. Students may take this course to fulfill the Writing and Speaking requirement of the General Education Core. Prerequisites: BIOL-225.

BIOL-280 Evolutionary Biology (3) Y
Examination of the theory and evidence for evolution. The course concentrates on the application of evolutionary theory to problems of population biology, speciation, life histories, behavior, sexual selection, quantitative genetics, and medical practices. Prerequisite: BIOL-225 or consent of the instructor.
BIOL-290 Seminar in Current Topics (1) A
Students will gain an appreciation for the breadth of topics, problems and careers in the biological sciences by attending a seminar series of presentations on a wide variety of topics in biology by professional biologists from other universities, industry, governmental agencies, or non-profit organizations. In addition, students will develop scientific communication and presentation skills by leading discussions of primary scientific articles in preparation for upcoming speakers or on topics chosen by the class. One hour per week. Prerequisites: BIOL-155 and 165.

BIOL-300 Internship in Health/Life Sciences (1–4) A
Internship program providing practical experience in various settings pertinent to careers in allied health and life sciences areas. Students will participate on a voluntary basis without monetary compensation and must provide their own transportation, liability insurance, uniform, and all other materials required by the participating organization. Full participation is expected. Failure to participate in a satisfactory manner, as determined by the participating organization, shall result in termination of the internship with no academic credit for the particular student. Satisfactory/Unsatisfactory grading. Prerequisites: Sophomore standing or higher; minimum GPA of 3.0; and permission of course instructor and participating organization/facility.

BIOL-305 Human Functional Anatomy (4) A
Survey of the anatomy of the human body with an emphasis on the relationship between body form and function in an evolutionary, comparative, and biomechanical context. Two lectures and two two-hour laboratory periods per week. Laboratory experience includes animal dissection. Prerequisites: BIOL-165. Junior or senior standing.

BIOL-320 Biochemistry (3) SI
An introduction to the molecules and chemical reactions that are characteristic of living things. The course will discuss the structures of important biological molecules including amino acids, proteins, nucleic acids, and lipids and metabolic processes that extract and store metabolic energy. Three hours of lecture per week. May be taken for either biology or chemistry credit. (Cross-listed as CHEM-320.) Prerequisites: BIOL-165 and CHEM-250, or consent of instructor.

BIOL-325 Advanced Genetics (4) O
Study of gene action and the mechanisms of inheritance beyond introductory level. Focuses on the integration of classical genetics with molecular models of gene action. Topics covered include Mendelian genetics, gene structure and function, mutation and repair, gene regulation, mobile genetic elements, developmental genetics, epigenetic factors, evolutionary genetics, and quantitative inheritance. Three lectures and one two-hour laboratory period per week. Prerequisites: BIOL-225 and CHEM-250 or consent of instructor.

BIOL-330 Mammalian Physiology (4) A
Study of principles of metabolism, homeostatic mechanisms, and structure-function relationships of animal systems with emphasis on human anatomy and physiology. Integrated lecture and laboratory experiences. Two lectures and two two-hour laboratory periods per week. Prerequisites: BIOL-165. Junior or senior standing.
BIOL-345 Human Evolution (3) O
Broad study of aspects of human evolution, including evolutionary theory; fossil and archeological evidence; aspects of comparative anatomy, behavior, and ecology; and the genetics and variation of modern human populations in order to reconstruct our species’ biological and cultural prehistory. Students may take BIOL-345 to fulfill the Writing and Speaking requirement of the General Education Core. *(Cross-listed as ANTH-345.)* Prerequisite: BIOL-155 or ANTH-205/BIOL-210.

BIOL-350 Plant Biology (4) O
An introduction to the fundamental principles of botany. This course will be a study of diversity, evolution, ecology, and reproduction of plants. Will include both laboratory and field studies. Three lectures and one three-hour laboratory period per week. Prerequisites: BIOL-155 or BIOL-165 or ENSC-101, or permission of instructor.

BIOL-355 Biochemistry Laboratory (1) SII
Students will practice the basic laboratory techniques in biochemistry including protein chromatography, electrophoresis, and enzyme kinetics and investigate the chemical properties of lipids and carbohydrates. *(Cross-listed as CHEM-355.)* Prerequisite: CHEM-320 or BIOL-320.

BIOL-390 Molecular Biology (4) O
Study of the molecular processes involved in gene function and regulation. Topics include a detailed study of replication, transcription, and translation with emphasis on protein-nucleic acid interactions and molecular mechanism of mutation and repair. Laboratory exercises will focus on experimental design in molecular biology to isolate and analyze specific DNA sequences and include the use of databases (such as GenBank) to analyze DNA sequences and gene products. Three lectures and one three-hour laboratory per week. *(Cross-listed as CHEM-390.)* Prerequisite: BIOL-225 or BIOL/CHEM-320.

BIOL-395 Biochemistry II (3) O/SII (even-numbered years)
This course focuses on the anabolic and catabolic chemical reactions used to manufacture, degrade, and/or recycle small molecules in biological systems with special attention paid to the mechanisms and chemistry of signaling processes within cells used to control and regulate cellular processes. *(Cross-listed as CHEM-395.)* Prerequisite: CHEM/BIOI-320 or BIOL-330 or consent of instructor.

BIOL-411 Human Biology and Culture (3) N
A study of the interactions of biology and human culture. Topics may include human sociobiology, human ecology, nutrition, reproduction, demography, and disease. Students may take BIOL-411 to fulfill the Writing and Speaking requirement of the General Education Core. *(Cross-listed as ANTH-411.)* Prerequisites: Math proficiency through MATH-105 and English proficiency; BIOL-210 recommended.

BIOL-425 Dental Science (3–4) O/SII
Teeth are a very significant component of any analysis of a skeleton from any context, including archeological, paleontological, and forensic. Designed for those interested in health sciences, anthropology, and biology, this course intensively studies the anatomy, histology, use, and evolution of teeth. *(Cross-listed as ANTH-425.)*
BIOL-430 Plant Growth and Development (2) D
Study of the developmental biology of plants that emphasizes the regulation of the processes of growth and development in the vascular plants. Topics include analysis of plant growth, plant growth regulators, photoperiodism and the regulation of development, factors involved in germination and flowering, and senescence. *Prerequisites: BIOL-155 and 165.*

BIOL-435 Forensic and Historic DNA Analysis (3) O
An examination of the theoretical approaches to and practical applications of molecular analyses of forensic and historic specimens. The course will integrate basic concepts of skeletal biology, genetics (including population genetics), molecular biology, and basic organic chemistry. Extensive use of the primary literature will be employed and students will design an original research project. Two two-hour meetings per week. Laboratory exercises will focus primarily on DNA profiling of vertebrate skeletal remains. *Prerequisites: Genetics (either BIOL-225 or BIOL-325) and CHEM-160.*

BIOL-450 Human Osteology (4) O
In-depth examination of the anatomy and physiology of the human skeletal system. Functional aspects will be considered for each bone or bone complex in the body. In addition, such issues as paleopathology, paleodemographic reconstruction, forensic anthropology, and osteoarcheology will be addressed. Two lectures and two two-hour laboratory periods per week. *(Cross-listed as ANTH-450.)* Prerequisite: BIOL-155.

BIOL-460 Topics in Biology (1–4) N
Study of a particular area of biology not covered comprehensively in one of the other advanced courses. A student may receive credit more than once for BIOL-460 if a different topic is covered each time. *Prerequisite: permission of the instructor.*

BIOL-465 Supervised Writing (.5) A
The student will work individually with a faculty member or professional contact to complete an assignment in science or medical writing. *Prerequisite: BIOL-365 or permission of the instructor.*

BIOL-490 Independent Research Project (1–4) A
Introduction to the procedures and practices of scientific research. The student will be expected to pose a problem, suggest procedures to be used to solve the problem, and then work toward its solution. A final written report is required. The course may be repeated, but no more than eight hours of research in biology will be awarded. *Prerequisite: 24 hours of biology and consent of the instructor.*

BIOL-495 Capstone: Integrative Biology (3) SII
Students will work in groups to complete a literature review for a biological problem that integrates cellular, tissue, organismal, and community levels of organization. The projects will involve class presentations/discussions, a written product, and peer critique. Students will also review the skills of writing vitae and job/graduate school applications. The course fulfills the departmental and General Education capstone requirements. *Prerequisite: Major in the biology department or permission of instructor and junior or senior standing.*
BIOL-496 Capstone: Research Experience (1) SII
The capstone course is an opportunity for students to demonstrate that they have achieved the goals for learning established by their educational institution and major department. Our aim is to develop a scientific way of thinking about the biological world. For this course, you will demonstrate what you have learned in your biology courses by taking the Biology Field test. You will reflect on what you learned in a research experience you have completed as an undergraduate and generate a substantial product in terms of an oral presentation you will give to the Department or University community, demonstrating higher-level thinking skills in analyzing your project. You will be given feedback on your presentation by faculty and peers. 
*Prerequisite: Junior or senior standing.*

**Business Administration Courses**

*Business administration courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.*

BADM-100 Freshman Experience (1) SI (Day)
This course provides tools for achieving academic success such as time management, listening, note taking, and study methods. Course offerings of the School of Business, course offerings by the University, and International opportunities are discussed. Leadership and ethics are emphasized as important aspects of the successful businessperson. Understanding curriculum guides and scheduling of classes takes place in this class. The internal assessment exam is given. Required of all day freshman business majors.

BADM-110 Introduction to Business (3) SI
An overview of the purpose and operation of a business is covered. The course begins by explaining the role a business organization plays in the economy. Students then are exposed to marketing, operations, human resources, and management. A survey of these functions is provided, along with details of the guiding principles of each. Students will also learn the process by which a firm develops, produces, and distributes its product or service. *(The course is open to non-business majors only.)*

BADM-120 Introduction to Business Finance (3) D
This course is an introductory course for non-majors to introduce the fundamental concepts and tools of corporate finance. Topics covered will include an introduction to financial management, an overview of financial statements and cash flows, valuation of future cash flows including the time value of money, valuing stocks and bonds, the cost of capital, capital budgeting, risk and return, short-term financial management, and long-term financing. *(The course is open to non-business majors only.)*

BADM-230 Business Law (3) A
Instruction in basic legal concepts and terminology; a brief overview of civil procedure; and attention to the substantive areas of business torts, contracts, agency, property, bailments, and personnel law.
BADM-231 Business Communications (3) A
Analysis of and practice in writing letters and memoranda for business. Fundamentals of appearance, tone, and psychology in writing are emphasized with special attention to the job application procedure. (This is not a speech or parliamentary procedure course.) Prerequisite: ENGL-101 and COMP-150 or word processing ability.

BADM-233 Business Law: Partnerships and Corporations (3) A
Study of the law relating to formation and operation of partnerships and corporations. The student learns commercial law through study of the Uniform Commercial Code (sales, negotiable instruments, and secured transactions) and the Bankruptcy Code.

BADM-332 Research/Writing/Project Management (3) A
Application of the principles and mechanics of research and technical writing. Students will conduct a primary or secondary research activity for a client. Skill development will be focused on applied writing skills; research design and development; statistical analysis; research reporting; and planning, implementation, and completion of a report. Prerequisite: ENGL-101, COMP-150. Recommended: MATH-220 or 450.

BADM-350 Career and Employment Strategies (1) A
Course designed to assist students in making the transition from full-time students to full-time professionals by helping them recognize career choice factors, determine personal career options, and understand fundamental aspects of an effective job search, including how to interview successfully. Dress, professional decorum, opportunities, and networking are discussed by faculty and by visiting business professionals. This course is a cooperative effort of the School of Business and the Professional Edge Center.

BADM-420 Special Topics in Business (1–5) D
Individual or group study or project. A project, research paper, seminar or workshop, or small group discussion may be appropriate to meet the needs of individuals who lack one to five hours for a major or minor required for graduation. This course can explore in more detail a topic not offered by the School of Business, substitute for a course requirement if not offered, or be used to explore governmental regulations, establishment of a new business, or other ideas presented by the student. Prerequisite: Senior standing and approval of the dean or the director of Undergraduate Programs of the School of Business required prior to enrollment.

BADM-439 Business Policy and Strategy (3) A
Study of business problems integrating study of accounting, economics, finance, management, and marketing. A computer-oriented management/marketing simulation is used to synthesize learning experiences. The student will be expected to have basic knowledge of the common core in business and these issues will not be taught. Prerequisite: Senior standing.

BADM-450 Internship in Business (1–4) Internship D
Internships are designed to offer students the opportunity to integrate their academic understanding of business concepts with practical experience. These faculty-supervised work experiences allow students to reflect, record, evaluate, and communicate their goals. Students may identify a potential internship on their own, through a School of Business faculty member, or through the Professional Edge
Center. In order for the student to enroll in and earn academic credit for BADM-450, the site and description of the internship must be approved by the School of Business. (Students also may choose to register for a non-credit-bearing internship through the Professional Edge Center.) Normally an internship lasts the equivalent of one regular semester, but occasionally it can be extended to two semesters. Additional information about internships in business is available in the School of Business or in Professional Edge Center. Prerequisite: Approval of the School of Business.

**Business Education Courses**

Business education courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

**BUED-146 Personal Financial Management (3) D**
Introductory, practical course designed to help the student manage personal income. Child care; life, health, and automobile insurance; savings and investments; purchase of real estate; and wills and estate planning are some of the topics covered. The purpose of this course is to prepare business education majors to teach in the high school environment; however, many students find the course useful for everyday life.

**BUED-240 Administrative Office Management (3) D**
A course oriented toward principles of effective office management, with emphasis on communications management, time management, management of personnel, records administration, management of EEO and OSHA issues, office decorum, ergonomics, and ethical issues.

**BUED-243 Secondary Education and Accounting Methods (3) D**
This methods course provides business students the opportunity to gain necessary skills to make the transition from knowing business content to becoming an effective teacher of that content. Topics include: procedures and skills to create learning effective learning environments, basic database management skills, and linear vs. holistic learning profiles. A significant portion of the course is dedicated to developing accounting teaching methods that incorporate critical thinking, the use of spreadsheets, and linking data. Prerequisite: Basic accounting and spreadsheet skills.

**BUED-343 Computer Education Methods (3) D**
This methods course provides students the opportunity to build skills in word processing and in the use of spreadsheets. Students will acquire the advanced content knowledge and skills that are highly demanded for computer educators. This includes but is not limited to worksheets, charts, letters, tables, newsletters, MLA and APA reports, citations, and works cited pages. Teaching methods will be role modeled and practiced as students learn the vast difference between instruction in a computer lab vs. a traditional classroom. Coursework will also include a critical study of the ever-changing demands that technology brings to business education. Prerequisite: Touch keyboarding skills 40 words per minute
Center for Service-Learning & Community Engagement Courses

Service-Learning courses are offered through the Center for Service-Learning & Community Engagement in collaboration with the office of Multidisciplinary Programs. Information about the Center can be found in the section entitled Shaheen College of Arts & Sciences.

CSL-150 Community: Learning and Serving (3) SI
An introductory course in the study of community and community life. The learning is accomplished through both traditional classroom instruction and community-based service-learning endeavors that reinforce the classroom instruction. Basic issues of community are covered in the class, including community theory, community research methods, diversity, community planning, and community organizing and organizations. Service-learning dominates the second half of the class with students placed in agencies in the Southeast Neighborhoods that have long-standing partnerships with the University. Participation in the UIndy Service Learning Expo is required of all students.

CSL-450/SOC-401 Undergraduate Community Project (3–5) SI
A capstone course for the Community Engagement through Leadership & Service Concentration and the Social Sciences Concentration in Community Organizing. The course combines classroom instruction on issues related to community leadership, community planning, community organizing, fundraising, and nonprofit agency management. The goal of the course is to prepare students for a service learning project in collaboration with one of the University’s partnering agencies in the Southeast Neighborhoods of Indianapolis. These service learning projects represent a capstone experience for students, and projects would be required to provide something of lasting value to the community. Participation in the UIndy Service Learning Expo is a requirement of the course.

CSL-480 Topical Seminar in Community Service Learning (3) D
This is a variable topics course; the topic for a given semester is announced prior to registration for the semester, having been selected in response to student needs and wishes. A student may receive credit for more than one CSL topical seminar if a different topic is covered each time. Prerequisite: CSL-150.

Chemistry Courses

Chemistry courses are offered through the Chemistry Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

CHEM-100 Elements of Chemistry and Physics (3) SI
A one-semester integrative chemistry and physics course intended for students who wish to learn fundamental principles relating to the structure of matter, energy transformations, motion of objects and waves, and the forces of nature. Students will learn through active participation in hands-on group activities. While doing the activities the students will demonstrate scientific habits and gain insight into the nature of science. May be taken for chemistry or physics credit. (Cross-listed as
PHYS-100) Four hours of laboratory/group activity per week. Prerequisite: Mathematics proficiency.

CHEM-103 Introduction to Chemistry (3) A
Introduction to both theoretical and practical aspects of general and inorganic chemistry. Three hours of lecture and two hours of discussion per week, which will include active participation in hands-on group activities. Prerequisite: Proficiency in general mathematics and high school-level algebra (equivalent of MATH-105 or above).

CHEM-104 Introduction to General Organic and Biological Chemistry (5) A
Introduction of chemistry as applied to the health-related programs. This survey course covers the fundamentals of general, inorganic, organic, and biochemistry, especially as they apply to biological systems. The overview of general chemistry includes atomic structure, bonding, nomenclature, and reactions, as well as radioisotopes, electrolytes, pH, and buffers in biological systems. The organic chemistry component includes naming, chemical reactions, and properties of organic compounds. Also included is the study of important biological compounds including proteins, lipids, enzymes, and carbohydrates. Four hours of lecture and one two-hour laboratory per week. Prerequisite: Mathematics proficiency.

CHEM-150 General Chemistry I (3) A
Study of the basic principles related to the composition and structure of matter, the changes in matter, and the energy changes that accompany these changes in matter. The course is the first-semester college chemistry course for science students. Three hours of lecture and one discussion per week. Prerequisites: One semester of college chemistry with a grade of C or better, or two semesters of high school chemistry within the past four years with a grade of B or better and demonstrated proficiency in general mathematics, algebra, and trigonometry (equivalent of high school pre-calculus or MATH-180 or above), or consent of instructor. Corequisite: CHEM-151 General Chemistry Lab I.

CHEM-151 General Chemistry Lab I (1) A
Laboratory to accompany CHEM-150 General Chemistry I. Introduces basic laboratory techniques, analysis and presentation of data, and investigations of the nature of matter. Two hours of lab per week. Corequisite: CHEM-150 General Chemistry I.

CHEM-160 General Chemistry II (3) A
Continuation of CHEM-150; builds on the basic principles of chemistry from General Chemistry I by applying these principles to the study of chemical solutions, reaction kinetics, chemical equilibrium, thermodynamics, electrochemistry, and nuclear chemistry. Three hours of lecture and one discussion per week. Prerequisite: CHEM-150 with a C- or better or consent of instructor. Corequisite: CHEM-161 General Chemistry Lab II.
CHEM-161 General Chemistry Lab II (1) A
Laboratory course to accompany CHEM-160. Laboratory experience focusing on properties of chemical solutions, reaction kinetics, chemical equilibrium, thermodynamics, and electrochemistry. Two hours of lab per week. Corequisite: CHEM-160 General Chemistry II.

CHEM-161-IL Investigative Laboratory (1) SII
Laboratory course designed to substitute for unrestricted sections of CHEM-161. The student will use instrumental methods and techniques to solve more in-depth laboratory questions, working on a more independent basis than students in the regular CHEM-161 laboratory course. Prerequisite: B+ or better in CHEM-150 and consent of instructor. Corequisite: CHEM-160 General Chemistry II.

CHEM-210 Environmental Problems (3) D
Study of the pollution of our present environment. The causes of these pollution problems and the damage that is being done are studied. Some solutions to the problems are discussed. May be taken for chemistry or earth-space sciences credit. Three hours of lecture per week. (Cross-listed as ESCI-210.)

CHEM-230 Environmental Chemistry (4) SII
Study of the chemical aspects of the problems that human beings have created in the natural environment. This course will build on the chemistry and problem-solving skills mastered in CHEM-160 to apply knowledge of general chemistry to real-life issues. Chemistry occurring in the air, soil, and water will be studied in detail. Case studies of current and historical pollution events, and methodologies used in environmental chemistry research will be explored and described in written and oral presentations. Students may take this course to fulfill the Writing and Speaking requirement of the General Education Core. Three hours of lecture and one two-hour laboratory per week. Prerequisite: CHEM-160 or consent of instructor.

CHEM-250 Organic Chemistry I (3) A
Detailed study of the structures, properties, naming, stereochemistry, syntheses, and reactions of hydrocarbons, alcohols, and alkyl halides. Three hours of lecture per week. Prerequisite: CHEM-160 with a C- or better or consent of instructor. Corequisite: CHEM-251 Organic Chemistry Lab I.

CHEM-251 Organic Chemistry Lab I (2) A
Laboratory to accompany CHEM-250 Organic Chemistry I. Introduces experimental techniques of organic chemistry emphasizing chemical separations and reactions of alkanes and alkenes and stereochemical modeling. Three hours of lab and two hours of lecture per week. Corequisite: CHEM-250 Organic Chemistry I.

CHEM-260 Organic Chemistry II (3) A
Continuation of CHEM-250; study of the chemistry of aromatic carbon compounds, carbon compounds containing oxygen, and amines. Structures, properties, naming, syntheses, and reactions of compounds and spectroscopic structure determination of each group are discussed. Three hours of lecture week. Prerequisite: CHEM-250 with a C- or better or consent of instructor. Corequisite: CHEM-261 Organic Chemistry Lab II.
CHEM-261 Organic Chem Lab II (2) A
Laboratory to accompany CHEM-260 Organic Chemistry II. Introduction to techniques of modern organic chemistry emphasizing reactions involving alcohols, ketones, carboxylic acids, and their derivatives. Three hours of lab and two hours of lecture per week. Corequisite: CHEM-260 Organic Chemistry II.

CHEM-263 Organic Chem II Spectroscopy Lab (2) SII
Advanced synthesis and spectroscopy laboratory to accompany CHEM 260 Organic Chemistry II. Introduction to techniques of modern organic chemistry emphasizing reactions involving alcohols, ketones, carboxylic acids, and their derivatives. Additionally, this lab will utilize instrumentation (NMR and FTIR) to perform spectral analyses of the synthetic lab products. Three hours of lab and two hours of lecture per week. This course replaces the credit-bearing portion of CHEM 261-Organic Chemistry Lab II (2 credits) as the corequisite Organic Chemistry II laboratory course, and will require approximately 1-2 hours of additional, independent lab work per week. Corequisite: CHEM-260 Organic Chemistry II.

CHEM-280 Intermediate Inorganic Chemistry (4) O
This course provides an introduction to inorganic chemistry with a central focus on periodic trends, molecular structure, bonding theories, and descriptive chemistry pertaining to the main group elements. Three lectures and approximately two to three hours of laboratory work per week. Prerequisite: CHEM-250.

CHEM-301 Chemistry Seminar (1) SII
This course will give students an opportunity to look at chemistry from a broader perspective than is typical in the chemistry content courses. The course will cover recent trends in chemistry research, careers in chemistry and chemistry-related fields, and communication skills in the field of chemistry. One hour per week. Prerequisite: Junior standing.

CHEM-310 Analytical Chemistry (5) SI
Study of the principles involved in the practice and theory of quantitative analysis. Laboratory techniques include gravimetric, volumetric, and instrumental methods of analysis. Three lectures and approximately four to six hours of laboratory work per week. Prerequisite: CHEM-160.

CHEM-320 Biochemistry (3) SI
An introduction to the molecules and chemical reactions that are characteristic of living things. The course will discuss the structures of important biological molecules including amino acids, proteins, nucleic acids, and lipids and metabolic processes that extract and store metabolic energy. Three hours of lecture per week. May be taken for either biology or chemistry credit. (Cross-listed as BIOL-320.) Prerequisites: BIOL-165 and CHEM-250, or consent of instructor.

CHEM-355 Biochemistry Laboratory (1) SII
Practice of the basic laboratory techniques in biochemistry including protein chromatography, electrophoresis, and enzyme kinetics and investigation of the chemical properties of lipids and carbohydrates. Approximately three hours of laboratory per week. (Cross-listed as BIOL-355.) Prerequisite: CHEM-320 or BIOL-320.
CHEM-370 Physical Chemistry I (3) SI
This course provides an introduction to the study of heat and energy and their influence in chemical and physical changes. Particular attention will be given to the concept of chemical equilibrium. Application of mathematical models will be extensive. May be taken for chemistry or physics credit. Three hours of lecture per week. (Cross-listed as PHYS-370.) Prerequisites: CHEM-160, MATH-191, and PHYS-150 or 153, or consent of instructor.

CHEM-375 Physical Chemistry Laboratory (2) SII
This laboratory course is designed to give junior and senior chemistry students practice with designing experiments, collecting and analyzing data, and presenting experimental results in a written format. Students in this course will be required to complete a series of laboratory projects. For each project, the student will design an experiment, complete the experiment, and write a report. Approximately four hours of laboratory per week. This course satisfies the capstone requirement of the general education core. (Cross-listed as PHYS-375.) Prerequisites: CHEM-310, MATH-191, and PHYS-150 or 153, or consent of instructor.

CHEM-380 Physical Chemistry II (3) SII
This course builds on the concepts mastered in CHEM-370 and extends the study of thermodynamics into electrochemistry and the study of chemical kinetics. In addition, the fundamentals of quantum mechanics will be discussed and applied to concepts of chemical bonding and molecular behavior. Three hours of lecture per week. (Cross-listed as PHYS-380.) Prerequisite: CHEM-370 or consent of instructor.

CHEM-390 Molecular Biology (4) O
Study of the molecular processes involved in gene function and regulation. Topics include a detailed study of replication, transcription, and translation with emphasis on protein-nucleic acid interactions and molecular mechanism of mutation and repair. Laboratory exercises will focus on experimental design in molecular biology to isolate and analyze specific DNA sequences and include the use of databases (such as GenBank) to analyze DNA sequences and gene products. Two one-hour lectures and two two-hour labs per week. (Cross-listed as BIOL-390.) Prerequisite: BIOL-225 or BIOL/CHEM-320 or consent of instructor.

CHEM-395 Biochemistry II (3) SII
Study of the anabolic and catabolic chemical reactions used to manufacture, degrade, and/or recycle small molecules in biological systems, with special attention paid to the mechanisms and chemistry of signaling processes within cells used to control and regulate cellular processes. (Cross-listed as BIOL-395.) Prerequisite: CHEM/BIOL-320 or BIOL-330 or consent of instructor.

CHEM-400 Advanced Laboratory Techniques (4) SII/O
Study of advanced chemical separation and analytical techniques and their applications. Two hours of lecture and additional guided independent study and laboratory experience per week. Prerequisites: CHEM-260 and 310, PHYS-160 or PHYS-163, and MATH-190 or consent of instructor.
CHEM-401, 402 Internship in Medical Laboratory Science (16, 16) A
Twelve-month training program conducted by an accredited school of medical technology. Fulfills all the requirements established by the Board of Schools of the American Society of Clinical Pathologists. Cannot be applied to a chemistry major or minor. Prerequisite: Consent of department and admission to an affiliated medical laboratory science program.

CHEM-427/327/227/127 Topics in Chemistry (1–4) D
Study of a particular area of chemistry not covered comprehensively in one of the other advanced courses. A student may receive credit more than once for a topics course if a different topic is covered each time. Prerequisite: Consent of instructor.

CHEM-450 Research in Chemistry (1–4) D
Introduction to the procedures and practices of scientific research. In collaboration with a faculty member, the student is expected to pose a problem, suggest procedures to be used to solve the problem, then work toward its solution. A final written report is required. The course may be repeated, but no more than eight hours of credit for research in chemistry will be awarded. Approximately six hours of work per week per hour of credit. Prerequisites: 16 hours of chemistry and consent of the instructor.

Christian Vocations and Formation Courses
Christian Vocations and Formation courses are offered through the Lantz Center for Christian Vocations and Formation. These courses are open to students of all majors. Additional information about the Center can be found in the section entitled Academic Programs.

CVOC-105-01 Service Learning Placement (1–3)
Christian Vocations Service Learning is a course that uses resources of Christian churches, leaders, and enterprises, as well as other service agencies, to help students integrate their classroom learning with their vocational commitments. Through placements in local agencies/organizations, students learn firsthand how to apply their learning in the context of practical life and work. Regular classroom lecture/discussion sessions allow students to compare their experiences with those of other students at other locations. The course goals include (1) to learn how to apply the disciplines of Christian living to actual contexts of work; (2) to enhance awareness of the concerns of church and community; (3) to develop leadership skills through integration of classroom with Christian service experiences, and (4) to reinforce partnerships between the University community and various Christian congregations and agencies. Satisfactory/Unsatisfactory (S/U) grading. Open to students of all majors.

CVOC-105-50 Appalachia Service Project (2)
Students involved in CVOC-105-50 will be in a service learning experience in Appalachia. There, for five days, the students will have the opportunity to help a family in need of housing improvements. The main objective of this course is to be participating fully in this service project. However, service learning also involves processing and reflection on the context, needs, and motivations for service. During the experience in Appalachia, students will have the occasion to view and consider elements of a clear subculture within the United States.
CVOC-110 Christian Exploration/Formation I (1.5)
This course introduces students to the practice of reflecting on Scripture, common reading and discussion, and the beginning of developing mentoring relationships. Students will be engaged in discerning ways that Christians are called to live in the world. Career counseling, films, guest speakers, journal reflection, and other activities are used to help students explore the multiple ways in which Christians are formed to respond to God’s call. Students will meet with a mentor to explore the connection between faith and work. This course can be taken in conjunction with CVOC-105-01. Satisfactory/Unsatisfactory (S/U) grading. Open to students of all majors. Required for Pre-Theology and Christian Formation concentrations.

CVOC-111 Christian Exploration/Formation II (1.5)
This course allows students to continue the exploration of vocation while becoming familiar with the classic practices of Christian spiritual formation. As students learn about a variety of Christian practices, they will have the opportunity to engage in the actual practice of them both in and out of class. This course takes for granted that service is a universal vocation for all Christians. Therefore, students are required to perform a certain amount of service throughout the semester. This course can be taken in conjunction with CVOC-105-01. Prerequisite: CVOC-110 or with permission from the director of the Lantz Center. Satisfactory/Unsatisfactory (S/U) grading. Open to students of all majors. Required for Pre-Theology and Christian Formation concentrations.

CVOC-210 Christian Exploration/Formation III (1.5)
Students will build on their foundation of exploration and formation by incorporating the practice of discernment and other spiritual practices into a “Rule of Life.” This course will include study and dialogue about the meaning and purpose of such a rule, and students will construct their own rule of life; to ensure that it is grounded in reality, each student will meet with a mentor to talk about its implications for his or her life. This course can be taken in conjunction with CVOC-105-01. Satisfactory/Unsatisfactory (S/U) grading. Prerequisites: CVOC-110 and CVOC-111. Open to students of all majors. Required for Pre-Theology and Christian Formation concentrations.

CVOC-211 Christian Exploration/Formation IV (1.5)
This course is the capstone course for the CVOC curriculum. As such it seeks to draw from all the elements of the previous semesters to provide students with an opportunity to live with their “Rule of Life,” to discern God’s call for the future, and to commit themselves to service. Students will be introduced to a particular paradigm of spiritual mentoring. This course will provide opportunities for specific acts of commitment by encouraging students to discern their role in the CVOC commissioning service as well as their own role as mentors. Prerequisites: CVOC-110, 111, and 210. This course can be taken in conjunction with CVOC-105-01. Satisfactory/Unsatisfactory (S/U) grading. Open to students of all majors. Required for Pre-Theology and Christian Formation concentrations.

CVOC-406 Internship (1-15) A
An opportunity for students who want to work in a closely supervised context of practical experience in a particular field of Christian service. A full-time internship of at least four weeks may be arranged during Semester I or II or in the summer. While the staff of the Lantz Center for Christian Vocations and Formation can assist
students in locating area businesses, schools, churches, and other agencies to arrange possible internships, students are responsible for making these arrangements. Prerequisites: CVOC-110 and 111. May be done in conjunction with CVOC-210 or 211. CVOC Satisfactory/Unsatisfactory (S/U) grading. Open to students of all majors. Required for Pre-Theology and Christian Formation concentrations.

Communication Courses
Communication courses are offered through the Communication Department. Information about the department and its major and minor can be found in the section entitled Academic Units.

Note: The Communication Department offers core courses every year, applied courses every semester, and major and elective courses every two or three years.

COMM-100 Public Speaking (3) A
Emphasizes the development of public speaking skills through concentration on research organization and delivery. Attention is given to classroom speaking, criticism, and listening.

COMM-101 Computer Applications in Communications (3) A
Introduces the capabilities, applications, and use of computers in the field of communication, including the current software packages, explanation of hardware terminology and function, and discussion of the role of computers in new media.

COMM-105 Communication Preparatory (1) Y
Provides the freshman or new major in Communication with orientation to University life and participation in the department and areas of communication study. Focus is on preparation for academic and professional success.

COMM-109 Foundations of Applied Radio & TV (3) A
As a prerequisite to the Electronic Media production and applied courses, the fundamental objective of COMM 109 is for students to learn basic audio and video production techniques. Students will be given assignments in order to learn those techniques. Students will also apply these techniques through on-air performance on WICR-HD3 (UIndy Radio) and through producing a program to air on UIndy TV5.

COMM-110 Applied Radio (1) A
Provides practical experience in working in the University radio station. The student must devote a minimum of four hours per week outside of class to practical work. Classroom instruction orients the student to radio station operation, audio production, and radio announcing principles. Prerequisite: COMM-109.

COMM-111 Applied Television (1) A
Provides practical experience in working in the University television production facility. The student must devote a minimum of four hours per week outside of class to producing video projects. Classroom instruction orients the student to video production and television announcing principles. Prerequisite: COMM-109.
COMM-114 Introduction to the Mass Media (3) SI
Surveys the mass media from historical, theoretical, cultural, and functional perspectives and emphasizes the role of the media system in a democratic society.

COMM-118 Studio Production (3) A
Basic introduction to all aspects of audio and video studio production. Explores theory and practical techniques for recording, digital editing, and post-production. Includes the study and use of television studio equipment, audio consoles and control surfaces, microphones, and both audio and video digital editing software. *Prerequisite: COMM-109.*

COMM-119 Field Production (3) A
Overview of the theory and practice of electronic field production. Examines the technical and aesthetic requirements for the use of audio and video in non-studio applications, such as single camera video production, electronic news gathering, remote broadcasts, and digital editing. *Prerequisite: COMM-109.*

COMM-120 Applied Journalism (1) A
Provides practical experience through work on the university’s student newspaper and its online publication. The student is expected to devote a minimum of four hours per issue to practical work. Areas of experience may include reporting, writing, editing, photography, layout/design, online publishing, business/advertising, and publication management. Initial classroom instruction orients the student to the program.

COMM-130 Speech Team (1) A
Offers students an opportunity to participate in classroom and experiential training in individual speech events. Participants deliver prepared, extemporaneous, and impromptu speeches; perform literature before University or community audiences; and compete in intercollegiate tournaments and festivals. Instruction is of an individual nature and adapted to the student’s previous training and skill level. *Prerequisite: Consent of the instructor.*

COMM-140 Applied Public Relations (1) A
Provides practical experience working in a public relations agency located within the Department of Communication. Concentrates on client service, strategic planning, and creation of communication tactics. The student must devote a minimum of four hours per week to practical work. Classroom instruction orients the student to the program.

COMM-141 Introduction to Strategic Communication (3) SII
The course will survey the nature and applications of principles, theories, concepts, and research of human communication and public relations. Specifically, it will introduce contexts of communication including interpersonal communication, cultural communication, group communication, organizational communication, and public relations.

COMM-150 Digital Multimedia Production (3) D
This course is an introduction to all aspects of digital audio and video production including theoretical, technical, and aesthetic techniques for recording, single-camera video, digital editing, live streaming, and post-production.
Course Descriptions

COMM-200 Business and Professional Communication (3) A
Enables the student to analyze variables that affect communication practices in business, governmental, and professional organizations. Participants experience the common interpersonal, group, and public communication situations found in organizational settings and develop skills in interviewing, conducting meetings, interacting in small groups, and preparing and presenting informative and persuasive speeches. Prerequisites: MGT-281 recommended. Sophomore standing required.

COMM-201 Classroom Communication (3) A
Surveys the communication skills necessary for effective classroom teaching. Emphasis is placed on developing lecture and discussion techniques, improving interpersonal communications, and public speaking skills. Prerequisite: Strongly recommended for education majors only.

COMM-211 Announcing (3) O/SII
Develops vocal skills necessary for on-air radio and television presentation. Studies include use of the human vocal system, analysis of copy, commercial voice-overs, news anchoring, news field reporting, interviewing techniques, and radio announcing. Prerequisite: COMM-109.

COMM-220 Introduction to Media Writing (3) SI
Provides an introduction to the specialized writing styles necessary for writing and reporting in various facets of mass communication. Students prepare articles and other written content for broadcast, print, and online media, including broadcast programs and news publications. Prerequisite: Keyboarding skills strongly recommended.

COMM-221 Copy Editing (3) O/SI
Covers responsibilities of the newsperson as a copy editor. The course typically includes practice in news handling, news judgment, preparation of print and Web copy, and display of news.

COMM-222 Publication Design (3) O/SI
Involves the study of publishing processes, typography, informational graphics, layout, and design as they apply to the printed media and their online publications. Students use current software to create projects such as brochures, ads, logos, newsletters, magazine and newspaper pages, and online publication pages on Macintosh computers. Prerequisite: COMM-101 or equivalent experience.

COMM-223 Photojournalism (3) O/SII
Provides experience in the technical and aesthetic process of conceiving, photographing, and producing photojournalistic materials. The course includes writing and photographic (camera and computer processing) techniques.

COMM-230 Voice and Diction (3) O/SI
Focuses on methods and exercises for voice improvement, including vocal variety, quality, range, articulation, and pronunciation.

COMM-240 Communication Research Methods (3) SII
Examines quantitative and qualitative research methodology pertinent to the field of communication.
COMM-310 Programming (3) O/SII
Examines factors influencing programming decisions for electronic media including radio, television, cable, satellite, mobile and online. Studies characteristics and behaviors of audiences, content creation and scheduling, promotions and marketing theory, quantitative and qualitative research and ratings systems, economic models, and ethical considerations.

COMM-311 Writing for Electronic Media (3) O/SI
Studies the methods used in gathering, reporting, writing, and editing electronic news. The practical use of audio and video equipment used in electronic newsgathering is emphasized. News gathering, reporting, and interviewing assignments are performed in conjunction with the University’s WICR News Department and University of Indianapolis television. Also familiarizes students with other genres in which a writer must be familiar, including radio and television commercials and public service announcements, documentaries, and dramatic scripts.

COMM-313 Television Directing (3) Every 3 yrs., SI
Develops skills in control room, studio, and on-the-scene techniques used in producing and directing the finished television production. The course is concerned with the style, special effects, and artistic decisions used in a television program. Prerequisite: COMM-109.

COMM-314 Communication Technology (3) O/SII
Introduces students to fundamental concepts and emerging trends in voice, video, and data communication. Provides an overview of the technologies involved in telephone, radio, television, cable, cellular, and satellite transmission as well as the application of computer and networking technologies to media and business communication.

COMM-315 Sports Media Production (3) D
This course applies broadcasting and journalistic techniques related to sports coverage in the radio, television, newspaper, and sports information fields. Emphasis is placed on the writing, research, delivery, sport coverage, and marketing of sporting events as well as live game broadcasts including play-by-play, color commentary, and field production. Prerequisite: COMM 109 - Foundations of Applied Radio and Television.

COMM-320 Writing for Print and Online Media (3) O/SII
Involves advanced interviewing and research techniques as well as the reporting and writing of complex stories for general and specialized audiences of print media and their online publications.

COMM-321 Public Relations Principles (3) O/SI
This course introduces the fundamentals and practices of public relations with emphasis in practical, strategic-driven programs of large or small companies and nonprofit organizations. Included in the study is attention to the systematic process of public relations, theories used in public relations, segments within the industry, promotional writing, basic layout and design, and the measurable value of public relations. Prerequisite: COMM-222 strongly recommended.
COMM-322 Public Relations Methods (3) O/SII
This course offers the student an opportunity to put the theory taught in COMM-321, Public Relations Principles, into practice through exercises and skill development. Students also learn to create and employ the tactics used in creating and implementing a public relations campaign. Prerequisite: C- or better in COMM-321.

COMM-323 Magazine and Webzine Writing and Editing (3) O/SII
Focuses on the writing and preparation of copy for magazines and their online publications. Students typically study magazine markets and plan, gather, organize, write, and edit materials for specialized and general circulation magazines and their online publications.

COMM-324 Public Relations Analysis (3) O/SII
Surveys, analyzes, and evaluates various approaches to actual public relations situations, problems, issues, and opportunities. Methodological models are explicaded and applied to such areas as current events, media relations, employee relations, community relations, and crisis communication. Focus is on public relations case studies and problem solving. Prerequisite: C- or better in COMM-321.

COMM-325 Mass Media Ethics (3) SII
Explores the ethics, values, obligations, and standards of the mass media and the principles, responsibilities, and decision-making processes of media professionals, including print and online journalists, broadcasters, photo and video journalists, public relations practitioners, and others. Students consider contemporary media issues, ethical cases, and various influences on media practices.

COMM-330 Group Communication (3) O/SI
Examines communicative interaction in small groups. Students study theory and research in group communication, participate in discussions, and develop skills in small-group transactions. Stress is placed on verbal and nonverbal messages, problem solving, norms, roles, cohesiveness, conflict, and leadership.

COMM-331 Interpersonal Communication (3) O/SII
Provides the student with information, insight, and current theory concerning communication on an interpersonal level. Emphasis is placed on self-awareness, self-disclosure, barriers, supportiveness in verbal transactions, nonverbal messages, message reception, and interpersonal relationships. The student is given the opportunity and specific means for learning and internalizing the relevant concepts through research and experiential vehicles.

COMM-332 Argumentation and Debate (3) Every 3 yrs., SI
Introduces the student to argumentation theory and public debate. Instruction centers on analysis of propositions, reasoning, research skills, discovery and evaluation of evidence, issue development, and techniques of persuasion and argumentation. Participants study and experience various formats for public debate.

COMM-333 Intercultural Communication (3)
Examines the intersections of culture, identity, and communication. Investigates language communities, code switching and multilingualism. Identifies barriers to successful intercultural communication and strategies to navigate them.
COMM-340 Persuasion (3) O/SII
Approaches persuasion from a consumer viewpoint and emphasizes the role of persuasion in a variety of settings, including advertising, politics, and social movements. theories of persuasion, mass media, and attitude change also are surveyed.

COMM-341 Topics in Communication (1–3) Every 3 yrs., SII
Focuses on topics of interest in the communication field that are not offered by the department on a regular basis.

COMM-343 Communication Research Practicum (3) D
Students will be engaged in all phases of a communication research project, including the selection of topic(s), the literature search, data gathering and analysis, the creation of the research report, and the dissemination of the results. The course may be repeated once for credit. Completion of COMM 240 Communication Research Methods (or a similar course with a social-scientific perspective) is highly recommended.

COMM-344 Sports Public Relations (3) O
This course introduces students to the field of sports public relations related to college athletics, professional sports franchises, and individual athletes. Included in the study are organizational communication, media relations, consumer relations, event planning, crisis communication, community relations, and legal ethical issues related to sports public relations. Prerequisite COMM-321 or MKTG-290; Recommended: COMM-322.

COMM-351 Digital Project Management (3) D
This course introduces the multi-faceted world of digital project management and presents best practices, relying on both theoretical and logistical underpinnings of the industry. Communication skills and strategic thinking are highly emphasized.

COMM-352 Digital Storytelling (3) D
This course is designed to give students an understanding of and experience in writing and producing stories for newer forms of media such as the Internet and mobile devices. The course will focus on using digital media tools to create compelling content and translate to different platforms.

COMM-410 Media Sales and Marketing (3) O/SI
Emphasizes the commercially operated media including an examination of marketing, promotion, sales, and advertising concepts, strategies and techniques. Generating revenue is studied in the context of pricing, packaging, inventory management, and budgeting.

COMM-411 Media Genres and Criticism (3) Every 3 yrs., SII
Focuses on developing media literacy, using familiar electronic media genres such as the documentary, situation comedy, the private detective serial, and the soap opera, among others. The course examines media syntax and investigates its impact on the various cultural traditions in society.
COMM-412 Media & Society (3) D
Examines the dynamic relationships among culture, society and the contemporary media system through consideration of sites of cultural production including entertainment industry, news, advertising, and public relations. Addresses the social, cultural and political consequences of the dominance of privately owned corporate media on a democratic society, and the role media play in the production, reception and representation of race, class, gender and sexuality.

COMM-413 Political Communication (3) D
This course introduces students to strategic messaging in the contemporary political process. Examines communication theory in persuasion and public opinion, media practices, the journalistic enterprise, advertising, institutions that impact (and are impacted by) the political process, citizenship, and the public sphere.

COMM-415 Gender and Identity in Communication (3) D
This course examines contemporary cultural issues related to sports and the media including the politics of race and gender, fan identities, and cultural ideals surrounding the athletic body. Included in the study is how these issues are suppressed, revealed, and struggled over within sports mediums including television, film, music, news, advertising, and new media.

COMM-420 Media Management (3) O/SI
Acquaints the student with the principles and practices associated with successful management in the media industry. Management and leadership are explored from the perspective of technical, social, and practical skills in a dynamic media marketplace.

COMM-421 Information Gathering and Dissemination (3) O/SII
Introduces student to techniques for gathering and using information in a media environment. Topics include computer-assisted reporting, journalistic source development, investigative reporting, access laws, government information, and the legal and ethical responsibilities associated with information gathering.

COMM-431 Gender and Communication (3) O/SI
Explores the complex relationships among women and men and communication from theoretical and practical perspectives. Differences in communication patterns of men and women are studied in a variety of contexts.

COMM-432 Public Address and Criticism (3) Every 3 yrs., SII
Examines the role of public discourse in American society. Students will read, listen to, and watch great speeches that have had an impact on society. Emphasis will be placed on rhetorical theory and criticism.

COMM-440 Communication Law (3) A
Provides students an overall understanding of communication law. History, evolution, and current state of First Amendment, journalism, broadcast, advertising, public relations, and communication technology law. Intellectual property, defamation, freedom of information access, and privacy rights are emphasized. Prerequisite: Junior or senior standing.
COMM-441 Senior Project (1-3) A
Serves as the culminating experience of the Communication curriculum. Students will compile a portfolio, make an oral presentation, and plan and execute an event to the approval of a jury of Communication faculty. Prerequisite: Senior standing.

COMM-442 Communication Internship (2-8) A
Places student in a professional environment suitable to the development of communication skills. Length of time is commensurate with the number of academic credits. Supervision of the students is the responsibility of the on-site supervisor. A grade of S or U is assigned. Prerequisites: Junior or senior standing, 2.3 cumulative GPA, 2.5 GPA in major, and 18 hours of coursework in major, including at least three hours of applied communication courses.

Community Leadership & Engagement Courses
Community leadership and engagement courses are offered through the School for Adult Learning. Information about the school can be found in the section entitled Academic Units.

CLE-100 Introduction to Global Foundations in Community Leadership (3) A (Accelerated)
Introduction to Global Foundations of Community Engagement This course will serve two important functions. It will provide a beginning theoretical foundation for the Community Leadership and Engagement program by helping students understand why and how engagement is undertaken by communities, cities, regions, and nations, and the impact increased engagement is expected to have when addressing the complexities of modern life. The course will focus on the development of an appreciation of interactions, flows of people and resources, cultures and social justice, and differing approaches to engagement across world regions.

CLE-200 Community Leadership & Engagement Theory, Concepts & Issues (3) A (Accelerated)
This course will support the development of an appreciation of the processes, approaches, and structures, available to bring about effective community-based outcomes. It will include a survey of contemporary approaches and emerging models for engaging neighborhoods and communities.

CLE-210 Tools & Technology for Community Leadership & Engagement (3) A (Accelerated)
This course will support the understanding of a variety of available tools and technologies critical for effective community engagement interventions. The course will focus on the development of interpersonal tools as well as both low-tech and technology-based approaches for community engagement.

CLE-310 Fundamental Development of Community Organizations (3) A (Accelerated)
This course will explore various means and implications for funding community engagement initiatives. The course will provide an understanding of the philosophy and practice of fund development as it relates to community engagement. Students
will have an opportunity to prepare and evaluate funding proposals and develop related budgets and plans for implementation and evaluation.

**CLE-320 Social Entrepreneurship (3) A (Accelerated)**
This course focuses on the basic principles of social entrepreneurship within the context of neighborhood and community development. The course will present emerging social entrepreneurial models that blend business development and community engagement, such as cultural entrepreneurialism and social enterprise. The course will explore structures that are emerging as this blending occurs, such as public/private/philanthropic partnerships and micro-investing.

**CLE-420 Community Leadership & Engagement Studio (3) A (Accelerated)**
The Community Leadership and Engagement Studio will provide students the opportunity to begin to apply the concepts that have been presented during preceding course work. During the Community Leadership and Engagement Studio course, students will identify areas/issues of personal interest within the Community Leadership and Engagement domain. Students will then identify organizations in the local community that address these areas/issues and begin to develop the foundation for a project that will be executed in the remaining courses of the program.

**CLE-450 Community-Based Research and Data (3) A (Accelerated)**
This course will focus on approaches to research and the use of data specific to community-based engagement work. This will include participative action research, data/evidence-based decision making, and community based assessment methodologies. It will also include a focus on outcomes/program evaluation and on the graphic communication of data. Students will develop a research proposal to meet the needs of a local community organization. The proposed research project will be completed in CLE-480.

**CLE-480 Excellence in Community Leadership & Engagement (3) A (Accelerated)**
This capstone course gives students an opportunity to complete an individual project in which they will engage key stakeholders around a critical community issue related to their area/issue of personal interest. The capstone project also will offer an opportunity for students to synthesize their learning and evaluate the outcomes of their project. Students conduct a community based research project based upon work in CLE 420 and 450 and will deploy and demonstrate their ability to work as on-the-ground professionals in community based activities and organizations.

**Computer Courses**
The following computer courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

**CCNA-101 Cisco Networking Academy I (4) D**
This course focuses on learning the fundamentals of networking. In this course, you will learn both the practical and conceptual skills that build the foundation for understanding basic networking. First, you will examine human versus network communication and see the parallels between them. Next, you will be introduced to
the two major models used to plan and implement networks: OSI and TCP/IP. You will gain an understanding of the “layered” approach to networks and examine the OSI and TCP/IP layers in detail to understand their functions and services. You will become familiar with the various network devices, network addressing schemes and the types of media used to carry data across the network. Prerequisite: CIS-151.

CCNA-102 Cisco Networking Academy II (4) D
The primary focus of this course is on routing and routing protocols. The goal is to develop an understanding of how a router learns about remote networks and determines the best path to those networks. This course includes both static routing and dynamic routing protocols. By examining multiple routing protocols, you will gain a better understanding of each of the individual routing protocols and a better perspective of routing in general. Learning the configuration of routing protocols is fairly simple. Developing an understanding of the routing concepts themselves is more difficult, yet is critical for implementing, verifying, and troubleshooting routing operations. Prerequisite: CCNA-101.

CCNA-201 Cisco Networking Academy III (4) D
The primary focus of this course is on LAN switching and wireless LANs. The goal is to develop an understanding of how a switch communicates with other switches and routers in a small- or medium-sized business network to implement VLAN segmentation. This course focuses on Layer 2 switching protocols and concepts used to improve redundancy, propagate VLAN information, and secure the portion of the network where most users access network services. Prerequisite: CCNA-102.

CCNA-202 Cisco Networking Academy IV (4) D
The course introduces WAN converged applications and quality of service (QoS). It focuses on WAN technologies including PPP, Frame Relay, and broadband links. WAN security concepts are discussed in detail, including types of threats, how to analyze network vulnerabilities, general methods for mitigating common security threats, and types of security appliances and applications. The course then explains the principles of traffic control and access control lists (ACLs) and describes how to implement IP addressing services for an Enterprise network, including how to configure NAT and DHCP. IPv6 addressing concepts are also discussed. Prerequisite: CCNA-201.

COMP-150 Microcomputer Applications (3) A
Course designed to introduce the student to Microsoft Word, Excel, Access, and PowerPoint, as well as the Internet. A Windows (Microsoft) environment is used. A counterpart course may be taught on the Macintosh.

COMP-170 Advanced Spreadsheets (3) A
This course will teach students how to utilize advanced functions of Microsoft Excel so that they can transform and manipulate data, perform complex analysis using Excel’s built-in functions, and present that data in meaningful forms. Prerequisite: COMP-150 or 160 or permission of instructor.
Computer Information Systems Courses

The following computer information systems courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

The following courses include those for the associate degree in information systems and applied business analytics and the bachelor’s degree in information systems and applied business analytics. All courses below require access to hardware/software outside of class time.

CIS-151 Introduction to Information Systems & Applied Analytics (3) A
The purpose of this course is to provide an overview of information systems and the field of analytics. It is a survey course looking at a number of topics in information systems and analytics. Much of the semester is spent reviewing the interrelationships between the organization and information systems. A number of information systems terms are defined and explained over the semester. Prerequisite: COMP-150 preferred.

CIS-153 Visual Basic (3) D
Introduction to programming applications for Windows using event-driven and object-oriented techniques. The course is taught using Microsoft’s Visual Basic. Prerequisite: CIS-151 (preferred).

CIS-255 C/C++ Language Programming (4) D
This course provides an introduction to computer programming using the C/C++ programming language. A previous course in computer programming will be helpful but is not required. C++ has both structured and object-oriented features and has many low-level features for a high-level language. These help make the language a popular choice for developing many types of programs. This course will help the student understand fundamental programming concepts and develop good programming style (methodology). May be taken for credit in either the Mathematics Department or the School of Business. Prerequisite: CIS-151 (preferred).

CIS-258 Web Design (3) D
This course provides an introduction to website design and development. It focuses on the development of websites for business purposes. The development of the websites will be performed using XHTML along with other development tools as needed. Prerequisite: CIS-151 (preferred).

CIS-262 Database Programming (3) D
This course looks at the use of a database environment. The emphasis of the course is on the use of the application to support an organization. Prerequisite: CIS-151.

CIS-351 Information Systems Management & Unstructured Data (3) SII
This course provides an understanding of organizational systems, planning, and the decision-making process. It also discusses how information is used for decision support in organizations as well as examining how non-structured textual information can be analyzed and used. It details the concepts of information systems for competitive advantage. Prerequisite: CIS-151.
CIS-352 Business Intelligence (3) SI
This course is an introduction to Business Intelligence. Business Intelligence refers to the use of computers to analyze complex information about an organization and its competitors for use in business planning and decision making. The objective is to create more timely and higher-quality input to the decision process. Prerequisite: CIS-151.

CIS-353 Programming Languages (3–4) SII
This course involves the study of a programming language. The actual language (e.g., COBOL, SQL, and Excel) typically will vary from semester to semester. This course is repeatable for credit as long as the course covers a different language. Prerequisite: CIS-151 and as needed depending on the specific language taught.

CIS-354 Database Systems (3) A
This course is designed to help a student develop an understanding of various database systems in use today. The class will consist of both conceptual and hands-on use of database systems. Prerequisite: CIS-151.

CIS-355 System & Process Analysis (3) SI
This course provides an understanding of the system development and modification process. It enables students to evaluate and develop the proper approach to model a variety of systems as well as the proper system development methodology. It emphasizes the use of research methods to gather the needed requirements from the users along with detailing various structured approaches to document the requirements. Various software packages will be used to supplement the conceptual material. Prerequisite: CIS-151.

CIS-356 Database Design (3) SII
This course covers information systems design and implementation within a database management system environment. Students will demonstrate their mastery of the design process acquired in earlier courses by designing and constructing a physical system using database software to implement the logical design. Various software packages will be used to supplement the conceptual material. Prerequisite: CIS-151.

CIS-359 Information Systems Project (3) SI
This course covers system analysis, physical design, programming, testing, and implementation of a database system using the skills learned in previous courses. This course is a continuation of the System Analysis course and the Database Design course. Various software packages will be used to supplement the conceptual material. Prerequisite: CIS-351, 352, 355 and 356.

CIS-360 Introduction to Computer Forensics (3) D
This introductory course familiarizes students with basic computer forensic, collecting the evidence, forensically sound evidence collection, remote investigations and collections, forensic investigation techniques, forensics software and e-mail analysis. A section on the ethics of computer forensics and on the preparation and analysis of investigation results is also included. Prerequisite: CIS-151.
CIS-420 Special Topics in Information Systems (topic to be determined) D
This is a special topics course in information systems, and prerequisites and credit hours are to be determined based on the specific material to be covered. This course is repeatable for credit as long as the course covers a different subject. Prerequisite: CIS-151 and as needed depending on the specific language taught.

CIS-453 Software Engineering (3) D
This course is designed to provide an understanding of software development and management. Various techniques will be examined to track productivity along with increasing productivity. Prerequisite: CIS-151.

CIS-455 Internship in Information Systems (1–4) D
This course allows students to earn credits for work being performed in an internship. Considerable documentation and contact with the faculty is required. If a student wants to take this course for credit only, approval of an information systems faculty member is required prior to taking this course. If the student wishes this course to substitute for another information systems class, approval of the director of undergraduate business programs is required. Minimum GPA requirements apply. Prerequisite: CIS-151.

CIS-456 Information Systems Senior Seminar (3) SII
This is the senior capstone course, which covers the factors necessary for successful management of system development or enhancement projects. The focus is on management and development for enterprise-level systems. To take this course, students must be seniors and have completed most of the other information systems classes. Prerequisite: CIS-351, 352, 356, 359 (may be taken concurrently). Senior Standing only.

Computer Science Courses
Computer science courses are offered through the R.B. Annis School of Engineering. Information about the school and its majors and minors can be found in the section entitled Academic Units.

CSCI-110 Introduction to Software Development for Digital Media (3) D
This course introduces students to the elements of software development using Javascript and HTML, with an eye toward applications for digital media.

CSCI-130 Microcomputer Applications (3) D
An introduction to microcomputer-based applications, including an overview of the history, societal impact, hardware, operating systems, and terminology of computing. Students will gain knowledge of and experience with commercial software including word processing spreadsheets and databases; coverage will include communications and graphics software. Does not count toward a mathematics major or minor.

CSCI-132 Software Applications for the Sciences (2) D
An introduction to microcomputer-based applications in the sciences, including an overview of computer history and the terminology of computing. Emphasis will be placed on the use of spreadsheets and word processing as tools for analyzing scientific data and for writing technical reports. Does not count toward a mathematics major or minor.

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CSCI-155 Introduction to Programming Using C++ (4) A
This course provides an introduction to computer programming using the C/C++ programming language. A previous course in computer programming will be helpful but is not required. This course will help the student understand fundamental programming concepts and develop good programming style (methodology). May be taken for credit in either the Mathematics Department or the School of Business. (Cross-listed as CIS-255.) Prerequisites: MATH-105 with a grade of C- or better, or consent of the department.

CSCI-156 Introduction to Object-Oriented Programming (4) SII/D
This course is a continuation of CSCI-155. Emphasis will be placed on the use of classes and other advanced features of the C++ programming language. Topics include object-oriented system design, inheritance, polymorphism, operator overloading, templates, exception handling, and abstract data structures. Prerequisite: CSCI-155 with a grade of C- or better.

CSCI-230 Computer Architecture (4) SI/D
This course is an introductory course in computer architecture. Students will learn about digital logic, the classical von Neumann model, machine-level representation of data, assembly language programming, and related architectural topics. Students will acquire an understanding of a computer system’s functional components and their characteristics, interactions, and performance. Prerequisite: CSCI-155 with a grade of C- or better.

CSCI-240 Data Structures and Algorithms (4) SI/D
This course will teach the student to use the classical abstract data structures (including linked lists, stacks, queues, and trees). These tend to play important roles in almost all large and important software systems. The student also will study sophisticated algorithms, many of which rely heavily on recursion, and learn how to measure and compare their computational complexity. These include, for instance, advanced searching and sorting techniques. Other topics include the role and the use of the containers and algorithms in the Standard Template Library (STL). Prerequisite: CSCI-156 with a grade of C- or better.

CSCI-310 Graphical User Interfaces (4) SI/O
A survey of some of the more modern popular programming languages, libraries, and software development tools that are used to implement programs featuring graphical user interfaces. Fundamental programming skills and understanding of the object-oriented programming paradigm are prerequisite. Students will design and implement programs in languages that feature object-oriented interface components. Prerequisite: CSCI-156 with a grade of C- or better.

CSCI-340 Computer Algorithms (4) SII/O
This course is an introduction to the theory of computer algorithms. We will examine different types of computer algorithms, such as divide-and-conquer, greedy, backtracking, and dynamic programming. In addition, we will study the running time and complexity of some computer algorithms. Prerequisite: CSCI-240 with a grade of C- or better, or consent of the department.
CSCI-350 Programming Languages (4) SI/O
Fundamental topics in this course will include language, syntax, semantics, and software design. This will include the study/use of state diagrams and BNF grammars. The course will compare and contrast common computers’ programming paradigms from this point of view. More emphasis will be placed on using the object-oriented programming paradigm. Students will construct a large software project. 
Prerequisite: CSCI-240 with a grade of C- or better, or consent of the department.

CSCI-365 Game Programming (4) SI/D
This course provides students with a foundation in the theory of game programming, including collision detection animation, and bitmapped graphics. Students will apply these elements to create their own computer games. Prerequisite: CSCI-156.

CSCI-370 Database Systems (4) SII/O
Students will learn the principles of database systems and database design as well as practical modeling and querying techniques. Emphasis will be placed on the relational approach. Related topics include the E-R Model, schema refinement, SQL programming, Internet databases, file organization and indexing, concurrency, data integrity, and security. Prerequisite: CSCI-240 with a grade of C- or better.

CSCI-380 Scientific Computing (4) D
This course is an introduction to scientific computing and numerical analysis. It introduces students to interpolation and approximation concepts, as well as numerical solutions of systems of linear equations, iterative methods, error analysis and numerical solutions of initial-value problems for ordinary differential equations. Prerequisite: CSCI-156 and MATH-191 with a grade of C- or better.

CSCI-390 Internet Programming (4) D
The primary focus of this course is Internet Programming. This course will introduce students to different Internet programming languages, such as HTML, Java, and JavaScript, designed for programming on the World Wide Web. Prerequisite: CSCI-156 with a grade of C- or better, or consent of the department.

CSCI-400 Topics in Computer Science (2-6) D
Special topics in computer science. Prerequisites and credit hours determined by the instructor/topic.

CSCI-420 Computer Networks and Distributed Computing (4) SII/O
This course is about the design, structure, and use of computer networks. The student will learn about hard-ware and software used to build computer networks. Topics include parallel computing, messaging, structural alternatives, communication protocols, and security. Different network architectures will be compared. Prerequisite: CSCI-240 with a grade of C- or better.

CSCI-421 Data Encryption and Network Security (4) SII/O
This course is an introduction to data encryption and network security. It will provide an in-depth study of some classical encryption algorithm and their implementation. Prerequisite: CSCI-240.
CSCI-430 Software Engineering (4) D
The student will learn about methods and tools that are commonly used to assist in the development and maintenance of large software systems. Topics include the software life cycle, product documentation, testing methods and strategies, tools (CASE), end-user considerations, software reuse, and project organization. This course involves a major software project in software design, providing one or more solutions to significant problems (posed by corporate partners, if possible). Students, working in teams, will develop system specifications, design documentation, program code, test documentation, and other deliverables. Prerequisite: It is advised that the students take this course during their senior year.

CSCI-450 Computer Graphics (4) D
This course is an introduction to computer graphics. It will examine two-dimensional graphics methods and transformations. Three-dimensional graphics methods, including transformations, viewing geometry, object modeling, and interactive methods also will be presented. Prerequisite: CSCI-156 with a grade of C- or better, or consent of the department.

CSCI-491 Computer Science Capstone (4) SII
This course is the senior capstone experience for computer science majors. After the completion of all upper-level computer science courses, a CSCI major chooses an area in which he/she wants to do more research and develop a computer project. Upon completion of a computer project the student is required to write a research paper describing the project and the research work. Prerequisites: CSCI-350 and 420.

CSCI-492 Research in Computer Science (1-3) D
Research project in computer science under the guidance of a faculty member. The student formulates a chosen problem, reviews the literature related to the problem, analyzes the problem, and interprets the results. Depending on the nature of the project, the student may produce some software. A final written report and an oral presentation are required. The course may be repeated, but no more than eight hours of credit for research in computer science will be awarded. Prerequisite: CSCI-240 with a grade of C- or better or consent of the department.

Criminal Justice Courses
Criminal Justice courses are offered through the Department of Criminal Justice. Information about the department and its majors and minors can be found in the section entitled Academic Units.

CRIM-110 Introduction to Criminal Justice (3) SI
Study of agencies and processes involved in the administration of criminal justice: the legislature, the police, the courts, the prosecutor, corrections, probation and parole, and juvenile justice.

CRIM-120 Trends in Corrections (3) SII
Analysis and evaluation of contemporary correctional systems in the U.S. and abroad. Discussion of recent research concerning correctional institutions and the various field services, with a focus on comparative and global corrections.
CRIM-121 Corrections Service Learning Lab (1) SII
The course is designed to provide students with the opportunity to become involved in the work of a local community organization that seeks to alleviate social problems associated with crime and delinquency. Students spend 24 hours working at a local organization over the course of the semester and keep a journal of their experience, relating it to course material. Corequisite: CRIM-120.

CRIM-200 Criminology (3) A
Study of the nature, extent, and theories of crime. Students are introduced to the attempts to control crime, to the judicial process, and to the attempts to reform the criminal. Prerequisite: SOC-101 or SOC-103.

CRIM-210 Criminal Investigation (3) SII
Theory of investigation, crime scene procedures, interviews, interrogations, surveillances, and sources of information; collection and preservation of physical evidence; investigative techniques in specific crimes.

CRIM-220 Criminal Evidence (3) SII
Basic rules of evidence as they apply in criminal justice from the collection of evidence through presentation in court, types of evidence, admissibility of evidence, and searches and seizures.

CRIM-230 Criminal Law (3) I
Theory, history, purpose, and philosophical concepts of criminal law; role of the Constitution and Supreme Court in criminal law; statutory considerations; and rights and responsibilities of officers in enforcing criminal laws.

CRIM-240 Constitutional Rights of Inmates (3) SII
In-depth examination of legal issues, constitutional challenges, developments, and decisions that affect the day-to-day operations of correctional institutions and jails. Specific issues related to inmates’ rights and the management of inmates are examined. Emphasis is placed on understanding the legal and administrative bases that guide correctional professionals.

CRIM-250 Gender Issues in Law and Society (3) A
The course examines the evolution of gender issues, from traditional roles to nontraditional roles, from an historical context to modern-day contemporary life. Gender is examined critically and reviewed at the macro and micro levels of various components of society with a focus on gender status, relationships, and treatment in different institutional, organizational, and group settings. Comparing the role of gender and its evolution in the United States to that of other countries, the focus will be on emerging and continuing issues of gender. (Cross-listed with SOC-250.)

CRIM-310 Juvenile Delinquency (3) A
The juvenile justice system, including theory, administration, treatment, confinement, community resources, and the roles of police, correction facilities, and the juvenile court. Prerequisite: SOC-101 or SOC-103.
CRIM-330 Custody and Treatment (3) SI
Introductory survey of philosophy, theory, and practice involved in custody and treatment of convicted offenders, supervision of inmates, and best practices. Appraisal of correctional treatment on post-correctional behavior with a focus on prisoner reentry.

CRIM-331 Corrections Service Learning Lab (1) SI
The course is designed to provide students with the opportunity to become involved in the work of a local community organization that seeks to alleviate social problems associated with crime and delinquency. Students spend 24 hours working at a local organization over the course of the semester and keep a journal of their experience, relating it to course material. Corequisite: CRIM-330.

CRIM-340 Police Administration and Management (3) SI
Course designed to provide a broad understanding of the police administration and management processes. Will include a detailed overview of the goals, standards, theories, and values needed by modern police administrators. Issues concerning cultural, social, economic, and environmental changes and challenges will be explored. Prerequisite: Junior standing in criminal justice major or permission of instructor.

CRIM-350 Internship in Criminal Justice I (1–8) A
Professional work experience in the field of criminal justice. The purpose of the practicum is to provide an opportunity for an advanced student to obtain a professionally supervised work experience in law enforcement, corrections, or related areas. Prerequisites: Junior or senior standing; major in Criminal Justice; GPA of 2.3 or above; or consent of instructor.

CRIM-360 Internship in Criminal Justice II (4–8) A
Second or third field placement designed to broaden the student’s field experiences. Prerequisites: Junior or senior standing; major in Criminal Justice; GPA of 2.3 or above; or consent of instructor.

CRIM-370 Crime Prevention (3) II
This course introduces students to crime prevention through the rational choice and routine activities theories of crime. Students will learn to identify locations at risk of criminal activity, the qualities of items making them attractive targets for thieves, and how daily patterns of living increase or decrease the probability of criminal activity. Students will then explore strategies for preventing crime through environmental design, target hardening, and situational crime prevention.

CRIM-390 Understanding Addictions (3) D
This course studies the dynamics of the addictions process including causation, symptoms, consequences, prevention, and treatment options. Emphasis is on study of chemical dependency and the abuse of illicit chemicals; other addictive behaviors also are explored. (Cross-listed as SOWK-390.)

CRIM-420 Academy Internship (12) D
Professional certification as Law Enforcement Officer after successful completion of 15-week, in-house Basic Training course at the Indiana Law Enforcement Academy
in Plainfield, Indiana. Limited to senior Criminal Justice majors with a concentration in Law Enforcement, bachelor’s degree track, who have completed all University core and degree major course requirements. **Prerequisite: Department approval as well as final approval based on comprehensive background investigation by an accredited law enforcement agency.**

**CRIM-425 Law and Society (3) SI**
Examines the functions of law, the impact of law on human relationships within society, intended consequences of laws, and the role and impact of legal processes, institutions, and practitioners in national and international contexts. *(Cross-listed as SOC-425.)*

**CRIM-430 Topical Seminar: Criminal Justice (3) D**
Study of a particular area of criminal justice not covered comprehensively in one of the other advanced courses. The topic for a given semester is announced prior to registration for the semester, having been selected in response to student needs and interests. A student may receive credit more than once for CRIM-430 if a different topic is covered each time. **Prerequisite: CRIM-110 or consent of instructor.**

**CRIM-435 Loss Prevention Accreditation (2) D**
This course utilizes the Loss Prevention Qualified (LPQ) accreditation curriculum to introduce students to the fundamentals of business operations, shrinkage awareness, and workplace safety concerns to provide a foundation for a career in loss prevention. Students will explore central concepts and practices comprising the essential tools for growth as a loss prevention professional, including External and External Theft, Interviewing as a Tool, Civil Recovery Restitution, Physical Security, Crisis Management and Emergency Response, and more. At the end of the semester, students will take the LPQ accreditation exam for LPQ accreditation. **Prerequisite: Junior or senior standing. Must have a loss prevention concentration or minor or instructor permission.**

**CRIM 440: Criminal Justice Capstone (3) SI**
This class is a culminating experience allowing students to apply their criminal justice knowledge to a real-world crime problem, reflect on their personal and career aspirations, and build their job-seeking skills. Students will apply the knowledge they have gained through their prior criminal justice coursework to identify, research, and address a crime problem in the local community, producing an intervention/prevention guide for a local audience. Students will also investigate career opportunities in criminal justice, reflect on their own personal and professional values and goals, and create a professional resume. **Prerequisite: Junior or senior standing; criminal justice majors only.**
Design Courses
Design courses are offered through the Art and Design Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

DSGN-101 Introduction to Creative Digital Practices (3) A
Introduces the capabilities, applications, and uses of computers for artists and designers. Includes an introduction to the current basic software used in the field of art and design.

DSGN-170 Visual Communication Design Principles (3) SII
Introduction to the language and processes of effective visual communication design. Exploration of design principles as they apply to visual communications and problem solving using both traditional media and computer applications. The course also includes information on visual research and development of ideas. Prerequisite: DSGN-101 and ART-120 or consent of instructor.

DSGN 250 Typography (3) SI
Introduction to typography; including an introduction to basic terminology, factors of legibility, and visual/verbal integration. Prerequisite: DSGN-170.

DSGN-275 Visual Communication Design I (3) SI
Students will use design processes and design thinking to solve communication problems. This course helps students gain skills in visual/verbal integration, clear communication and the ability to generate a variety of concepts in response to project requirements. Typography and image-making are explored using industry standard computer applications. Prerequisites: DSGN-170 or consent of instructor.

DSGN-295 Visual Communication Design II (3) SII
Further investigation of concepts and practices of typography and visual communication design in more complex contexts. Students will strengthen composition and form making skills while implementing semiotic and design thinking strategies of instructor. Prerequisites: DSGN-275 or permission of instructor.

DSGN-297 Sophomore Portfolio Review (NC) SII
All design majors are required to present a portfolio of their work to a committee of the faculty after completing 45 hours. Students will receive a satisfactory grade or an unsatisfactory grade. Any student receiving an unsatisfactory grade may be required to correct deficiencies in the portfolio with additional coursework.

DSGN-298 Graphic Production (3) SII
Study of prototyping and production techniques with projects that emphasize professional preparation of artwork and graphic design. Prerequisite: DSGN-250 and DSGN-275 or consent of instructor.

DSGN-331 Creative Strategies (3) SI
This course emphasizes the design process and creative strategies as they apply to branding and visual identity. Prerequisites: DSGN-250 and 275.
DSGN-371 Introduction to Web Design (3) SI
Introduction to Web Design explores the World Wide Web through its history, uses, impact on society, and current trends. Prerequisites: DSGN-101, 170, 250, and 275 or permission of instructor.

DSGN-372 New Media Design (3) SII
A continuation of DSGN-371 with greater emphasis on creative expression and sophisticated manipulation of interactive media. Prerequisite: DSGN-371.

DSGN-375 Portfolio and Internship Preparation (2) SII
Prepares visual communication design majors for DSGN-420, Internship in Visual Communication Design. Résumé preparation, interviewing skills, portfolio reviews, and options on the graphic organization of portfolios will be included. Prerequisites: DSGN-250 and 275 or consent of instructor.

DSGN-381 History of Graphic Design (3) SI
Survey of visual communication design history starting with the invention of writing and moving through contemporary graphic design. Emphasis is placed on the period from the Industrial Revolution to the present.

DSGN-392 Applied Visual Communication Design (3) SII
Provides practical experience working in a design studio within the Department of Art and Design. This course focuses on client interaction, problem analysis, design solutions and implementation. Prerequisite: DSGN-331 or consent of instructor.

DSGN 425 Visual Communication Design III (3) SI
Advanced investigation of concepts in visual communication design. Students explore strategies of semiotics and creative problem solving through design thinking including discovery, ideation and experimentation. Emphasis will be placed on expressive and creative communication and portfolio development. Prerequisites: Senior standing with a VCD major.

DSGN 420 Internship in Visual Communication Design (1–4) A
Off-campus studio experience that provides students with firsthand application of visual communication principles and skills; a B average in art classes is required. Prerequisite: DSGN 298, DSGN 375 and consent of Instructor.

DSGN 431 Senior Design Studio I (3) SI
Capstone senior experience in which students are required to submit a proposal for a major project. The project must support research and be reviewed and approved by faculty. Prerequisite: DSGN-331 and 392 or consent of instructor.

DSGN 432 Senior Design Studio II (3) SII
Senior capstone experience. Students will finalize and make revisions to major project started in Semester I, including creating process documentation and planning and executing an exhibition. This course will help students to sharpen their portfolios and get them ready to compete on the job market. Prerequisites: All VCD major art classes including DSGN-371 and 372, or permission of instructor.
DSGN-470 Senior Portfolio (1) A
Capstone senior experience in which the student is required to develop a professional portfolio based on the requirements defined by his or her specific major or discipline and mount an exhibition of representative work. Bachelor of Science in Visual Communication Design students must present a portfolio of their work.

Digital Media Management Courses

*Digital media management courses are offered through the School for Adult Learning. Information about the school and its majors and minors can be found in the section entitled Academic Units.*

DMM-110 Introduction to Digital Media Management (3) A (Accelerated)
This introductory course addresses the principles and current trends of social and digital media management, covering a broad range of topics planning to execution to measurement.

DMM-140 History of Social and Digital Media (3) A (Accelerated)
This course investigates the history of social and digital media, covering a broad range of topics from the time Tim Berners-Lee managed to connect hypertext technology to the Internet up until today.

DMM-210 Digital Journalism and Communication (3) A (Accelerated)
New media mindsets with an eye to writing for the Web and how they relate to blogging, digital photography, audio, audio slideshows, video, Web design, and social networking in online communication are examined in this course.

DMM-220 Social Listening and Reputation Management (3) A (Accelerated)
This course examines effective listening techniques and the online reputation management skills necessary in today’s “always on” business environment.

DMM-230 Online Interpersonal Community (3) A (Accelerated)
This course examines the psychology of online communication, how “normal” behavior differs from the pathological with respect to Internet use, how people behave on the Internet compared to offline, why they behave thusly, and what implications this has for the digital media manager.

DMM-310 Content Management and Content Management Systems (3) A (Accelerated)
This is a course in content management, content management systems, and content strategy, covering a broad range of topics from the discovery and creation of quality content to strategy and success in content management. Content management systems are designed to store, organize, create, publish, process, and power all of one’s online endeavors.

DMM-320 Social CRM in Digital Media (3) A (Accelerated)
This course examines customer relationship management (CRM) as it applies to social and digital media, a widely implemental model for managing a company’s interactions with customers, clients, and sales prospects. It involves using technology to organize, automate, and synchronize business processes—principally sales activities, but also those for marketing, customer service, and technical support.
DMM-330 Marketing Research, Metrics, Analytics, and Measurement (3) A (Accelerated)
Tools, applications, and methodology used in evaluating and measuring the results of
digital and social media management efforts, with a concentration in improving social
media ROI (return on investment), is the focus of this course.

DMM-404 Copyright Law, Legal Issues, Ethics, and Etiquette in Digital Media
(3) A (Accelerated)
This course explores digital media law with an emphasis in intellectual property,
copyright law, issues, ethics, and etiquette as it relates to social and digital media.

DMM-410 Excellence in Digital Media Management (Capstone Course) (3) A
(Accelerated)
This capstone course examines productive shifts in social and digital media strategies
to harness the power of the social Web and adapt to the new era of instantaneous
business.

Digital Media Studies Courses
Digital media studies courses are offered through Multidisciplinary Programs. Information about the program and its majors and minors can be found in the section entitled Academic Units.

DIGI-410 Web and Social Media Analytics (3)
This course explores theory and practice in analyzing, managing, and applying the
web traffic data generated from websites, social media, mobile devices, and search
engines. Students will learn about the different kinds of data generated by web users
and various methodologies on how it is gathered and analyzed. With this knowledge,
students will implement projects to improve web performance for a certain product
or service, nonprofit, company, app, or digital experience.

DIGI-490 Capstone (3)
Interactive digital media students will collaborate in a team with members from all
three tracks to produce an app, game, simulation, website, or other digital project,
including branding, marketing, creative endeavor, or academic scholarship. In these
groups, students will work together and use their various skills and knowledge to
create, propose, design, implement, and test the project and develop it from initial
idea to finished product. Writers, designers, and programmers will lean to collaborate
across disciplines in preparation for future careers in the field. Students will also make
updates to their personal portfolio websites to better prepare for careers.
Prerequisites: DSGN-101, CSCI-110, COMM-351, ENGL-482, and DIGI-410.
Course Descriptions ....................................................................................................

Earth-Space Sciences Courses
Earth-space science courses are offered in the Physics and Earth-Space Sciences Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

ESCI-100 Elements of Earth-Space Sciences (3) A
This course provides an introduction to the scientific method through a study of the basic elements of the earth sciences: physical geography, meteorology, geology, oceanography, and astronomy. The course provides a broad understanding of the Earth system and the interrelationships between the various components of the Earth system. Students learn concepts and theories pertaining to the scientific method and the earth sciences in lecture and then are expected to apply those concepts in labs and on exams. The course meets for two hours of lecture and two hours of lab each week. Prerequisite: Math proficiency through MATH-090.

ESCI-101 Geohazards and Natural Disasters (3) A
This course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, floods, tornadoes, hurricanes), the primary controls on their frequency and intensity, and how human decision-making, including economic, political, and cultural forces, can influence the magnitude of impact when they inevitably occur. Hands-on labs familiarize students with the scientific method as well as the real-world tools that scientists apply to risk analysis and hazard mitigation. Particular attention is paid to how physical data are presented and interpreted. In-class discussions focus on case studies from around the world to introduce students to a wide range of hazard scenarios, and demonstrate how the effects of various hazards differ in the developing and developed world. This course consists of two hours of lecture and two hours of lab each week.

ESCI-150 Physical Geology (3) SII
Study of the earth, the rocks, and oceans that compose its surface, and the volcanic, deformative, erosional, and depositional forces that have modified it. One or two Saturday field trips may be taken. Course includes two hours of lecture and two hours of lab per week. Prerequisite: Math proficiency through MATH-105.

ESCI-151 Physical Geology B (1)
This is a course for students who wish to enter the geology major or minor and have had a general introduction to geology. Emphasis is on rock and mineral identification, geologic structures, and a systems-view of plate tectonics. One or more weekend field trips are required. Material is presented in an accelerated format as students are expected to retain knowledge of the material from their lower division course. Prerequisite: ESCI-100 or ESCI-101 (may be taken concurrently).

ESCI-202 Physical Geography (3) O/SI
Course will cover relationships within and between geology, meteorology, climatology, and oceanography. Various forms of maps and mapping (topographic, geologic, soils, climate, barometric, temperature) will be addressed. An Indiana Core 40 college-prep background, especially in the math and sciences areas, is presumed. Primarily for social studies, geography, and history teaching majors. Two hours of lecture and two hours of lab per week.
ESCI-206 Time, Trilobites, and Tyrannosaurus Rex (3) SI
This course provides an introduction to the field of historical geology and the evolution of life, with a specific focus on the geology of Indiana. Through lectures and labs, students learn how the scientific method has been used to formulate and test various scientific hypotheses and theories related to the historical sciences. Hands-on labs teach students how to identify different kinds of minerals, rocks, and fossils, and how to infer paleoenvironments based on their distributions. Additionally, students learn about the vastness of geologic time and how organisms have evolved throughout the billions of years of Earth’s history. The course includes two hours of lecture and two hours of lab per week. Prerequisite: Math proficiency through MATH-105.

ESCI-207 Astronomy (3) SI
Introductory course concentrating on three primary areas: (1) observational techniques, (2) solar system astronomy, and (3) stellar and galactic astronomy. During each portion of the course there is a laboratory emphasis on observation and hands-on learning. Some observation is scheduled every clear night that the course meets, using the University’s Noblitt Observatory in Lilly Science Hall. (Cross-listed as PHYS-207.) Prerequisite: Math proficiency through MATH-105 or consent of department.

ESCI-210 Environmental Problems (3) SII/D
Study of the pollution of our present environment. The causes of these pollution problems and the damage being done are studied. Some solutions to the problems are discussed. May be taken for chemistry or earth-space sciences credit. (Cross-listed as CHEM-210.)

ESCI-211 Meteorology: Weather and Climate (3) O/SII
An introduction to the study of composition, structure, and circulation of the atmosphere, including elementary theory of storms and other weather disturbances. Course includes two hours of lecture and two hours of lab per week. Prerequisite: Math proficiency through MATH-108 or consent of instructor.

ESCI-230 Introduction to Geographic Information Systems (2) A
Course designed to provide concentration on computer mapping (GIS) and data interpretation skills common to earth, environmental, health, social sciences, business, and other disciplines. Course will include use of GPS data, aerial photos, satellite imagery, and related information. Course also will include general mapping concepts. Prerequisite: Math proficiency through MATH-105 or consent of department.

ESCI-265 Ecology (4) A
Study of interactions between organisms and their physical and biological environments. Includes study of physical factors, biochemical cycles, population dynamics, and population interactions. Students will design and complete an independent research study. Three lectures and one two-hour laboratory period per week. (Cross-listed as BIOL-265.)
ESCI-320 Practicum (3–6) D
Practicum experience designed to serve as an introduction to a professional work experience in the field. Students are placed under the supervision of a professional practitioner in an earth-space or science-related organization. Prerequisite: Consent of department.

ESCI-365 Field Studies in the Earth-Space Sciences (1–4) D
Field trips, field projects, and field work are selected by the instructor and student to enhance and broaden the student’s experiences in the geological, atmospheric, astronomical, or environmental sciences. Field techniques, data gathering, data presentation, and analysis will be emphasized. Some walking and climbing may be required. Course may be taken more than once but not more than a total of four credit hours. Prerequisite: Consent of instructor or department.

ESCI 382: Research Experience (0.5-6)
This course provides undergraduate students with a structured experience in archeological research. Students commit to either working on an existing faculty or graduate student research project or developing an independent project of their own. Interested students should contact the course instructor about possible projects prior to registration. Students may enroll in the course multiple times and earn a maximum of six credit hours. Cross-listed as ANTH-382. Instructor permission recommended.

ESCI-401 Geoarcheology (4) O/SI
This course provides a broad introduction to the use of the theories and methods of the earth sciences to answer archeological research questions. Students are introduced to a variety of topics including soil morphology, paleoeconomic geology, geomorphology, geophysics, and archeological site formation processes. This is a project-based course, meaning that evaluations are based on students’ abilities to ask and answer research questions using the critical thinking and technical skills developed in the class. Students are encouraged to engage in on-going faculty research project(s) that will provide a foundation for future study and active involvement in the professional research community. Weekend field trips are required.

ESCI-403 Paleontology: Fossils (3) D
Study of the governing principles, evolution, classification, and distribution of fossils; includes the geologic history and paleoecology of plants, vertebrates, and invertebrates (emphasis is on the invertebrates with little, if any, emphasis on vertebrates). One or two Saturday field trips may be taken. Course includes two hours of lecture and two hours of lab per week. Prerequisites: Math proficiency through MATH-105; ESCI-101, ESCI-150, or ESCI-206.

ESCI-410 Hydrogeology (3) O/SI
Study of the principles of surface and ground water as a resource with emphasis on the practical application of techniques to water-well and groundwater reservoir problems. Saturday field trips may be taken. Prerequisites: ESCI-100 or 202 or 205 or 206 and MATH-180 or consent of department.
ESCI-420 Energy Resources (3) D
Study of a variety of renewable and nonrenewable energy resources vital to the economy of the United States and the world. The origin of and exploration for oil, gas, coal, and uranium will be highlighted. Alternative energy resources and the environmental impact of energy resource development will be an integral part of the course. Saturday field trips will be planned.

ESCI-425 Soil Morphology (4) O/SII
This course introduces students to sediments, soils, and soil formation processes. Students become familiar with the USDA soil classification system and the USDA’s online Web Soil Survey. Soil field identification and mapping techniques are taught and students learn how to identify and interpret archaeological sediments and soils. The course also provides a basic introduction to shallow geophysics. This is a project-based course, meaning that evaluations are based on students’ abilities to ask and answer research questions using the critical thinking and technical skills developed in the class. Weekend field trips may be required. Prerequisites: ESCI-150 or ESCI-206.

ESCI-430 Topics in Earth-Space Sciences (1–4) D
Study of selected specific areas in earth-space sciences not covered by the established curriculum. These subjects are timely or focused toward student and market needs. Topics will be announced prior to semester registration. A student may receive credit more than once for different topics.

ESCI-450 Physics of the Solid Earth (4)
Most of what we know about the Earth's interior derives from geophysics. Geophysics requires proficiency with quantitative methods and physical principles from a range of disciplines. This course will introduce you to Earth structure via the primary datasets that inform us about plate tectonics, Earth structure, and internal Earth processes. The theme of Earth as a heat engine and chemical processing factory will be explored throughout. This course is cross listed with ESCI-550: Graduate Physics of the Solid Earth. Prerequisites: ESCI-150 (or equivalent) and PHYS-150 or 153. Co-requisites: PHYS-160 or 163.

ESCI-455 Applied Geophysics (5)
This course is a survey of geological techniques applied to solving earth science, archaeological, environmental, and engineering problems. The course takes a practical, hands-on approach to show the applications of geophysics to resource exploration and development, archaeological site investigation, hazard mitigation, hydrology, and more. Course consists of four lectures and one two-hour laboratory per week. One off-campus Saturday field experience is required. This course is offered coincident with ESCI-555: Graduate Applied Geophysics. Prerequisites: ESCI-150 (or equivalent) and PHYS-150 or 153. Co-requisites: PHYS-160 or 163.

ESCI-490 Senior Research (1–3) D
Introduction to the procedures and practices of scientific research. The student will be expected to pose a problem, suggest procedures to be used to solve the problem, and then work toward its solution. A final written report is required. Prerequisite: Senior standing or consent of department.
ESCI 495: Capstone: Integrated Earth Science (3)
Students will work to complete a literature review for an Earth or environmental problem that integrates multiple aspects of the Earth System. The project will involve class presentations/discussions, a written product, and formal critiques. Students will also review the skills of writing vitae and job/graduate school applications. The course fulfills the departmental and General Education capstone requirements. Prerequisite: Major in Earth or Environmental Science or permission of instructor and senior standing.

ESCI 496: Capstone: Research Experience (1)
The capstone course is an opportunity for students to demonstrate that they have achieved the goals for learning established by their educational institution and major department. Our aim is to develop a scientific way of thinking about the Earth and its systems. For this course, you will demonstrate what you have learned in your Earth Science courses by taking the UIndy Earth Science Exit Exam. You will reflect on what you learned in a research experience you have completed as an undergraduate and generate a substantial product in terms of an oral presentation you will give to the Department or University community, demonstrating higher-level thinking skills in analyzing your project. You will be given feedback on your presentation by faculty and peers. Prerequisite: Major in Earth or Environmental Science and senior standing.

Economics Courses
Economics courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

ECON-110 Microeconomics (3) A
Covers the introductory tools of economic decision making of single economic units such as households and businesses.

ECON-111 Macroeconomics (3) A
Covers the introductory tools necessary in analyzing the workings of an economy. Covers topics such as the determination of gross national product, inflation, unemployment, and international linkages.

ECON-210 Intermediate Microeconomics (3) D
Emphasis is given to the behavior of a firm operating in different competitive, regulatory, and legal environments. Firm and consumer behavior are analyzed under conditions of uncertainty and firm strategies dealing with various other challenges. Prerequisite: ECON-110.

ECON-211 Intermediate Macroeconomics (3) SI
Provides an analysis of an economy in the context of a model that describes the workings of demand and supply sides of a national economy with linkages to international markets. Application of theory is emphasized. Prerequisite: ECON-111.
ECON-363 Money and Banking (3) A
Covers the definition and the process of money creation and the role of financial intermediation. The regulation of financial institutions and the role of the Federal Reserve in the design of monetary policy also are covered. Prerequisite FIN-210 and ECON-111. (Cross-listed as FIN-340.)

ECON-386 Quantitative Methods (3) A
Quantitative methods and modeling techniques used to support management decision making. The following topics are covered: brief review of probability and distribution; decision analysis; utility and decision making; forecasting; linear programming; transportation, assignment, and transshipment problems; integer programming; queuing modeling, computer simulation, and multi-criteria decision problems. Prerequisite MATH-220 or MATH-280. (Cross-listed as SCM-386.)

ECON-410 Econometrics (3) D
The course introduces students to applications of statistical tools. Students will learn how to conduct and critique empirical studies in economics. The emphasis is on applications. Prerequisites: MATH-220 or MATH-280, ECON-211, and ECON-386.

ECON-461 Economic Development (3) D
Studies the issues of developing countries in the current global environment and provides different models of development strategies that countries may follow. Prerequisite: ECON-111.

ECON-464 Comparative Economic Systems (3) SI
Analysis, comparison, and evaluation of several existing economic systems. Historical evolution of these systems is given emphasis. Prerequisite ECON-111 or permission of the instructor.

ECON-465 Economics of Fiscal Policy (3) D
Federal and local government policies of spending and taxation are discussed. Theory of taxation and national fiscal problems and issues are given emphasis. Prerequisites: ECON–110 and ECON-111 or the permission of the instructor.

ECON-485 Seminar in Public Policy (3) D
Current economic issues in the United States are discussed. The topics may vary according to existing issues at the time of coverage. Typical issues are: energy, environment, labor and collective bargaining, immigration, education, and poverty. Prerequisites: ECON-210, 211, and 465.

Education Courses
Education courses are offered through the Teacher Education Department. Information about the department and the teaching majors and concentrations it offers can be found in the section entitled Academic Units.

EDUC-091 BUILD Math I (3) SI
Designed for students in the BUILD program (Baccalaureate for University of Indianapolis Learning Disabled). The focus of the course is arithmetic, real numbers, linear equations and inequalities in one variable, applied problems, and polynomials. Credit/no credit grading.
EDUC-093 BUILD Study Skills (.5) SI
Designed for students in the BUILD program. The focus of the course is on organizing, note-taking, test-taking, and research. The class will meet for one hour twice a week. *Credit/no credit grading.*

EDUC-100 Exploration in Education (2) SI/SII
Explores some of the areas that contribute to the education profession. Two goals of the class are (1) to give those who may be considering a career in education some basis for making a major career decision and (2) to provide those who have elected to pursue a major in education some insights into the topics they will encounter during their preparation and subsequent classroom experiences. Selected issues and problems are considered. *Required for all teaching majors. Open to all students. Field experiences required.*

EDUC-101 BUILD Math II (3) SII
Continuation of BUILD Math I, focusing on geometry, graphing straight lines, graphing and linear systems of equations, rational expressions, rational equations and complex fractions, radical expressions, and quadratic equations. Restricted to students in the BUILD program. Successful completion of BUILD Math I with a CR and BUILD Math II with a C or above represent demonstration of math proficiency.

EDUC-110 Freshman Seminar in Education (1) SI
New Student Experience in Education is a transition course designed to facilitate students’ integration into the learning community of UIndy. The course helps new teacher education majors in their first semester of enrollment to develop skills and relationships that will serve them well as they pursue their career goals in education. Through a combination of in-and out-of-class experiences, this course concentrates on helping students understand and prepare for entrance to the teacher education program, develop an awareness of professional standards, and consider a future as a K-12 classroom teacher.

EDUC-130 Technology in Education I (2) SI/SII
This course prepares education candidates to meet national and state standards for integrating technology into the classroom as an instructional tool. Instructional software, multimedia tools, the Internet, and other computer-assisted learning opportunities are utilized to meet learning needs of every student. Candidates spend considerable time in laboratory settings gaining hands-on experience with technology and building technological knowledge. Candidates learn about appropriate productivity software that will enhance their personal and professional lives. Required of all teaching majors.

EDUC-203 Psychology of Development, Learning, and Instruction (4) SI/SII
This in-depth interdisciplinary course is required for admission to the teacher education program. It is also a required course for the Child and Youth Programs Minor. It is designed to provide you with an introduction to major domains of human development (e.g., physical, cognitive, and psycho-social) as they relate to the principles of learning and instruction. Examination of the normative developmental characteristics of P-12 learners provides the foundation from which candidates will identify risk and resilience factors related to student achievement, apply theories and concepts from educational and developmental psychology to evaluate the
developmental responsiveness of various school based practices, and be introduced to the process of analyzing student data to design instruction. It is also designed to provide a foundation for your own development as a reflective educator who views learning as a lifelong process. Effective teachers keep in mind the developmental processes that contributed to where the learner (and the teacher) is now and where s/he is headed (INTASC #2).

EDUC-204 Field Experience (.5) SI/SII
Field experience provides students with an opportunity to develop observational and reflective thinking skills, apply concepts from EDUC-203, and analyze authentic learning environments. Register concurrently with EDUC-203.

EDUC-218 Young Adult Literature: Yesterday to Today (3) A
This course will expose students to quality young adult literature by examining the appropriateness of young adult literature as an engaging genre through a thematic approach. Literature studied will address issues of particular concern to adolescents: achieving personal identity, puberty and sexual awareness, interpersonal relationships, cross-generational conflicts, answering spiritual questions, and increasing social and political awareness. Using various approaches to reading adolescent literature, including reader response criticism, close reading strategies, and contemporary critical theories, students will investigate multiculturalism, globalism, and diverse audiences and subject matter, as well as recent history of the cultural construction of the “teenager.” Genres studied will include young adult and children’s fiction, biography, graphic novel poetry, memoir, short story, and information/nonfiction books. (Cross-listed with ENGL-218).

EDUC-272 Introduction to Learners with Mild Disabilities (3) Y
Presents models and introduction to the characteristics, history, and identification of students with mild disabilities. Particular attention is devoted to understanding disability as a social construct, the impact of labels on children and families, and the concepts of cultural competence and normalization. Strategies of working collaboratively with other professionals and families to optimize the outcomes of the child in the inclusive classroom and community are stressed. Course applies toward a special education license in mild interventions. A field experience is required. Prerequisite: Must be enrolled in or have completed EDUC-203/204.

EDUC-290 Teaching in a Diverse Society (3) SI/SII
Examines the impact of our nation’s increasingly diverse society on schools. Course provides an overview of the various cultural characteristics of students and how these differences have an impact on student behavior and achievement in the school environment. The course also explores the interaction of teacher and student value systems regarding culturally different learners as a basis for fostering sensitivity to and respect for cultural differences. Course required of all levels of teacher licensure.

EDUC-300 Social, Political, and Philosophical Foundations of US Education (3) SI/SII
Teachers are increasingly being asked to assume leadership roles in their schools, districts, and communities and grapple with the problems and issues affecting students and their families. The primary goal of this course is to help students apply ethical and philosophical lenses to examine how teaching and learning influence and are influenced by certain fundamental assumptions and beliefs about the nature of
individuals, roles of the teacher and student for bringing about certain ends, and the purpose of schooling in a democratic society. Ultimately, this course will help students begin to develop strategies for addressing those aspects that work against students’ opportunities to learn. Students will be introduced to questions and issues in the social, political, ethical, and philosophical contexts of education that are of a concern to educators, researchers, and various interest groups, and the various (at time contradictory) positions, policies, and practices that have been devised. This course is required for all levels of teacher licensure. This will be writing/speaking intensive course, focused on argument. While there is no prerequisite for this course, students must reach at least a junior standing at UIIndy in order to enroll.

EDUC-305 Curriculum and Methods for the Young Child (3) SI
Focuses on curriculum and assessment issues in early childhood education. Topics include child and school readiness, developmentally appropriate practice, formal and informal assessments, and role of play in learning. Course required for elementary (primary and intermediate) licensure. Prerequisites: Admission to Teacher Education Program.

EDUC-320 Technology in Education II (3) D
Prepares students to meet technology standards and strategies for the integration and implementation of technology across the curriculum. Teachers design and develop lesson plans that incorporate the use of technology to address curricular needs. They also plan professional development activities for their building so that other teachers may become skillful technology users. Upon finishing this course, teachers demonstrate the value and function of instructional technology as a critical component to delivering 21st-century skills. Participants discuss the importance of maintaining an interest in and critical examination of developing trends in technology with emphasis on applications in education. Participants need a working knowledge of computers as well as access to a computer and the Internet on a regular basis.

EDUC-325 Teaching Math in the Primary Grades (2) SI
Prepares candidates to teach mathematics in kindergarten to second grade. Emphasis is placed on creating classrooms that encourage exploration and communication of ideas relating to numbers, patterns, shapes, and space. How to use informal and formal assessments to support learning and guide instructional decisions, ways to incorporate technology, and professional resources for mathematics teachers are addressed. Course required for elementary (primary and intermediate) licensure. Prerequisites: MATH-208/210 with grades of C or higher and admission to Teacher Education Program.

EDUC-326 Teaching Math in the Intermediate Grades (2) SII
Provides candidates with instructional strategies for teaching mathematics in grades three through six. Special attention is given to methods that promote multiplicative reasoning, equivalence, and computational fluency. Modeling and developing problem-solving strategies, using language and other representation systems to communicate concepts, and exploring cooperative learning structures are studied. Course required for elementary (primary and intermediate) licensure. Prerequisite: EDUC-325 with a grade of C or higher and admission to the Teacher Education Department.
EDUC-330 Technology in Education II (1) SI/SII
This course is the second in a two-course sequence. This course focuses on integration of pedagogy, content, and technology for pre-service teachers in a seminar-based, hybrid format. This course prepares teacher education candidates to meet national and state standards for integrating technology into the classroom as an effective instructional tool, specific to content areas. Candidates explore how best teaching practices, content knowledge, and technology are combined to create meaningful learning experiences for their students.

EDUC-334 Developmental Literacy (3) D
Helps both candidates and practicing teachers assess and teach literacy in classrooms. Emphasis is placed on working with students with learning disabilities. Candidates develop proficiency in administering, scoring, and analyzing interest/attitude surveys, individualized reading inventories, and writing samples with a small group of students. Using the results of these diagnostic tools, the candidates design and implement one-on-one lessons to build on the strengths and meet the needs of students. Course required for all-grade and secondary education teachers seeking an endorsement in Mild Interventions.

EDUC-335 Literacy in the Primary Grades of Elementary School (4) SI
Focuses on children’s literacy development in the primary grades (grades K–2). Instructional and assessment strategies are demonstrated and applied in field experiences (EDUC-338) developing phonemic awareness, phonics, fluency, vocabulary, and comprehension. Candidates learn about a balanced literacy program that includes reading aloud, shared reading and writing, guided reading and writing, word study, self-selected reading, and bookmaking. Course required for elementary (primary and intermediate) licensure. Course taught on-site at a local school. Register concurrently with EDUC-338. Prerequisite: Admission to the Teacher Education Program.

EDUC-336 Literacy in the Intermediate Grades of Elementary School (4) SII
Focuses on children’s literacy development in the intermediate grades (grades 3–6). Instructional and assessment strategies are demonstrated and applied in field experiences (EDUC-339) developing fluency, vocabulary, and comprehension with fictional and informational texts. Candidates learn about literacy instruction through basal work, literature circles, reading-writing workshop, process writing, and content area reading-writing. Candidates learn to monitor students’ literacy development through informal reading inventory and portfolio assessment. Course required for elementary (primary and intermediate) licensure. Course taught on-site at a local school. Register concurrently with EDUC-339. Prerequisite: EDUC-335 with a grade of C or higher and admission to the Teacher Education Department.

EDUC-338 Field Experience (1)
Register concurrently with EDUC-335.

EDUC-339 Field Experience (1)
Register concurrently with EDUC-336.

EDUC-360 Literacy and Pedagogy in the Content Areas (3) SI
Provides necessary background material and strategies related to new literacies across the curriculum. The course also integrates learning for unit and lesson planning.
Students learn specific strategies related to new literacies and learning, with some emphasis on teaching English language learners. Students review traditional classroom materials, the role of supplemental texts, and applications of Web 2.0. The role of writing to learn also is addressed, with specific strategies and applications appropriate to various content areas. Course required for secondary and all-grade licensure. Register concurrently with EDUC-371 and EDUC-365. Prerequisite: Admission to Teacher Education Program.

**EDUC-365 Middle School Practicum (1) SI**
Provides students with opportunities to design and implement lesson plans, assess student work, and evaluate the effectiveness of the instruction. Register concurrently with EDUC-360 and EDUC-371. Prerequisite: Admission to Teacher Education Program.

**EDUC-371 Special Needs in the Secondary Classroom (3) SI**
Provides a general introduction to the characteristics, history, and identification of students with mild disabilities. Students use case studies to assess student needs, plan differentiated instruction, and design behavior intervention plans. The course examines models of coteaching, strategies for working collaboratively with professionals and families, and applications of assistive technology to accommodate needs of diverse learners. Course required for secondary and all-grade licensure. Register concurrently with EDUC-360 and EDUC-365. Prerequisite: Admission to Teacher Education Program.

**EDUC-372 Teaching Learners with Mild Disabilities (3) SI**
Provides models of effective instruction for students with diverse learning needs who are educated in the general education classroom. An emphasis is placed on promoting culturally responsive teaching and strategies to differentiate and adapt instruction to accommodate exceptional learners. Curriculum that promotes the academic, social, and behavioral competence of students is demonstrated in addition to data-based instructional systems such as curriculum-based measurement. Applications of assistive technology to support learners are emphasized. Course required for an elementary and special education license in mild interventions. Register concurrently with EDUC-373. Prerequisite: Admission to Teacher Education Program (elementary majors). (Note: The second requirement pertains only to candidates seeking Mild Intervention License.)

**EDUC-373 Field Experience (1) SI**
Provides students with the opportunity to work with students with diverse learning needs. Placement is based on license developmental levels. Register concurrently with EDUC-372.

**EDUC-374 Assessment and Instruction of Learners with Mild Disabilities (3) SII**
Presents various models of formal and informal assessment to discern the needs of students with diverse learning profiles. The linking of assessment and intervention to promote optimal outcomes for students is emphasized. Students learn to administer, evaluate, and interpret various tests, rating scales, and classroom-based assessments to determine appropriate instructional strategies. Assessment procedures by other service providers such as occupational therapists are observed. Curriculum-based assessment and measurement are used as an operational model to inform teaching and learning. Assistive technology applications are explored to support assessment and
instruction. *Course required for an elementary and special education license in mild interventions. Register concurrently with EDUC-375. Prerequisites: EDUC-372 with a grade of C or higher and Admission to the Teacher Education Program.*

**EDUC-375 Field Experience (1) SII**
Provides students with the opportunity to work with students with diverse learning needs. Placement is based on license developmental levels. *Register concurrently with EDUC-374.*

**EDUC-378 Family and Professional Collaboration (2) SI**
Explores the dynamics of empowerment as a basis to develop effective school-family partnerships. The history of empowerment is explored along with requisite principles and strategies to promote collaboration and communication between families and professionals. The values and principles of a “system of care” approach that supports family voice and choice will be discussed and demonstrated. An emphasis is placed on understanding disability, cultural and linguistic biases, and barriers to shared decision-making from the perspective of the family and student. *Course required for a special education license in mild interventions.*

**EDUC-385 Classroom Management Through Positive Behavior Support (3) SII**
Presents a framework for creating an instructional environment based on positive behavior support and school-wide discipline. Knowledge and skills of proactive classroom management to promote the academic, behavioral, and social success of students is presented. These approaches range from the techniques of self-management to collaborative problem solving. Functional assessment and analysis as methods to determine causes of challenging behavior and academic failure are stressed. An overview of conflict resolution curricula is provided as are strategies to manage and prevent school-based needs. *Course required for a special education license in mild interventions. Field experience required. Prerequisite: EDUC-372 with a grade of C or higher or consent of the instructor.*

**EDUC-386 Multimedia Presentation (3) SII**
Introduces concepts and applications in the development of multimedia presentations. Course incorporates entry-level skills of Web development, image editing using Photoshop, digital movie editing, PowerPoint, principles of interactive multimedia authoring systems, and effective multimedia presentation design. *Prerequisite: Completion of computer requirement for major or permission of the instructor.*

**EDUC-390 Methods of Teaching: Middle Level/Junior High and High School Subjects (3) SII**
Explores the theories and methods of effective instruction in specific content areas (art, biology, business education, English, foreign languages, mathematics, music, physical education, science, social studies, and theatre). Students develop lesson plans and assessments, teach lessons using a variety of methods appropriate for the subject and developmental levels of diverse populations of students, incorporate appropriate technology and literacy elements, and reflect critically on their work. *Course required for secondary and all-grade licensure. Register concurrently with EDUC-391. Prerequisite: EDUC-360 and 371 with a grade of C or higher or permission of instructor.*
EDUC-391 High School Practicum (1) SII
Course provides students with opportunities to design and implement lesson plans, assess student work, and evaluate the effectiveness of the instruction. Register concurrently with EDUC-390.

EDUC-402 Science for Elementary Teachers (2) SI
Explores classroom organization and curriculum development in science for elementary teachers. Students learn management techniques, hands-on science activities, and methods for promoting, designing, and implementing science inquiry into various types of instruction. Course required for elementary (primary and intermediate) licensure. Prerequisites: EDUC-326 and 336 with grades of C or higher or consent of the instructor.

EDUC-405 Social Studies for Elementary Teachers (2) SII
Explores classroom organization and curriculum development in social studies for elementary teachers. Students learn to design and implement instructional and assessment strategies that help students conduct research, practice democratic citizenship, and learn age-appropriate content from the social studies disciplines. Course required for elementary (primary and intermediate) licensure. Prerequisites: EDUC-326 and 336 with grades of C or higher or consent of the instructor.

EDUC-420 Children’s Literature (3) SII
Explores the many genres (both fiction and nonfiction) and formats (e.g., picture books, magazines, and media) of children’s literature that are appropriate for use in elementary classrooms. Students learn how to evaluate texts for literary and visual quality and use these texts to support their future students’ understanding of themselves and the world around them. Special attention is given to motivating students to become lifelong readers. Prerequisite: EDUC-335 with a grade of C or higher. Course required for elementary reading licensure.

In order to enroll in any of the supervised teaching courses listed below, a student must meet all criteria as outlined in the Teacher Education Undergraduate Handbook.

EDUC-471 Supervised Teaching: Primary/Elementary School (10) A
Observation, participation, and student teaching at the primary level under the supervision of a cooperating teacher and the direction of the University supervisor. Prerequisite: Completion of all education and major requirements.

EDUC-472 Supervised Teaching: Intermediate/Elementary School (10) A
Observation, participation, and student teaching at the intermediate level under the supervision of a cooperating teacher and the direction of the University supervisor. Prerequisite: Completion of all education and major requirements.

EDUC-480 Supervised Teaching: Reading (1) SII
Advanced study in the area of reading. Major trends and current issues in reading education are explored. Supervised experience, which includes diagnostic/prescriptive approaches for remedial reading, is provided. Course applies toward a reading license. Prerequisites: Completion of all education and major requirements.
EDUC-485 Supervised Teaching: Special Education (10-Elementary, 4-Secondary/All-Grade) A
Supervised interaction with students with mild disabilities experiencing significant difficulties in academic, social, and/or behavioral functioning. Placements are arranged at appropriate schools. Prerequisite: Complete all education and major requirements.

EDUC-492 Exit from Program Portfolio (.5) A
Students develop the Exit from Program Portfolio, a requirement for passing student teaching. Course required for all levels of teacher licensure. Enroll concurrently with first student teaching placement. Prerequisite: Completion of all education requirements (elementary) or all education requirements (secondary/all-grade). Register concurrently with EDUC-471 or 472 (Elementary, Semester I) or EDUC-495 and EDUC-496 (Secondary/All-grade, Semesters I or II).

EDUC-495 Supervised Teaching: High School (6) A
Observation, participation and supervised teaching under the supervision of a cooperating teacher and the direction of a University supervisor. Prerequisite: Completion of all education requirements. Register concurrently with EDUC-496 and 492.

EDUC-496 Supervised Teaching: Middle School (6) A
Observation, participation, and supervised teaching under the supervision of a cooperating teacher and the direction of a University supervisor. Prerequisite: Complete all education requirements. Register concurrently with EDUC-495 and 492.

EDUC-497 Special Topics in Education (1-3) Y
Group study in selected topics in elementary, middle, secondary, or curriculum development.

EDUC-498 Supervised Teaching: Elementary Experience (All-Grade majors only) (4–6) A
Observation, participation, and supervised teaching under the supervision of a cooperating teacher and the direction of a University supervisor. Prerequisite: Completion of all education requirements. Register concurrently with EDUC-495 or 496.

Emergency and Disaster Management Courses
Emergency and Disaster Management courses are offered through the School for Adult Learning. Information about SAL and its majors and minors can be found in the section entitled Academic Units.

EDM-265 Introduction to Emergency Management (3) A (Accelerated)
Emergency management is the coordination and integration of activities necessary to build, sustain, and improve the capabilities to prepare for, respond to, recover from, or mitigate against hazards and/or disasters. It is a complex interaction of politics, public perception, and passion for doing what’s right, despite the obstacles. This course introduces students to common emergency management terms, programs, and policies at the local, state, and federal government levels.
EDM-270 Emergency and Disaster Preparedness and Planning (3) A (Accelerated)
This course is designed for emergency management personnel who are involved in developing an effective emergency planning system. This course offers training in the fundamentals of the emergency planning process, including the rationale behind planning. It will develop your capability for effective participation in the all-hazard emergency operations planning process to save lives and protect property threatened by disaster. *Prerequisite: EDM-265.*

EDM-275 Threat and Hazard Analysis and Reduction (3) A (Accelerated)
The hazards risk analysis and reduction process, as described and applied in this course, provides a general philosophy and description of specific tools and methods that can be utilized to manage the risk associated with the hazards facing a community. *Prerequisites: EDM-265 and 270.*

EDM-300 Disaster Response, Recovery, and Mitigation (3) A (Accelerated)
This course is designed for emergency management personnel who are involved in policy and planning development and the management of natural catastrophic events and those caused by humans, including terrorism that impact people and property. The course examines the role of human service organizations in providing assistance to people and communities affected by disasters and the long-term recovery. *Prerequisites: EDM-265 and 270*

EDM-305 Social Vulnerability to Disasters (3) A (Accelerated)
Drawing on current theory and research, field studies, class activities, and life experiences, students will explore how vulnerable social groups are affected by and cope with hazardous conditions and events, and strategies for community-based mitigation engaging those most at risk. *Prerequisite: EDM-265, 270 and 275.*

EDM-310 Introduction to Emergency Operations Centers & Incident Command System (3) A (Accelerated)
This course describes the history, features and principles, and organizational structure of the Incident Command System. The class will explore examples of effective incident management, primarily through lectures and case studies. The course will also include field trips to local emergency operations centers in the central Indiana area. *Prerequisites: EDM-265, 270 and 275*

EDM-315 Exercise Design & Development (3) A (Accelerated)
This course is designed to introduce the fundamentals of emergency exercise design and prepare students to design and conduct a small exercise. It addresses the components of a comprehensive exercise program, the exercise development process, organization of the design team, exercise documentation, and the steps in designing an exercise. *Prerequisites: EDM-265, 270 and 275*

EDM-320 Community Approach to Emergency Disaster Management (3) A (Accelerated)
Networking is the number one key to effective emergency and disaster management. This course will present an overview of relationship building processes with public and private sector agencies and organizations and effective resource management. *Prerequisites: EDM-265, 270 and 275*
EDM-410 Introduction to Homeland Security I (3) A (Accelerated)
Introduction to Homeland Security course is a presentation of the evolution of the all-hazards approach to mitigation, prevention, preparedness and response to disaster and terrorism against the United States. This course will discuss in the history of the Department Homeland Security, attacks of September 11, 2001 along with the Patriot Act. 2. History will provide an historic overview of the terrorist threat in the United States. It will further discuss the development of the infrastructure within which the federal government now addresses terrorism resulting from legislation, directives and government policies. When possible this class will take an offsite visit to Indiana Department of Homeland Security, Emergency Operation Center (EOC) and the Indiana Fusion Center.

EDM-415 Introduction to Homeland Security II (3) A (Accelerated)
Introduction to Homeland Security course is a presentation of the evolution of the all-hazards approach to mitigation, prevention, preparedness response and recovery to disasters and terrorism against the United States. This course will discuss in detail the attacks of September 11, 2001 along with the Patriot Act and Homeland Security Act.

Engineering Dual Degree Courses
Engineering Dual Degree courses (EDDP) are offered through Indiana University-Purdue University School at Indianapolis. For more information regarding the engineering courses available through IUPUI, they can be found at engr.iupui.edu/main/academics/undergrad/index.php.

Engineering Courses
Engineering courses are offered through the R.B. Annis School of Engineering. Information about the school and its programs can be found in the section entitled Academic Units.

ENGR-196 Introduction to Engineering (3) SI
An overview of the engineering profession and methodologies of engineering design. Students develop skills using computer-aided design and simulation software for engineering systems. Projects and homework are implemented and tested in a laboratory environment. The course also introduces the students to standard computer application software and university network and software resources.

ENGR-198 Engineering Design Lab II (1) SII
This course is a full semester intro to project based methods of instruction focusing on the skills needed to collaborate and be successful in the five week intensive courses that begin in the sophomore year. The specific nature of the projects used will be different from year to year depending on the specializations of the faculty and composition of the student population. However, no matter the specific details of the projects chosen, the project teams will be selected from diverse disciplines and expected to work in a collaborative fashion to complete significant projects incorporating their domain expertise and interests. Prerequisite: ENGR-196 with a grade of C- or better or permission of instructor.
**ENGR-210 Engineering Economics (3) SII**

Concepts and techniques of analysis for evaluating the value of products/services, projects, and systems in relation to their cost. Economic and cost concepts, calculating economic equivalence, comparison of alternatives, purchase versus lease decisions, financial risk evaluation, cash analysis. *Prerequisites: MATH-270, ENGR-196, with a grade of C- or better or permission of instructor.*

**ENGR-230 Introduction to Entrepreneurial Thinking (2) SI**

Entrepreneurs play vital roles in creating solutions to many challenges facing society. They create enterprises that provide jobs, improve productivity, increase prosperity, and enhance the quality of life of the people. Many great companies have been founded by people with engineering and science background. The course introduces the students to critical concepts and tools they will need to identify opportunities, create solutions, and build successful enterprises, particularly technology ventures that are based on technological innovations. The course will be hands-on and will center around the customer development methodology. The students will learn how to work with team, identify business opportunities, and apply the customer discovery process to validate the opportunity and solution. They will also learn about legal formation, intellectual property protection, licensing, acquiring resources, financial planning, sources of funding, and leadership. The class will be highly interactive comprising of lectures, active discussions, and team activities focused on the customer discovery process for a start-up company. *Prerequisites: ENGR-196 with a grade of C- or better or permission of instructor.*

**ENGR-296 Engineering Design Lab III (1) SI**

This is a five-week intensive project based course in which diverse teams of engineering students will work on significant engineering projects with internal or external partners to produce a useful product designed to solve a specific concrete problem. The exact nature of each team member’s responsibilities and expectations may depend on their specific engineering discipline. Engineering Design Lab III is generally taken in the first semester of the sophomore year. *Prerequisite: ENGR-198 with a grade of C- or better or permission of instructor.*

**ENGR-298 Engineering Design Lab IV (1) SII**

This is a five-week intensive project based course in which diverse teams of engineering students will work on significant engineering projects with internal or external partners to produce a useful product designed to solve a specific concrete problem. The exact nature of each team member’s responsibilities and expectations may depend on their specific engineering discipline. Engineering Design Lab IV is generally taken in the first semester of the sophomore year. *Prerequisite: ENGR-296 with a grade of C- or better or permission of instructor.*

**ENGR-396 Engineering Design Lab V (1) SI**

This is a 5-week intensive project based course in which diverse teams of engineering students will work on significant engineering projects with internal or external partners to produce a useful product designed to solve a specific concrete problem. The exact nature of each team member’s responsibilities and expectations may depend on their specific engineering discipline. Engineering Design Lab V is
generally taken in the first semester of the junior year. Prerequisite: ENGR 298 with a grade of C- or better or permission of instructor.

ENGR-398 Engineering Design Lab VI (1) SII
This is a 5-week intensive project based course in which diverse teams of engineering students will work on significant engineering projects with internal or external partners to produce a useful product designed to solve a specific concrete problem. The exact nature of each team member’s responsibilities and expectations may depend on their specific engineering discipline. Engineering Design Lab V is generally taken in the first semester of the junior year. Prerequisite: ENGR 396 with a grade of C- or better or permission of instructor.

ENGR-400 Special Topics in Engineering (.5-3) D
The study of a selected area in engineering not covered by the established curriculum. These subjects are timely of focused toward student and market needs. Topics will be announced prior to semester registration. A student may receive credit more than once for different topics.

ENGR-496 Engineering Design Lab VII: Senior Design Project (1) SI
This is a full semester project based course in which diverse teams of engineering students will work on a significant engineering project with internal or external partners to produce a useful product designed to solve a specific concrete problem. The exact nature of each team member’s responsibilities and expectations may depend on their specific engineering discipline. Unlike the other “design lab” courses, the project and team selected for this course will be continued in the capstone courses Engineering Design Lab VIII. Engineering Design Lab VII is generally taken in the first semester of the senior year. Prerequisite: Engr Design Lab VI (ENGR 398), Engineering Economics (ENGR 210) all with a grade of C- or better or permission of instructor.

ENGR-498 Engineering Design Lab VIII: Senior Design Project
This is the full semester long engineering capstone course in which engineers complete a significant engineering project in collaboration with an external partner or partners. This is the course that gives engineering students a completely authentic experience of designing, developing and evaluating an engineering product for one or more external partner(s) and reviewer(s). With the guidance of a faculty mentor each senior will work as a member of the team identified in EDL VII, to manage and execute a significant engineering project which will create a product that can be tested and evaluated against concrete design criteria. The exact nature of each student’s responsibilities and expectations may depend on their specific engineering discipline. Engineering Design Lab VIII is generally taken in the second semester of the senior year. Prerequisite: Engr Design Lab VII (ENGR 496) with a grade of C- or better or permission of instructor.
English Courses

English courses are offered through the English Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

ENGL-100 Basic Writing (4) A
Review of basic writing skills. Students are assigned to ENGL-100 on the basis of the English placement test. Students write short papers and focus on thesis development and paragraph construction; they also focus on strengthening their understanding and use of grammar and mechanics. Individual conferences are an important component of the class. Students must earn a C or better to receive credit for the course and to be allowed to enroll in ENGL-101. Students who do not earn a C or better in ENGL-100 will be required to repeat the course until a C or above is achieved. May not count on an English major/minor or the general education core.

ENGL-100 Basic Writing—ESL (English as a Second Language) (4) SI
Basic Writing (see description above) for non-native speakers with an additional component of listening and speaking. Students are placed in the course on the basis of the TOEFL or Verbal SAT and the English Department placement exam.

ENGL-101 English Composition* (3) A
A course designed to increase the student’s ability to write clear, organized, vigorous expository prose with attention to the mechanics of English and correct grammatical forms. Students who are placed in ENGL-101 without having taken ENGL-100 and who receive a C- or lower will be assigned to ENGL-100 or a repetition of ENGL-101 at the discretion of the instructor. Students assigned to ENGL-100 must earn a C or above before repeating ENGL-101. Students reassigned to ENGL-101 will be required to repeat the course until a grade of C or above is achieved.

* Students may obtain credit for ENGL-101 (and thereby may enroll in ENGL-102) in one of the following ways:
1. completing ENGL-101 with a grade of C or above.
2. successfully completing (C or above) a college-level English composition course at an accredited college or university.
3. obtaining a score of 3 or higher on the College Board Advanced Placement (AP) English Language and Composition exam.
4. obtaining a passing score (420) on the College Level Examination Program (CLEP) English Composition with Essay exam.

ENGL-101 English Composition/BUILD (3) SI/II
English Composition (see description above) for students in the BUILD program.

ENGL-101 English Composition—ESL (English as a Second Language) (4) A
English Composition (see description above) for non-native speakers with an additional component of listening and speaking. Students are placed in the course on the basis of the TOEFL or Verbal SAT and the English Department placement exam.

ENGL-102 Literature (3) A
Introduction to the ideas and literary works that have shaped Western societies. The student writes multiple assignments, some of which include research, and receives
Course Descriptions

Instruction in library research, in documentation of sources, and in the organization, revision, and preparation of a final draft. Prerequisite: ENGL-101 with a grade of C or above.

ENGL-102 Literature—ESL (English as a Second Language) (4) A
Literature (see description above) for non-native speakers with an additional component of listening and speaking. Students are placed in the course on the basis of English Department placement.

ENGL-105 Freshman Seminar in English (1) SI
Course designed to provide students in English and English teaching with an orientation to the University of Indianapolis in general and to the study of writing, literature, and editing in particular. This course fulfills the University’s freshman New Student Experience requirement. Required for all English majors.

ENGL-180 Applied Professional Writing: Writehounds (1) A
An opportunity to learn and apply knowledge in the various fields of Professional Writing. Typical projects include building and writing a website, writing a small grant for a local nonprofit, or editing and publishing a short book. Open to freshmen students and above; can be taken four times for credit.

ENGL-210 Introduction of Literary Criticism and Theory (3) SI
This course introduces students to the art of reading and writing critically using various theoretical approaches and accurate literary terminology. Students also will learn the skill of close reading in order to develop their own ideas in dialogue with other critics using a variety of print and electronic sources. Prerequisite: ENGL-101.

ENGL-211 British Literature I (3) SI
British Literature I is a survey course that explores British Literature from its beginnings with Old English poetry to 1750 C.E. Students will gain skills in reading early literature and come to understand the culture that produced it. Prerequisite: ENGL-101.

ENGL-212 British Literature II (3) SII
Survey of English Literature from the late 18th century to the present, with reading of poems and fiction by a diverse range of British authors and examination of the cultural, social, and political forces shaping British literature from Romanticism to the present. Prerequisite: ENGL-101.

ENGL-213 American Literature I (3) SI
Survey of the major authors, literary movements, and minority voices from colonial beginnings to the Age of Romanticism, with emphasis on Bradstreet, Rowlandson, Franklin, Poe, Emerson, Thoreau, Douglass, Jacobs, Hawthorne, Melville, Whitman, Stowe, including representative works of women’s literature and literature of the American Indian. Prerequisite: ENGL-101.

ENGL-214 American Literature II (3) SII
Survey of the major authors, literary movements, and minority voices from the Age of Realism to the present, with emphasis on Dickinson, Twain, Crane, James, Frost, Faulkner, Miller, Williams, and O’Connor, including representative works of
women’s literature, African-American literature, and Jewish literature. **Prerequisite: ENGL-101.**

**ENGL-218 Young Adult Literature: Yesterday to Today (3) A**
This course will expose students to quality young adult literature by examining the appropriateness of young adult literature as an engaging genre through a thematic approach. Literature studied will address issues of particular concern to adolescents: achieving personal identity, puberty and sexual awareness, interpersonal relationships, cross-generational conflicts, answering spiritual questions, and increasing social and political awareness. Using various approaches to reading adolescent literature, including reader response criticism, close reading strategies, and contemporary critical theories, students will investigate multiculturalism, globalism, and diverse audiences and subject matter, as well as recent history of the cultural construction of the “teenager.” Genres studied will include young adult and children’s fiction, biography, graphic novel poetry, memoir, short story, and information/nonfiction books. (Cross-listed with EDUC-218).

**ENGL-220 Advanced Composition: Expository Writing (3) A**
Practice in the techniques of research and exposition to promote effective writing. Class activities include intensive discussion and peer review of student writing. Model essays and published works are examined to study strategies of expository writing. Students will deliver presentations and speeches on their research and writing. **Prerequisite: ENGL-101.**

**ENGL-270 Introduction to Creative Writing (3) A**
Designed for majors and non-majors with little or no previous creative writing experience, this course will teach students the basic techniques of the craft of creative writing of fiction and poetry, though the course may include drama and nonfiction. Though taught in a workshop format that emphasizes student writing, it also will focus on the work of contemporary writers for inspiration and technique. **No prerequisite is required.**

**ENGL-280 Introduction to Professional Writing (3) O/SII**
An introduction to the major concepts of Professional Writing, including research writing, writing for a professional audience, discourse analysis, visual rhetoric, multimodal writing, documentation, user testing, and copyediting. The course should prepare majors for future courses in the concentration. For non-majors, the course should introduce students to major concepts of writing in many professional fields.

**ENGL-310 Creative Nonfiction (3) O/SI**
Sometimes called "the fourth genre," Creative Nonfiction is a relatively new and varied category of writing perhaps more often and better defined by its writers than by its critics. It includes reflective, political, nature, lyric, narrative, and humorous sub-genres, among others. This course will focus on the different tool kits used to craft several sub-genres, the development of the essay (especially in its modern form), and contemporary exemplary readings for both writers and students of literature. **Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.**
ENGL-311 Short Story (3) O/SI
This course explores the short story as an international and multicultural literary genre. This course will contain modules on craft, the development of the genre, and contemporary works. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-316 Popular Literature (3) D
This course explores literary genres and modes designed to appeal to a mass audience. Subjects may include science fiction, horror, mystery and detective fiction, romance, “chick lit,” literature into film, and pulp fiction. Students will explore the relationship between popular literature and “high” culture, the social and political contexts of literature, and the role of marketing and distribution practices. This course may be taken twice for credit, provided the course content is new. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-325 Poetry (3) SII
This course not only introduces students to the terms and techniques used in studying and analyzing poetry but also aims as broadening students' understanding and appreciation of (and delight in) poetry. This course will contain modules on craft, the development of the genre, and contemporary works. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-330 Drama I: An Historical Survey (3) O/SII
Introduction to historical and artistic developments in dramatic literature. This course provides a survey of the theatre from its classical Greek beginnings to the end of the 19th century. Stressing the relationship between social, religious, and political pressures, the course touches on major figures and movements in Western cultures in order to provide a basis for understanding today’s theatre. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-331 Drama II: Contemporary Drama (3) O/SII
Historical and critical examination of the major developments, personalities, and achievements in drama from the 19th to the 21st century. The course examines the interplay of philosophical and aesthetic changes and their influences on the theatrical product. Principal playwrights include Ibsen, Pirandello, Miller, Beckett, Fugard, and Wilson. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-340 Novel (3) O/SI
This course provides a study of the historical development of the novel as an international and multicultural literary genre from its 18th-century origins to the present day. This course will contain modules on craft elements particular to the novel (plot and chapter construction, depth of character development, multiple plot threads, and literary devices), and the evolution of the genre from its formative stage to its contemporary possibilities. Prerequisite: ENGL-101; ENGL-210 strongly recommended.

ENGL-342 Women Writers (3) D
This course discusses women’s writing as a literary tradition. Particular attention will be paid to the ways in which women writers from different time periods and cultures
represent female subjectivity. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

**ENGL-343 Native American Literature (3) D**
This course discusses Native American writing as a literary tradition. Particular attention will be paid to expanding students’ knowledge of Native American histories and cultures in order to understand the myths, themes, and techniques that recur in the literature. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

**ENGL-344 African American Literature (3) D**
This course discusses African American writing as a literary tradition. Particular attention will be paid to expanding students’ knowledge of African American history and culture in order to understand the ways in which writers from different time periods explore recurrent themes, such as home, travel, music, and the intersecting axes of identity. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

**ENGL-345 Environmental Literature (3) O**
A survey of the environmental and ecological aspects of texts, mostly about North America. Students will read a variety of literary genres from the 19th century to contemporary times and engage the history, philosophy, and ethics of the environment, ecology and sustainability. Possible authors include Henry David Thoreau, Ralph Waldo Emerson, James Fenimore Cooper, Willa Cather, Ernest Hemingway, Rachel Carson, Peter Matthiessen, Mary Oliver, Wendell Berry, etc. Students will read and analyze these texts and produce a longer analytical essay and shorter writing assignments. **Prerequisite:** ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

**ENGL-360 Studies in English Language and Linguistics (3) SI**
An introduction to the structural, social, and historical aspects of the English language. Topics include morphology, syntax, phonology, usage, history of English, dialects, first and second language acquisition, and issues related to teaching and learning English as a first and second language. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

**ENGL-370 Poetry Writing Workshop (3) SII**
This course emphasizes the techniques of poetry and helps students discover a voice. Various sub-genres of poetry will be explored—from traditional forms such as sonnets and villanelles to the more experimental forms of prose/blues/jazz/hip hop poems—in order to broaden students’ understanding and appreciation of the art of poetry writing and help them develop their style and voice. As part of the class, students also will have the opportunity to meet and hear contemporary poets and writers through the Kellogg Writers Series. **Prerequisite:** ENGL-270.

**ENGL-371 Fiction Writing Workshop (3) SI**
Through writing exercises and discussion of student writing as well as that of published authors, students will learn about the techniques and craft of short story writing: plot and character development, setting, and point of view. Various sub-genres of fiction will be introduced to broaden students’ knowledge and help to develop their voice and style. As part of the class, students will have the opportunity
to meet and hear contemporary poets and writers through the Kellogg Writers Series. 
Prerequisite: ENGL-270.

ENGL-379 Etchings Literary & Fine Arts Journal (1) A
This course is to teach the process of compiling material for a literary and fine arts magazine. Class members will learn about the process of selecting manuscripts and artwork for publication in a magazine, of establishing criteria for selecting material for publication, and of reaching consensus for material to be included. The editing and preparation of manuscripts and artwork will be discussed. The primary focus of this is the publication of UIndy’s literary and fine arts magazine, Etchings. Students will learn about the printing and production process for a literary and fine arts magazine. This will include formatting and designing a literary and fine arts magazine, composing magazine pages using a desktop publishing program, editing and proofreading literary manuscripts for publication, and working with printers. This course may be taken four times for credit. Prerequisite: ENGL-270 or permission of the instructor.

ENGL-385 Book Editing and Publishing (3) D
Acquisition of knowledge and skills required for copyediting, design, and publishing of book manuscripts and long documents. An actual editing test acquaints students with publishing standards and prepares them for similar tests in careers. Emphasis on word processing techniques for on-screen revision and on industry-standard desktop publishing software. The theory and practice of visual rhetoric underlies the course. Prerequisite: ENGL-280 or permission of instructor.

ENGL-387 Composition Theory and Practice (3) O/SII
This course explores the historical and theoretical bases for reading and writing in multiple genres and discourse communities. Students will read foundational studies in the field of rhetoric and composition as well as contemporary work in related fields of literacy, writing studies, and professional writing. The course will also focus on integrating theory with qualitative research methods as students engage in an extended research study. Students will produce written work in a range of genres that give them experience with academic and professional standards of the field. Prerequisite: ENGL-280 or permission of instructor.

ENGL-410 Literary Theory and Criticism (3) D
Study of major schools of literary criticism. The course acquaints students with the ways in which verbal structures in general—but literary texts in particular—may be approached and understood, and how understanding of literary texts may be molded into coherent, developed arguments. Prerequisite: ENGL-101 and 210.

ENGL-411 Medieval Literature and Culture (3) D
This course examines literary texts from the beginnings of literature in the English language in the eighth century up to the Renaissance (1500). Students will read Old English poetry (in modernized texts) and Middle English literature along with a few brief non-literature pieces of historical and cultural significance. Cultural forms include the romance, religious treatises, lyric poetry, and drama. Information about medieval history and religion as well as cultural movements such as courtly love will enhance students’ understanding of the literature of the period. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.
ENGL-412 Renaissance Literature and Culture (3) D
This course examines literary texts and literary movements in their cultural and historical contexts. Topics may include representative works of the poetry, drama, and prose (fiction and nonfiction) emerging during the 16th and early 17th centuries. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-413 Eighteenth- and Nineteenth-Century Literature and Culture (3) D
This course examines literary texts and literary movements in their cultural and historical contexts. Possible topics include Romanticism, the age of revolutions, realism, Victorian literature, fin de siècle literature, or a focus on a thematic preoccupation of 18th- and 19th-century writers, such as slavery, women’s emancipation, or sciences and pseudosciences. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-414 Twentieth-Century Literature and Culture (3) D
This course examines literary texts and literary movements in their cultural and historical contexts. Special emphasis is given to ethnic, cultural, and gender diversity, and required readings include a variety of works by authors of color. Possible topics include late realism, modernism, postmodernism, or a focus on a thematic preoccupation of 20th-century writers. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-415 Contemporary Century Literature and Culture (3) D
This course examines literary texts and literary movements in their cultural and historical contexts. Special emphasis is given to ethnic, cultural, and gender diversity, and required readings include a variety of works by authors of color. Particular attention will be paid to postmodernism and 21st-century writers' responses to its texts and ideas. The impact of globalization on literary studies will be addressed also. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-420: Special Topics in Literature (.5 -3) D
This course provides an opportunity for students and faculty to focus on a topic not covered in other courses. As the topic varies with each offering, this course may be repeated for credit. Previous topics have included Scottish literature, fiction of the Napoleonic Wars, Chinese and Western novels, and more. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-430 Shakespeare (3) O/SI
This class studies representative plays from Shakespeare’s career, taking a chronological approach but spanning all principal genres—comedy, history, tragedy, and romance. Students approach Shakespeare’s work as both theatre and literature, with some emphasis on contemporary social and political influences. The course objective is to enhance the appreciation of Shakespearean drama in both its original and modern contexts. **Prerequisite:** ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.
ENGL-435 Multicultural Literature (3) D
This course discusses American works by minority authors as a literary tradition. Particular attention will be paid to the ways in which minority authors from different time periods and cultures represent their experiences in America. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-436 Postcolonial Literature (3) D
This course discusses works by authors of colonized nations as a literary tradition. Particular attention will be paid to the ways in which postcolonial authors from different time periods and cultures present their perspectives on colonialism and postcolonialism. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-440 Chaucer (3) D
Reading in Middle English of the works of Geoffrey Chaucer. Students examine the moral vision, artistic unity, humor, and aesthetic beauty of Chaucer’s art. Special attention is given to the narrative, dramatic, and poetic devices through which Chaucer’s poetry achieves its effects. Prerequisite: ENGL-101; ENGL-210 strongly recommended.

ENGL-450 English Internship (1–4) D
Places students in settings in which they can practice writing and editing skills. Appropriate credit arranged for time spent. Workplace supervisor oversees work and English Department faculty member supervises and assigns grade (Satisfactory or Unsatisfactory).

ENGL-461 Methods of Teaching English as a Second or Other Language (3) O/SI
This course serves as an introduction to approaches, methods, and techniques in teaching English to speakers of other languages (and second languages in general), covering both theoretical metrical and practical applications of theory to language teaching.

ENGL-462 Language and Society (3) O/SI
Our course offers an introduction to basic concepts and issues in sociolinguistics as they relate to Teaching English as a Second Language or Other Languages (TESOL), including monolingualism, bilingualism, and multilingualism; language in society; language identity; language diversity; minority languages, dialects; language and education; second language learning; language maintenance; language prejudice; and language rights. These concepts will form the foundation for a historical and contemporary understanding of languages and language learning in the United States and in selected countries internationally, as well as the relationship of languages to education. We will address important controversies surrounding English in the United States, namely, whether English should be the official language of the nation ("English Only"), multilingualism in large, diverse societies, and whether bilingual education should be promoted or discontinued. We will also explore issues related to dominant and minority languages in multilingual nations, and issues related to English as a world language.
ENGL-463 Testing and Assessment (3) O/SII
This course addresses topics, issues, and methods related to assessing English language proficiency in EFL and ESL classrooms. We’ll explore standardized language proficiency tests, as well as informal and alternative methods of assessment for English learners. In addition, we’ll consider issues relating to L1/L2 proficiency and academic achievement, as well as the sociocultural aspects of testing and assessment.

ENGL-464 Materials Development (3) O/SII
This course will offer an introduction to the types of instructional materials used in EFL/ESL classrooms, and addresses the selection and development of instructional materials for TESOL. The course will include theoretical considerations and practical applications, including evaluating and adapting instructional materials. This course will provide opportunities for students to examine and develop instructional materials for the language classroom as well as consider how to develop and use authentic instructional materials for communicative purposes. The course will also consider the challenges of teaching in materials-poor environments, creating situationally and socioculturally appropriate materials, and tailoring materials to given ages, proficiency levels, standards, and institutional requirements in order to meet the needs of English learners.

ENGL-465 Issues in Literacy and Language (3) SII
This course introduces students to the theoretical underpinnings of literacy and language instruction. Focus on a broad range of issues in the field by examining scholarly and professional research on reading and writing pedagogies, assessment, response, process theory, literate activity, writing as a social practice, and literacy technologies and contexts for English language arts instruction. Students will produce work that benefits professional development in a range of scholarly and instructional contexts. Prerequisite: ENGL-101; ENGL-102, FYS-110, ENGL-212, ENGL-214, or ENGL-218.

ENGL-466 Pedagogical Grammar (3) O/SII
This course is designed for students who are current or prospective ESL/EFL teachers in domestic or international settings, and focuses on the teaching of grammar in a variety of EFL/ESL contexts. It is not a “grammar course” per se, because the emphasis of the course is on ways of teaching grammar rather than on acquiring or mastering knowledge of grammar itself, but the development of your own English grammar knowledge will be a peripheral outcome of the course. you will become aware of different perspectives on grammar teaching and of the influence that your knowledge about language and language learning processes may have on your own teaching. We will engage in discussion, critical analysis, and reflections of student knowledge, experiences and beliefs about language learning and the implications thereof for grammar teaching and learning. We will also analyze some of the most common grammatical structures of English that teachers and students encounter in typical reading, writing, speaking and listening materials. This will allow us the opportunity to augment our competency and credibility as language teachers. Importantly, we will address ways in which grammatical structures may be taught to English learners within contemporary pedagogical paradigms, so as to expand our repertoire of effective classroom instructional methods, techniques and materials.
ENGL-467 Second Language Acquisition (3) O/SII
What does it mean to learn and acquire a first language, and how and why is second
language learning different? What does it mean to be a successful or so-called “good
language learner”? How do individual and social differences affect L2 learning? How
does an understanding of Second Language Acquisition (SLA) research and theory
contribute to teaching practice in the language classroom? These are but a few of the
questions that we will address in our course as we examine topics and issues in the
field of SLA, and draw connections to the learning and teaching of foreign and second
languages.

ENGL-468 Second Language Psycholinguistics (3)
This course introduces you to the psycholinguistic study of bilingualism and second
language acquisition in children and adults. In it, we will explore the
neuropsychological foundations of bilingualism, including spoken and written
language processing, simultaneous and successive language acquisition, bilingual
memory and cognitive effects, and neurolinguistic and neuro-computational models
of the bilingual brain. We will also discuss methodological approaches researchers
use to study the psycholinguistics of bilingualism and the process of becoming
bilingual, including observation, experimentation, verbal and computational
modeling, and brain imaging. By learning more about these research methodologies
and the theories they have yielded, you will be better positioned to become an
effective teacher and researcher in the field of second language acquisition.

ENGL-469 Practicum/Internship in TESOL (3) O/SI
This course functions as a forum to address practicum/internship experiences with the
learning of successful education practice and models in contemporary ESL/EFL
language education. Through onsite and online discussions and tasks, coupled with
the practicum/internship placement, the course creates a significant opportunity for
students to reflect on and make connections between the knowledge and skills they
have acquired during various components of the TESOL experience. Thus, it is
expected that students who take this course are near their completion of the TESOL
program, so that they have acquired a substantial background in TESOL to apply their
learning to the ESL/EFL teaching and learning context.

ENGL-471 Advanced Poetry Writing Workshop (3) SII
This class aims at furthering students’ understanding of the craft and technique of
writing poetry. Though the primary focus will be on workshopping student writing,
students also will read and discuss essays by poets about technique, style, and craft
to enhance their understanding of the art of writing and hone not only their ability to
write but also to critique their own work as well as that of others. Students will be
expected to give a public reading of their work and will have opportunities to meet
national and local writers. Prerequisite: ENGL-370 or permission of instructor.

ENGL-472 Advanced Fiction Writing Workshop (3) SI
This class aims at furthering students’ understanding of the craft and techniques of
fiction writing. Though the primary focus will be on workshopping student writing,
students also will read and interrogate professional examples of short stories, flash
fiction, and novel chapters to further enhance their understanding of the art of fiction
writing and hone not only their ability to write but also to critique their own fiction
as well as that of others. Students will be expected to give a public reading of their
work and will have opportunities to meet national and local writers. Prerequisite: ENGL 371 or permission of instructor.

**ENGL-478 Literary Arts Programming: Kellogg Writers Series (1) D**
This course will teach students how to plan and organize a reading series: scheduling writers’ campus visits, promoting the series, and hosting writers on the day of their reading. Students will work with various campus offices as well as off-campus arts organizations to promote and coordinate writers’ series events. May be repeated for a maximum of 3 credit hours. Prerequisite: ENGL-270.

**ENGL-479 Etchings Press (1) Y**
This course alternates between two national awards for established writers. In the fall, the English Department awards a prize to a published book of young adult fiction, graphic novel, or literary fiction. The books are submitted by the authors, and students read and choose the winner. In the winter, students run a chapbook contest based on criteria and submission guidelines they generate the previous spring or summer. Students are exposed to recently published or unpublished works in the fields. The Reading Prize course focuses on building editorial reading and judging knowledge while the Chapbook Contest includes both editorial and publishing knowledge.

**ENGL-481 Substantive Editing: Making Text Readable (3) O**
Study of the characteristics of easy-to-read text and of on-screen editing techniques to simplify difficult-to-read text while preserving the author’s voice. Students learn to write better as well as to improve, through substantive revision, the writing of others. Emphasis is on conciseness, clarity, sentence variety, paragraph mastery, and style with grace. Prerequisites: ENGL-101.

**ENGL-482 Writing for the Web and Content Management Systems (3) Y**
This course will prepare students to write and edit content for websites and other online venues that they design and implement. Sometimes, written content is lost on Web pages because of overpowering multimedia, bad design, poor editing, or many other reasons. Web 2.0 software allow almost anyone to develop a content-rich and interactive website that can integrate many users and provide relevant information. This course will focus on making readable text an integral part of every page of a website.

**ENGL-485 Professional Writing Studio (3) D**
This course incorporates various modes of professional writing to create interactive, multimodal academic essays or create works and eBooks or ejournals. Topics include research methods, digital rhetoric, visual rhetoric, user interface design, and usability testing. The course uses workshop and studio teaching methods to explore how digital media, technology, and software can be applied to creative and academic writing. Prerequisite: ENGL-280 or permission of instructor.

**ENGL-489 Writing for Nonprofit Organizations (3) D**
Students enrolled in this course will focus on the writing, editing, design, and persuasion skills needed to develop many documents for nonprofit organizations. Service learning projects throughout the semester will culminate in writing a grant proposal for a local nonprofit organization. Prerequisite: ENGL-101.
ENGL-494 Independent Research (.5-3) D
This course provides undergraduate students with a structured experience in research. Students commit to either working on an existing faculty research project or developing an independent project of their own. Students may enroll in the course multiple times and earn a maximum of 6 credits. Prerequisite: ENGL-101.

ENGL-495 Capstone (3) A
To help English majors in Literature, English Teaching, Creating Writing, and Professional Writing create a portfolio and senior capstone project that showcases their learning skills gained while at the University of Indianapolis. The main purpose of the course is to substantially revise a previous work or produce a totally new work. Students will work on their project during the fall semester of their senior year and present their project to the English department and/or campus community by that semester’s end. Prerequisite: Must be an English major in senior year.

Entrepreneurial Courses
Entrepreneurial courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

ENTR-280 Small Business Venture (3) SI
Provides essential knowledge for those interested in business start-ups, including search for venture opportunities; economic, technical, and operational feasibility of venture, financing, marketing, and legal operations; and franchising and partnering. Exposure to Indianapolis Entrepreneurial Academy members and alumni/programs. Recommended prerequisites of the knowledge of accounting and some finance.

ENTR-332 Entrepreneurship (3) SII
Emphasizes further detailed planning, development and management of an entrepreneurial organization, including pre-start-up, start-up, survival, growth, and transition to professional management. Explains the function of entrepreneurship and corporate entrepreneurship. Prerequisite: ENTR-280.

ENTR-443 Managing the Venture Financing Process (3) SI
Examines, compares and contrasts venture-financing options available for new business start-ups and growing businesses, including debt and capital management. Emphasizes creating and analyzing financial documents, approaching financial sources, and managing the venture’s financial condition. Students prepare and present a full financial plan to at least three qualified outside financing sources. Prerequisite: ENTR-280, ENTR-332, ACCT-210, FIN-210.

ENTR-444 Small Business Practicum (3) SII
Students consult, shadow, and network with local small businesses engaged in for-profit manufacturing, for-profit services and a not-for-profit firm. Students develop a thorough “Profiles in Entrepreneurship” journal for each firm, working on issues in accounting, production, marketing, personnel, finance, insurance, law, and/or information systems. Prerequisite: ENTR-443.
ENTR-445 New Venture Creation (3) SI
This capstone, case-driven course emphasizes the team study and analysis of advanced business development/management issues in an entrepreneurial setting, including near and long-term strategy development and the expansion of critical thinking skills. Prerequisite: ENTR-443444.

Environmental Science Courses
Environmental science courses are offered through the biology department.

ENSC-101 Environmental Science (3) SI
Introduction to the fields of environmental science and sustainability. The course is broadly interdisciplinary in nature, providing a grounding in environmental science and scientific methods, but also touching on environmental legislation, politics, ethics, and economics as well as social forces that create and solve environmental issues. Three lectures and one 2 hour laboratory per week. Prerequisite: Math proficiency through MATH-105.

Environmental Sustainability Courses
Environmental sustainability courses are offered through Interdisciplinary Programs. Information about the program and its majors and minors can be found in the section entitled Academic Units.

SUST-410 Internship (1-8) D
A professional experience in sustainability with a nonprofit or business, supervised by a professional at the organization and by a faculty member. Academic credits are arranged by site hours per week during the semester, including summers.

SUST-430 Topical Seminar (1-4) D
A course in a specialized area in Environmental Sustainability, or this course may be cross-listed with approved courses from other departments. A student may receive credit more than once for SUST-430 if a different topic is covered each time.

SUST-440 Practicum (1-8) D
A combination of theory and practice in which scholarly work in the discipline is coupled with practical work or research experience at a nonprofit or business. Students will work closely with a faculty advisor and an on-site professional.

SUST-450 Environmental Sustainability Capstone (3) A
An individualized experience focused on student needs and interests. Students may opt to do a field-based experience (minimum 84 contact hours) with an environmentally-related organization. Reading and writing components related to the experience are required. A second option is a literature-based research paper or creative these. Students select an advisor from faculty participating in the major in consultation with the major coordinator, or as approved by the coordinator in consultation with the Environmental Sustainability major committee. Students must consult with the coordinator and have a faculty advisor prior to registering for the class. Prerequisite: Students must have senior status.
Experience Design Courses

Experience design courses are offered through Multidisciplinary Programs. Information about the program and its majors and minors can be found in the section entitled Academic Units.

EXD-101 Introduction to Experience Design (3) A
This course introduces students to the methods and concepts of experience design using hands-on methods and project management techniques. It can be taken as a stand-alone elective or serve as an introduction for students pursuing a major, minor, or concentration in experience design. There are no prerequisites.

EXD-250 For-Profit Experience Design (3) D
This course explores the ways in which society has come to rely on experiential design as a means of engaging visitors, audiences, and consumers. Through research and project-based learning, students will have the opportunity to look at a variety of for-profit applications by examining research, design, and management styles in fields ranging from the hospitality industry to event marketing to theme park design.

EXD-251 Nonprofit Experience Design (3) D
This course explores how a variety of types of learning centers (such as museums, galleries, science centers, libraries, outreach programs, and other cultural institutions) utilize experience design as a means of engaging visitors. Through research, guest speakers, fieldtrips, and project-based learning, students in this class will have the opportunity to explore various applications of experience design in the nonprofit sector.

EXD-300 Experience Design Outreach (3) D
Students will work in small groups headed by an account manager. They will work closely with specific community “clients” to design programming to meet identifiable community needs (e.g. to promote literacy, community team-building, anti-bullying strategies, etc.). Students will meet regularly with their faculty sponsor and with the community partner representative(s). Throughout the process, assessment will be conducted within the student groups, with the faculty sponsor, with the community partner, and with the targeted audience to ensure quality performance and continued quality improvement.

EXD-399 Independent Study in Experience Design (3) D

EXD-450 Internship in Experience Design (1–3) D
Gain work experience in experience design at an approved site. Students are supervised on a day-to-day basis by a site supervisor and report to the instructor on a regular basis. Internships may be arranged during Semester I or II or in the summer.

EXD-472 Experience Design Theory and Methods (3) D
This course helps students to explore the theoretical literature and methodologies of the field of experience design. Through literature surveys, comparative research, and applied projects, students will learn how to apply theory and methods to specific content, design, audience, and environment requirements as might be encountered in a professional setting. This course is not open to freshmen.
EXD-480 Special Topics in Experience Design (3) D
Examination of a topic not covered thoroughly in other Experience Design courses. Topics vary, and students may repeat the course for credit if the topic is different. This course is not open to freshmen.

EXD-490 Senior Capstone Project (1) A
The completion of the Experience Design Capstone Project provides the assessment tool for demonstrating the student’s successful acquisition of the theories and skills associated with this field of study.

Finance Courses
Finance courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

FIN-210 Finance (3) A
This course provides an introduction to financial principles that can be utilized across multiple disciplines with the overall goal of maximizing shareholder value in the organization. The concepts of financial statement analysis, forecasting, leverage, working capital management, the time value of money, capital budgeting, security valuation, and capital markets will be addressed through both lectures and regular weekly homework utilizing online software.

FIN-310 Real Estate Finance (3) SII
This course provides an introduction to the world of real estate finance through developing an understanding of essential topics and concepts including rights and ownership; title and sales contracts; lending practices including fixed rate, adjustable rate, and alternative financing; taxes and assessments; and escrow. Single-family residential property topics will include valuation, investment analysis, and tax considerations. Multi-family and commercial property topics will include property valuation, investment analysis, leasing, renting, financial leverage, and the markets involved. The subjects will be covered through lectures, guest presentations, and active approaches of problem solving and case discussions including group and individual programming. Prerequisite: FIN-210.

FIN-320 Financial Planning (3) D
This course addresses the fundamentals of financial planning in order to make informed decisions related to spending, saving, borrowing, and investing that will lead to long-term financial security both for personal purposes and/or as a professional financial advisor. Topics include cash management and budgeting, tax strategies, housing decisions, investments, estate planning, financial independence/retirement planning, and insurance needs analysis. The course provides an active approach to learning the concepts by utilizing cases and allowing students to create their own financial plan. Prerequisite: FIN-210.

FIN-330 Risk Management and Insurance (3) D
A study of risk and the risk management process begins the course. Types of applications of risk management include commercial risk, personal risk, and public risk. Each kind of insurance product is described fully and analyzed within the current marketplace. A study of the insurance industry’s role in the economy, the financial
markets, and the overall business community also is covered. The course provides in-depth analysis of the processing, investing, and evaluation of risk management. Prerequisite: FIN-210.

FIN-340 Financial Markets & Institutions (3) A
This course provides an understanding of financial markets and the financial institutions that serve those markets. Topics include a review of the Federal Reserve and monetary policy, interest rate drivers and forecasting, debt security markets, equity markets, derivative security markets, commercial banking, and non-bank financial operations with the overall goal of understanding the flow of funds between corporations, government, and individuals. An active approach to applying these concepts is utilized through real-world problems and cases. Prerequisite: FIN-210.

FIN-350 Investments (3) A
This course provides an introduction to the world of investing and provides a solid foundation of core investment theories and practices. The concepts of markets, exchanges, trading, portfolio theories, risk and return, portfolio management, and the understanding and valuation of various securities including common stocks, bonds, preferred stocks, convertibles, mutual funds, options, and futures will be addressed through both lectures and active approaches of problem solving and case discussions. Prerequisite: FIN-210.

FIN-360 Financial Modeling (3) A
This course is designed to teach students how to make financial decisions by creating dynamic models in Excel. Students will learn how to implement a financial analysis by utilizing the essential tool of Excel. This course will address practical decisions encountered in topics such as capital budgeting, valuation, financial planning, portfolio analysis, capital asset pricing model, security valuation, capital structure, and dividend policy. This course will be hands-on in nature and will include working through real-world cases and decisions faced by financial managers by building spreadsheets and analysis tools. This course will provide students with a practical skill set and competitive advantage when seeking a future career in finance. Prerequisite: FIN-210.

FIN-401 Financial Wellness (1) D
This course is designed to provide students with basic knowledge of core personal finance topics. It is required for the Healthy Diploma program and represents one of the ten indicators of personal health. The key elements of the course include understanding debt and credit, banking, automobile purchase or lease and financing options available, home purchase or rental and mortgage alternatives, establishing goals and developing a budget to achieve these goals, tax returns, insurance, investments, and retirement planning. Prerequisite: Open to Healthy Diploma students only or permission of instructor.

FIN-410 Derivative Securities (3) A
Students gain a thorough understanding of options, futures, and other financial instruments. Skills are developed in basic pricing analysis, use of pricing models, trading and hedging strategies. Students are first introduced to the basic model for pricing, hedging, and other analysis. Next, these techniques will be applied through an introduction of hedging strategies. The goal is to develop skills the students can apply in derivative markets. Prerequisite: FIN-210.
FIN-420 International Financial Management (3) A
Students are led through a study and examination of economic relationships and problems of international trade. Topics covered include currency risk and risk management techniques used in foreign exchange markets. Issues related to country and political risk also are addressed. Prerequisites: FIN-210, ECON-110 and 111.

FIN-430 Special Topics in Finance (1-4) D
Prerequisites: FIN-350.

FIN-440 UIndy Student Fund (3)
The UIndy Student Fund (USF) is a portfolio of financial assets managed by a group of students under the direction of a faculty advisor. The assets are invested under the policies contained in an Investment Policy Statement, which is reviewed annually and approved by the University board of trustees. The USF is designed to provide students with hands on experience in performing security analysis and portfolio management, while developing skills necessary to succeed as an investment professional. During this course, students will be expected to participate in a series of activities designed to further their knowledge of security analysis and investment banking. The activities will include a review of market research, fundamental analysis of securities, research report creation, and end with a presentation/recommendation to an investment committee. Most work is self-directed and students are expected to allocate a significant amount of time outside class time for this work. Prerequisite: FIN-350 and approval of the instructor.

French Courses
French courses are offered through the Global Languages Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

FREN-101 French Language and Culture I (4) SI
This is an introduction to basic French and to French and Francophone culture. This course addresses the five language skills: listening, speaking, writing, reading, and culture. The course will concentrate primarily on the first three skills (listening, speaking, and writing). This course fulfills the modern language requirement of the general education core.

FREN-102 Introduction to French Language and Culture II (4) A
This is a continuation of the introduction to basic French and to French and Francophone culture. This course addresses the five language skills: listening, speaking, writing, reading, and culture. The course will concentrate primarily on the first three skills (listening, speaking, and writing). This course fulfills the modern language requirement of the College of Arts and Sciences core. Prerequisite: FREN-101 or equivalent.

FREN-201 French Language and Culture III (4) A
This course reviews concepts from FREN-101 and FREN-102 and introduces new grammar topics. This course concentrates on the refinement of students’ French skills with particular regard to writing and reading. Students will work on developing more elaborate sentence structure through writing assignments. In addition to small readings throughout the course, students also will read a short novel. This course
fulfills the modern language requirement of the bachelor of arts degree. **Prerequisite:** FREN-102 or equivalent.

**FREN-440 Directed Readings in French (1-8) (Y/D)**
Readings in topics selected by the student with approval of the instructor. **Prerequisites:** Junior or senior standing and consent of the instructor.

**German Courses**

*German courses are offered through the Global Languages Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.*

**GERM-101 German Language and Culture I (4) SI**
This is an introduction to basic German and the cultures of the German-speaking world. This course addresses the five language skills: listening, speaking, writing, reading, and culture. The course will concentrate primarily on the first three skills (listening, speaking, and writing). This course fulfills the modern language requirement of the general education core.

**GERM-102 Introduction to German Language and Culture II (4) A**
This is a continuation of the introduction to basic German and to German-speaking cultures. This course addresses the five language skills: listening, speaking, writing, reading, and culture. The course will concentrate primarily on the first three skills (listening, speaking, and writing). This course fulfills the modern language requirement of the College of Arts and Sciences core. **Prerequisite:** GERM-101 or equivalent.

**GERM-201 Introduction to German Language and Culture III (4) A**
This course reviews concepts from GERM-101 and GERM-102 and introduces new grammar topics as well. This course concentrates on the refinement of students’ German skills with particular regard to speaking, writing and reading. Students will work on developing more elaborate sentence structure through writing assignments. Small readings throughout the course as well as the creation of a (digital) portfolio will help students with the transition to the upper-level courses. This course fulfills the modern language requirement of the bachelor of arts degree. **Prerequisite:** GERM-102 or equivalent.

**GERM-440 Directed Readings in German (1–8) Y/D**
Readings in topics selected by the student with approval of the instructor. **Prerequisites:** GERM-201, junior or senior standing and consent of the instructor.
Gerontology Courses
The gerontology courses are offered through the College of Health Sciences. Information about the college and its majors and minors can be found in the section entitled Academic Units.

GERO-301 Interdisciplinary Perspectives on Aging (3) A
An introductory-level gerontology course. It will provide the student with an introduction and overview of the field of gerontology including terminology, theoretical perspectives, research and demography, public policy, ageism, history of the study of aging, cross-cultural study of aging, end-of-life issues, career exploration, and professional ethics. Course investigations will include readings from texts and articles, accessing websites, and exploring methods for transferring learning into application. Course assignments will include projects that will require students to interact with aging adults and aging network professionals as well as projects that will require students to explore personal value systems and perceptions of aging.

GERO-305 Physical Dimensions of Aging (3) SI
Study of the effects of aging on body systems and influence of such changes on health and function. The course will include opportunities for designing strategies that facilitate healthy aging. Students will be interacting individually with content and interacting with others about the content. Learning experiences will be connected to the real world and are designed to facilitate reflections, critical thinking, and application of principles learned.

GERO-310 Aging in Society and Community (3) SII
Examines aging from both macro and micro perspectives to explore how the aging individual is affected by social and cultural forces, and, in turn, how the aging population affects the greater society. Students will draw on sociological perspectives to increase understanding of applied and theoretical issues in aging, examine the social aspects of aging through roles and relationships, and explore aging as it is related to social institutions and the concept of community. Students will consider patterns of diversity in the aging population as evidenced by race, ethnicity, socioeconomic status, and gender.

GERO-320 Psychology of Aging (3) SII
This course examines psychological aging in terms of change processes. Psychological theories of aging will be covered as well as the content areas of cognition, personality, and mental health. Students will examine normal and pathological psychological development in these domains, and some of the factors that may influence variations in aging trajectories (i.e., patterns of change over time), including interventions. In addition, several issues in the psychology of aging will be addressed, such as suicide and recognizing the differences between dementia, delirium, and depression.
Greek Courses
Greek courses are offered by the Philosophy and Religion Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

GRK-101 Ancient Greek I (3) O/D SI
Study of the fundamentals of the ancient Greek language helps the student acquire effective translating skills. Students utilize the Greek of the New Testament. Primary emphasis is given to learning the tenses, voices, and moods of regular verbs, and the declensions of nouns, pronouns, and adjectives. Secondary emphasis is given to translating biblical texts.

GRK-102 Ancient Greek II (3) O/SII
A study of irregular verbs and nouns completes the student’s grammatical base. The course emphasizes translating selected biblical texts and some non-biblical ones. **Prerequisite: GRK-101.**

GRK-105 Elementary Modern Greek I (3) D
An introductory course designed to prepare students to read, speak, and understand Modern Greek. Classes will focus on the study of grammar and vocabulary as well as on the reading of adapted passages. Classroom time will be spent on oral work and on elementary dialogues among the students and between the students and the instructor. These drills simulate everyday life situations. No previous exposure to the language is required.

GRK-106 Elementary Modern Greek II (3) D
A continuation of Elementary Modern Greek I, emphasizing the further development of skills in reading, speaking, and understanding Modern Greek. Reading selections are used from newspapers and other contemporary sources. Further classroom dialogues are written and presented among students and between students and the instructor. **Prerequisite: GRK-105 or permission of instructor.**

GRK-201 Ancient Greek III (3) O/SI
Emphasis is on translating and exegetical skills using biblical and some non-biblical texts. Students should acquire grammatical and syntactical skills as well as vocabulary proficiency. **Prerequisite: GRK-102.**

GRK-202 Ancient Greek IV (3) D
Study of more difficult biblical and non-biblical texts increases the student’s translating and exegetical skills. **Prerequisite: GRK-201.**

GRK-205 Intermediate Modern Greek I (3) D
The aim of the course is to enable students to become independent users of the language who deal effectively and with a good degree of accuracy with familiar communication situations or situations of personal interest; to understand the main points of conversations, descriptions, etc.; and to connect phrases in a simple way. **Prerequisite: GRK-106 or permission of instructor.**
GRK-206 Intermediate Modern Greek II (3) D
The course is to enable students to become independent users of the language who understand extended speech; to interact fluently and spontaneously; to understand main ideas of abstract and concrete topics; to present clear and detailed accounts on a variety of topics. Prerequisite: GRK-205 or permission of instructor.

Health Care Consumer Advocacy Courses
Health Care Consumer Advocacy courses are offered through the School for Adult Learning. Information about SAL and its majors and minors can be found in the section entitled Academic Units.

HCCA-200 Introduction to Health Care Consumer Advocacy (3) A (Accelerated)
The course is to enable students to become independent users of the language who understand extended speech; to interact fluently and spontaneously; to understand main ideas of abstract and concrete topics; to present clear and detailed accounts on a variety of topics.

HCCA-205 Foundations of Health Care Consumer Advocacy Practice (3) A (Accelerated)
The course is to enable students to become independent users of the language who understand extended speech; to interact fluently and spontaneously; to understand main ideas of abstract and concrete topics; to present clear and detailed accounts on a variety of topics.

HCCA-210 Health Care Terminology (2) A (Accelerated)
A basic overview of the vocabulary that is pertinent to the delivery of health care systems. Basic anatomy and physiology vocabulary will be included as well as common ailments, diagnoses, treatments, and payment-for-care options.

HCCA-270 Financial Management in Health Care (3) A (Accelerated)
This course is designed for those who do not have a financial background in the healthcare industry. It focuses on fiscal leadership and understanding unique to health care. The approach for this payment model system addresses financial management rather than accounting and addresses the financial management systems in hospitals, medical practices, managed-care organizations, human services support organizations, and long term care facilities. It also provides a foundation for understanding and practice regarding the selection and use of financial resources.

HCCA-300 Health Care & Community-Based Resources for the Health Care Advocate I (3) A (Accelerated)
A review of the breadth and use of health care and community-based resources will be provided. Assessing complex client needs; creating, implementing, and evaluating person-centered plans; making referrals; navigating payment-for-care options; and documenting strategies that focus on optimal use of available community-based resources and optimization of independence will be examined through role simulation and case studies. Interwoven into this course is the potential role of cultural barriers and how to address them in navigating the healthcare system effectively. These barriers may include, but not be limited to, language, communication strategies, behavioral translations, geographic location, and transportation.
HCCA-310 Information Technology for Health Care (3) A (Accelerated)
This introductory course will explore the integration of technology into the delivery of health services. History of health care informatics, health information management applications, and electronic health records will be addressed. Attention is given to the importance of confidentiality and security of patient records. Prerequisite: COMP-150.

HCCA-315 Healthcare Policies and Legislations (3) A (Accelerated)
This course will explore the history of health care legislation in the United States and internationally, as well as implications for the future within both venues. Political, social, and economic influences on policies at the various levels from patient to policymaker will be reviewed at the local, state, and international level.

HCCA-400 Health Care Advocacy Internship and Capstone (6) A (Accelerated)
This capstone course finalizes the preparation needed to pursue a career in healthcare as a Health Care Consumer Advocate, serving culturally and demographically diverse populations. Students will be presented case studies, scenarios, role-plays and simulations that integrate the content, knowledge, processes, and products from the previous Health Care Consumer Advocate courses. This course synthesizes the critical knowledge needed for advocates to serve health care consumers through all the transitions of health care, both theoretically and practically. Additionally, it will address the implications of change in the future of healthcare through a systems approach. The capstone course will allow the student to further his/her professional identity as a Health Care Consumer Advocate through participation in a professional internship.
Health Science Courses

Health science courses are offered through the College of Health Sciences. Information about the college and its majors and minors can be found in the section entitled Academic Units.

HSCI-120 Medical Terminology for Rehabilitation Professions (1) SI/Summer
This course enables participants to define medical terms built from word parts, understand terminology commonly used by rehabilitation professions, and comprehend the use of these terms in patient charts. Medical terminology built from root words, prefixes, and suffixes will be explored. Participants will also explore terms and abbreviations used in rehabilitation professions, such as physical and occupational therapy.

History Courses

History courses are offered by the History and Political Science Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

HIST-101/201 World History to 1700 (3) A
Survey of the peoples of the pre-modern and early modern world, who fashioned the foundations of the world we operate in today. This course explores early civilizations through their major religions, the emergence of various political forms, the stratification of societies, and the legacies of cultural sharing and conflict. We will examine not only the context for early civilizations in Africa, the Americas, Asia, and Europe, but also how these civilizations have shaped our present.

HIST-102/202 World History Since 1700 (3) A
Survey of the major themes in world history since 1700. Special attention is given to providing students with a basic framework of chronology and geography for understanding these themes, for appreciating the interaction among civilizations and cultures over time, and for acquiring a familiarity with the historical roots of contemporary global realities. Enrollment in 102 sections restricted to freshmen.

HIST-207 Brief History of the United States I (2) SI
Survey of selected topics in United States history through the Civil War period. Students may not receive credit for both HIST-207 and HIST-217. This course does not fulfill the core history requirement. It does not count toward a history major or minor unless taken along with HIST-208 and HIST-209.

HIST-208 Brief History of the United States II (2) SII
Survey of selected topics in United States history since the Civil War period. Students may not receive credit for both HIST-208 and HIST-218. This course does not fulfill the core history requirement. It does not count toward a history major or minor unless taken along with HIST-207 and HIST-209.
HIST-209 Readings in U.S. History (2) D
A reading course in United States history designed for students who have taken HIST-207 and HIST-208 but, owing to a change in major, need credit for HIST-217 and HIST-218. Prerequisite: HIST-207 and HIST-208. This course does not fulfill the core history requirement. It does not count toward a history major or minor unless taken along with HIST-207 and HIST-208.

HIST-217 United States History to 1865 (3) A
Survey of United States history from the European exploration and coloniziation of America through the Civil War era with special attention to the formation of American social and political institutions.

HIST-218 United States History Since 1865 (3) SII
Survey of United States history from the late 19th century to the present with special attention to the progress and problems of the United States in the 20th century.

HIST-275 Transition/Outcomes Assessment I (1) I
This course is intended to monitor the transition of History majors out of their first year of undergraduate studies. It is designed to ensure that students, by the end of their sophomore year, have the competencies and are able to produce the outcomes requires to be successful in advanced 300-level and 400-level HIST courses. This course is not open to freshmen. Prerequisite: ENGL-101.

Courses numbered 300 or above are not open to freshmen.

HIST-303 Modern Europe (4) D
Study of European history from the French Revolution to the present. The course focuses on major social, economic, and political developments; the evolution of modern Western ideologies; and the changing role of Europe within the modern world.

HIST-331 History of Latin America (4) D
This course explores the phases of Latin America history from European discovery to the present, including the colonial period, the age of independence, and the struggles of modern states. Particular focus will be given to the sources of the inequality of power within many Latin American societies and to the consequences of the inequality of power between Latin American countries and other world powers. Topics covered include European colonialism, the struggle for independence, U.S. hegemony, communist revolutions, and the drug trade. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-353 Modern Africa (4) D
Introduction to African peoples and cultures and a study of major themes that link Africa with other world civilizations and developments. These include the legacies of the slave trade and colonial domination, and problems experienced by modern African nations. This course is not open to freshmen. Prerequisite: ENGL-101.
HIST-375 Transition/Outcomes Assessment II (1) SII
This course is intended to monitor the transition of History majors into their final year of undergraduate studies. It is designed to ensure that students, by the end of their junior year, have the competencies and are able to produce the outcomes required to be successful in the HIST-475 Seminar in Historiography capstone course. This course is not open to freshmen. Prerequisite: HIST-275.

HIST-400 Ancient Rome and its Legacy (4) D
Ancient Rome and its subsequent Empire become one of the most powerful and long-standing empires to ever rule the earth. Its domination and supremacy has been admired as a front of western civilization. In this class, we will explore how a marginal village arose to control the Mediterranean, Europe, North Africa and the Middle East and how its culture from gladiators to orators sustained its diverse peoples. Rome is significant not just for what it achieved but also the legacy of what it left behind. This class will thus explore the Roman influence on other periods of history including the present. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-401 Colonial and Revolutionary America (4) D
A study of Colonial and Revolutionary America, 1607 to 1790. Emphasis is placed on the European background and colonial policy, the development of the different American colonies, the coming of the Revolution, the War for Independence, the Confederation Period, the Age of Federalism, and the impact of the Revolution in the Early Republic. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-402 Medieval Europe (4) D
This course investigates the European and Near-Eastern Middle Ages in order to challenge the common perception of this period as a “middle age” lacking in progress. Topics drawing from European, Byzantine, and Islamic civilizations include immigration from groups like the Vikings, the establishment of dominant world religions, revolutions in commerce, and the powerful transformations wrought by epidemics like the Black Death. This course will emphasize the analysis of primary source materials to illuminate our understanding of this period. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-403 Early Modern Europe (4) D
Early modern Europe (1450-1789) gave birth to the modern world we see today, but it was a traumatic process. While the hallmarks of religious diversity, capitalism, the rule of law, and the scientific revolution have their roots in this period, the transformations they triggered in Europe also sparked widespread anxiety and fear leading to rebellions against authority, debilitating poverty, and devastating warfare. This course will emphasize the methods and theories historians use to construct these early modern histories. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-404 Early American Republic (4) D
Examination of the history of the United States from the Revolutionary Era to the antebellum period. Topics include the Jeffersonian Era, the Age of Jackson, Indian Removal, Slavery, the Market Revolution, the Second Great Awakening, Romanticism, Sectionalism, Women’s Rights, and other social and cultural developments. This course is not open to freshmen. Prerequisite: ENGL-101.
HIST-405 Civil War and Reconstruction (4) D
Study of the American Civil War era through the end of Reconstruction. Emphasis is placed on the coming of the war, military and social aspects of the conflict, politics of the era, constitutional questions raised, and changes in American society and culture. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-406 The United States, 1877–1945 (4) D
Exploring the major trends of the Gilded Age, Progressive Era, World War I, the Great Depression, and World War II, this course examines the modernization of American social, economic, cultural, and political institutions in war and peace, with a particular focus on what that meant for Americans of different backgrounds. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-410 History of African Americans to 1910 (4) D
This course examines the rich and diverse history of African Americans in the United States, from the introduction of slavery to the American colonies until 1910. Via an examination of African American political, economic, and cultural history, this course provides students with the analytic framework for understanding the persistent issue of race in American life. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-415 History of the Civil Rights Movement (4) D
This class takes a broad perspective on the civil rights movement. By examining the movement’s roots in the Second World War and the legacy of the movement into the decades following the 1960s, this course encourages students to think about the ways in which the civil rights movement served as a watershed in American cultural and political life. Students will be asked fundamental questions about the movement, including when it began, who belonged, and how historians have tried to write about it. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-416 The Third Reich: Rise, Fall, and Aftermath (4) D
Study of German history from 1918 to the present. Special attention is given to the rise of Hitler, the domestic and international politics of the Nazi period (1933–45), and the legacy of the Third Reich in the years since World War II. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-419 Modern Imperialism (4) D
Examination of the impact of modern European colonial domination on the peoples and cultures of Africa and Asia and its reflection in contemporary African and Asian attitudes, politics, and economics. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-420 Indiana and the Midwest (4) D
Study of the history of Indiana and the Midwest from settlement to the present era. Emphasis is placed on the political, economic, social, and cultural development of the state and region. 
This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-422 History of the British Isles to 1714 (4) D
Survey of the history of Britain from the ancient world to 1714. Topics will include the development of medieval monarchies, legal, religious, and constitutional developments, and society and culture, focusing on issues of identity and nationality.
Throughout the course the interaction between the “Four Kingdoms” (England, Ireland, Scotland, and Wales) will be stressed. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-423 Modern Britain (4) D
This course will study the evolution of Modern Britain and the role of Britain in modern history. Major themes will include the development of parliamentary government, the zenith and decline of the British Empire, and Britain’s evolving role in Europe. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-427 Modern Russia (4) D
History of Russia from tsarist times to the present. Topics covered include the problem of reform in Imperial Russia; the collapse of the old regime; Lenin, Stalin, and the establishment of the communist dictatorship; World War II and the Cold War; the post-Stalin era; and social, economic, and political issues in the former USSR today. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-464 United States Diplomatic History to 1945 (4) D
Investigation of major episodes in American foreign relations and a critical examination of the evolution of the nation’s diplomatic tradition from its founding through World War II. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-465 The United States and the World Since 1945 (4) D
Study of world affairs and especially the preeminent international role of the United States since World War II. Topics covered include the Cold War, the Korean War, nuclear strategy, disarmament, the Vietnam War, the Middle East, and the global economy. This course is not open to freshmen. Prerequisite: ENGL-101.

HIST-475 Seminar in Historiography (4) SI
Detailed analysis of the historical method and the problems of writing history. Students have the opportunity to conduct research and write history. Prerequisite: HIST-375.

HIST-480/481/482/483 Special Topics in History (1–4) D
Comprehensive examination of an historical topic not covered thoroughly in other advanced history courses. Topics vary, and students may repeat the course for credit if the topic is different. This course is not open to freshmen. Prerequisite: ENGL-101.
Honors Courses
Honors courses are offered through the Honors College. Information about the Honors College can be found in the section entitled Academic Programs.

These courses may be taken at any point in a student’s career, with the exception of HON-400 having to be taken before HON-490.

In addition to the courses listed below, Honors College students with at least 30 earned credit hours with a GPA of 3.3 or higher may elect to up to 6 credit hours of coursework as “Honors Option.” Honors Option affords students the opportunity to develop original work that explores innovative connections, the synthesis of ideas, in-depth analysis, or creative expression beyond that offered in a standard course. Honors Option course proposals must be approved by the Honors College Committee prior to the start of the semester in which the Honors Option course is to be taken.

ART-110 Honors: Art Appreciation (2) SII
Exploration of the visual arts with emphasis on media, design principles, and the place of art in human society, past and present. *Note this particular honors class will likely focus on Impressionism.

BIOL-155 Honors: Introduction to the Diversity of Life (4) SI
A broad survey of life and its history, diversity, and classification. Students will become acquainted with the major groups of prokaryotes, protists, animals, plants, and fungi. Three lectures and one two-hour laboratory period per week. Prerequisite: MATH-105 or its equivalent.

CHEM-161 Honors: General Chemistry II Lab (1) SII
Laboratory course to accompany CHEM-160. Laboratory experience focusing on properties of chemical solutions, reaction kinetics, chemical equilibrium, thermodynamics, and electrochemistry. Two hours of lab per week. Corequisite: CHEM-160 General Chemistry II.

CHEM-261 Honors: Organic Chemistry II Lab (2) SII
Laboratory to accompany CHEM-260 Organic Chemistry II. Introduction to techniques of modern organic chemistry emphasizing reactions involving alcohols, ketones, carboxylic acids, and their derivatives. Three hours of lab and two hours of lecture per week. Corequisite: CHEM-260 Organic Chemistry II.

ENGL-102 Honors: Western World Literature and Composition (3) D
Honors English is an introduction to themes and genres of Western world literature. Students read and discuss classics from ancient Greeks to Shakespeare and the modern period. Students write short papers and a research paper, with emphasis on thesis, organization, documentation, style, and grammatical correctness. Prerequisite: ENGL-101 with a grade of C or above.

ESCI-206 Honors: Time, Trilobites, and T-Rex (3) O/SII
This course provides an introduction to the field of historical geology and the evolution of life, with a specific focus on the geology of Indiana. Through lectures and labs, students learn how the scientific method has been used to formulate and test various scientific hypotheses and theories related to the historical sciences.
Hands-on labs teach students how to identify different kinds of minerals, rocks, and fossils, and how to infer paleoenvironments based on their distributions. Additionally, students learn about the vastness of geologic time and how organisms have evolved throughout the billions of years of Earth’s history. The course includes two hours of lecture and two hours of lab per week. Prerequisite: Math proficiency through MATH-105.

**FYS-140 Honors: Poverty and Wealth in Politics (3) SI**
While the United States consistently ranks as one of the first world countries with the greatest percentage of citizens in poverty, it simultaneously outspends every other country as candidates fund their campaigns in so-called democratic elections. The paradox of poverty and wealth is visible in nearly every aspect of American politics, from social welfare polices to campaigns and elections, yet the as pervasive as the inequity may appear, it is inherently complex. How does poverty and wealth manifest within our political institutions, our political behavior, and our policies? How does it embody or defy the democratic principles of equity, liberty, and freedom upon which our society was founded? Perhaps most importantly, what does the contradiction between wealth and poverty from a political perspective tell us about our culture and ourselves? This course will explore the complicated but exciting political dimensions involving wealth and poverty and challenge students to think beyond the binaries as they deconstruct the paradox of American politics.

**FYS-140 Honors: Gender in Toyland (3) SII**
This interdisciplinary course examines the ways children are socialized into traditional gender roles through one of the most ubiquitous aspects of their lives – toys. We will begin by examining the gendered messages encoded in toys, toy advertising and other media tie-ins involving toys, in order to explore the how they contribute to and shape our understanding of what it means to be a boy and a girl in today’s world. Historical and cross-cultural comparisons of toys and toy advertising will provide a spring board to think critically about the process of gender socialization and the ways children actively construct their own unique conceptualizations of gender by creatively interpreting, negotiating, and resisting these messages in order to “do” gender their way.

**FYS-180 Honors: Poverty and Wealth in Anthropology (3) SI**
In this course, we will examine complexities and conditions of global poverty and wealth in relation to contemporary United States and Mexico. We will consider questions such as, “What is the nature of poverty and why does it persist?” “What are the causes and consequences of impoverishment?” And, “Through what political economic institutions and sociopolitical processes can impoverishment be linked to the genesis and maintenance of wealth?” While ethnographic literature focused on lived experiences of poverty and wealth will provide our point of departure, readings from political science will focus our attention on the larger sociopolitical themes and debates threaded through these accounts.

**HIST-202 Honors: World History Since 1700 (3) D**
Students will focus their attention on 10 important issues selected from world history since 1500. For each of these issues, background readings and discussion will be
followed by student activities designed to demonstrate understanding and critical analysis. *Note: This class is open only to entering freshmen.*

**INTD-230 Honors: Communiversity (1) SI**
This course brings together current students, alumni, faculty, staff, and community members to model and promote life-long learning. In addition to our online discussions, the course is augmented by a lecture and performance series featuring scholars who will provide multi-disciplinary perspectives.

**KINS-104 Honors Wellness and Fitness for a Lifetime (2) A**
A highly experiential introduction to the eight dimensions of wellness: physical, mental, social, spiritual, intellectual, environmental, occupational, and financial. Students will determine their individual overall wellness level and engage in interdisciplinary activities, field trips, and projects to examine social, environmental, and other structural influences on wellness. *Lab fee: $20.*

**NURB-330 Honors: Methods of Nursing Research (3) SII**
An introduction to basic research concepts and the research process as applied to evidence-based practice are presented in this course. Concepts include qualitative and quantitative research, statistics, and scientific writing. Knowledge of the research process and the concepts are demonstrated through writing critiques of published nursing research and a group presentation of an evidence-based project. This course provides the foundation for the reading and understanding of nursing research, incorporating nursing research into nursing practice, and collaboration on research teams.

**PHIL-130 Honors Philosophy: Poverty Ethics and Effective Giving (3) SI**
The course will focus on two questions. The Ethics Question: Are affluent people morally required to give their resources to help out the worst off people in the world — and if so, how much are they required to give? The Effectiveness Question: What is the most good one can do with their money? On Mondays and Wednesdays, we will focus on developing ethical reasoning skills by studying, and evaluating, various answers to The Ethics Question. On Fridays, we will learn about the conditions of the worst off people in the world, various interventions for helping them, and methods used to evaluate those interventions. We will use what we learn on Fridays to answer The Effectiveness Question. At the end of the course, our answer to The Effectiveness Question will determine how we will direct some money (at least $3000) to do the most good possible.

**PSCI-101 Honors: American National Government (3) D**
This course challenges students to think critically and creatively about the federal government. Students study the core concepts of American democratic theory — judicial review, separation of powers, and balances and federalism. The course also explores the role of political parties, elections, and the media in American politics and examines the enduring significance of the civil rights movement and of the women’s movement.

**PSY 245 Honors: Lifespan Psychology (3) SI**
This course is part of the Developmental core content area of the psychology major
and provides a survey of a scientific discipline, this course will include three major components: theory, methodology, and empirical findings. Students will be introduced to the major theories of human development in the cognitive, social, and emotional realms. Additionally, the practical application of theories, methods, and basic-science findings will be examined.

**PSY 345 Honors: Abnormal Psychology (3) SII**
This course examines the major forms of abnormal behavior. Topics include the symptoms and diagnostic criteria for various types of mental illness, theories about how different types of abnormal behavior develop and are maintained, and various therapeutic approaches used in treatment of mental disorders. Current research and empirical findings related to abnormal behavior are presented.

**REL-130 Honors: Readings in Christianity (3) A**
The Honors Religion course provides academically motivated students with a set of primary and secondary readings that allow them to engage texts and issues from the Christian tradition in a manner that satisfies the University’s religion requirement. The format of the course will be primarily discussion. The Honors Religion course combines primary source material (texts produced during the particular historical period under consideration) and the secondary sources (books, articles, etc. by scholars of that historical period). Within this format, different historical periods and different sets of primary source material can be offered, depending on the expertise of the individual instructor.

**SOCS-200 Honors: Exploring Human Complexity (3) D**
An in-depth interdisciplinary study of the many components that influence the development of individuals within both their specific groups and the context of Western culture. Various elements in this multifactorial and reciprocal model of human functioning will be explored, with focus on the interaction between them. Each element influences both the individual and the impact of the other elements. Components of the model include topics in biology, anthropology, sociology, psychology, and family theory.

**HON-201 Artistic Works, Value, and Criticism (3) D**
This course introduces students to fundamental philosophical problems in the fine arts and humanities (art, music, literature, theatre) with special attention given to the nature of artworks and character of aesthetic experience. The course also takes a historical approach to examine how our current understanding of the nature of artistry and artistic works developed and how theoretical work in the last fifty years currently influences our thinking on these matters. This course fulfills the philosophy requirement of the general education core.

**HON-202 Nature and History: How the Natural World Influences the Course of Civilization (3) D**
Years of formal education have created artificial barriers in students’ thinking between the several disciplines. These barriers are particularly apparent between the sciences and the histories of human societies. This interdisciplinary course for students in the Honors College is designed to encourage students to think beyond those barriers and explore the relationships between nature, culture, and events in world history from different perspectives. Its secondary purpose
is to compare and contrast two ways to approach answering questions—the scientific method and the historical method.

**HON-203 Honors Seminar in Philosophy (3) SII**
Moral language designates ways in which we can judge the permissibility of actions, the justice of laws and institutions, and even the character of individuals. It allows us to hold ourselves and others accountable to standards that are deeply important to who we are as human beings. But what gives moral claims their weight? Why should we do the things that people tell us to do? Can I ever judge myself to have made a moral error, and if so what are the signs that such an error has been made? If I have made a moral mistake how do I correct for it? What gives groups, even governments, moral authority? These questions indicate the importance that moral values have in our lives; an importance that is reflected in the primary literatures that have developed around it such as ethics, political philosophy, and philosophy of law, as well as the influence it has had on issues in moral psychology, action theory, epistemology, and metaphysics.

**HON-302 The Arts: Connections and Relevance (3) D**
An interdisciplinary experience in the arts including investigation of interrelationships between a variety of art forms in the use of basic artistic elements, creation of styles, expression of emotion, and communication of ideas. Discussion of aesthetics and meaning in art, connections and relevance between arts and the broader spectrum of human endeavor past and present. Classroom experiences include presentations and interactions with practicing artists in music, visual arts, and theater. Field trips include museum, concert, theater, and other live arts experiences.

**HON-310 Art in Focus (3) D**
Art in Focus is an Honors course that focuses in-depth on an art movement: its artists, their artworks, the ideas they shared, and the society in which they worked. The course sets the stage for the development of the art movement and ends with the influence of the art movement or subsequent art movements, artists, and artworks. Content may vary by topic.

**HON-340 Washington Semester Program Seminar (4–8) A**
Highly interactive and in-depth examination of key issues related to one of the following focal areas of study: American Politics, Contemporary Islam, Economic Policy, Foreign Policy, International Business and Trade, International Environment and Development, International Law and Organizations, Print and Broadcast Journalism, Justice, Peace and Conflict Resolution, Public Law, or Transforming Communities. Seminars involve simulations, case study, debate, lectures, and class discussion. Integral to the seminar experience are meetings with leaders and experts in the field on at least a weekly basis. Students are evaluated on the basis of participation, exams, written assignments, group discussions, and group project. This class is held in Washington, D.C., in conjunction with American University. Some areas of study also require international travel. **Prerequisite: Permission of chair of Honors College required.**

**HON-342 Washington Semester Program Internship (4 ) A**
Practical experience in appropriate agency related to focus area of study, involving working two days a week (about16 to 20 hours a week) combined with weekly, half-day class sessions to supplement and process field-based learning. Students
participate in an internship placement fair and are required to interview at least three internship sites. This class is held in Washington, D.C. in conjunction with American University. Faculty at American University facilitate student selection and placement, as well as supervise the internship. Prerequisite: Permission of chair of Honors College required.

**HON-343 Washington Semester Program Research (4 ) A**
A highly individualized course designed to develop basic research skills and engage in an in-depth study of a topic. This class is held in Washington, D.C. in conjunction with American University. A member of the American University faculty is assigned to the student to facilitate research. Prerequisite: Permission of chair of Honors College required.

**HON-350 Global Women (3) D**
This course explores the historical development of women’s human rights, the local and global conflicts surrounding women’s struggles, and contemporary understandings of women’s activism and resistance to oppression. Using a human rights framework, this course examines the lives of women from diverse societies and time periods, as well as the means by which women have worked individually and collectively to gain basic human rights. This course also examines major human rights issues impacting women today and how they relate to a variety of topics, including: culture, religion and tradition: violence against women; sexuality and health, marriage, motherhood and family life, war and refugees; work and immigration, asylum seekers and trafficking, education, politics, and the economy. The course concludes with an analysis of the role of women’s organizing in effecting progressive social change.

**HON-400/410 Honors Proseminar (0.5) A**
Preparation for all phases of the capstone Honors Project and introduction to ethical considerations related to conducting research with human participants, funding project ideas, and selecting a faculty adviser to supervise the final Honors Project. Emphasis on developing a literature review, project methodology, the role of collaborative planning, and revision/resubmission processes. Students work together in a project team to troubleshoot, engage in peer review, and help one another produce successful project proposals. Additional topics and discussions are tailored to the development of each person’s project. The class is graded on a credit/no credit basis based on submission of a full project proposal for review by the Honors College Committee. Prerequisite: Permission of chair of Honors College required.

**HON-480 Honors Topical Seminar (1–3) D**
Interdisciplinary topical study designed to challenge and broaden the intellectual horizons of Honors College students. Topics and format vary as determined by the special interests and needs of students and the expertise of faculty. May be repeated one time as topics change.

**HON-490 Honors Project (1-6) A**
A capstone experience of the Honors College. The student may register for HON-490 only after the Honors College Faculty Committee has approved the honors project proposal. Prerequisite: HON-400 or HON-410 and permission of chair of Honors College.
Resource Management Courses Human

Human resource management courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

HRM-381 Human Resource Management (3) A
Study of the organization, objectives, functions, and problems in human resource management. The management of EEO, affirmative action plans, unions, compensation and benefits, OSHA and EPA compliance, training and development of employees, and the importance of human resources in organizational effectiveness are primary topics.

HRM-384 Labor Law (2) D
Review of labor statutes from the New Deal to the present. The National Labor Relations Act, Fair Labor Standards Act, regulations of OSHA and EEO, Americans with Disabilities Act, and similar laws are studied. Prerequisite: HRM-381. (Management majors with HRM concentrations may substitute additional legal readings in lieu of the prerequisite.)

HRM-385 Employee Benefits and Compensation (3) D
Survey of the various employee benefits and administration of benefit plans, with special attention to IRS and DOL requirements. Prerequisite: HRM-381. (Management majors with HRM concentrations may substitute additional legal readings in lieu of the prerequisite.)

HRM-481 Organization Development (3) D
This course introduces the field of Organization Development, the theory and practice of bringing planned change to organizations. OD focuses on ways companies and individuals diagnose and solve problems that limit organizational effectiveness. The course is theoretical and applied in terms of organizations, issues in OD, and OD tools and techniques. Prerequisite: HRM-381.

HRM-482 Collective Bargaining and Management (3) D
Introduction to study, practice, and issues of collective bargaining. Topics include formation of unions, contract issues and formulation, violation of contract, and remedies; international unions; legal aspects of labor laws, employee rights, and employer rights; social environment; and ethical issues. The second half of the semester concentrates on management issues; departmental relationships; structure; unionized versus nonunionized environments; and accountability. Prerequisites: MGT-281 or 234, and junior or senior standing (HRM-384 is recommended).

HRM-483 Training and Development (3) D
This course is an overview and introduction to the discipline, skills, and knowledge base associated with training and development as done in organizations. The major focal points are to introduce students to what is actually done in organizations and prepare them for introductory positions in corporate training departments. Prerequisite: HRM-381.
Industrial and Corporate Security Management Courses

Industrial corporate and security management courses are offered through the School for Adult Learning. Information about the college and its programs can be found in the section entitled Academic Units.

ICSM-200 Foundations of Industrial and Corporate Management (3) (Accelerated)
In this survey class, students will be introduced to theoretical and practical concepts related to industrial and corporate security including assessing and evaluating plans that are aimed at protecting human, IT and physical assets of an organization.

ICSM-300 Securing Personal Assets (3) (Accelerated)
People are the most critical component of a secure workplace. In this course, students will explore personnel security issues from a Human Resources and a Corporate Security perspective. Topics will range from background checks and hiring to training personnel for natural and human made crisis situations.

ICSM-320 Securing IT and Physical Assets (3) (Accelerated)
IT and physical assets are two parts of organizations that are becoming easier to breech. In this course, students will explore issues concerning the security of IT and physical assets for organizations of varying sizes beginning with an overview of risk analysis and ending with the foundation of a plan for minimizing risk to IT and physical assets.

ICSM-350 Industrial and Corporate Security Communication (3) (Accelerated)
Waiting until there is a threat or hazard in the workplace is too late. Being proactive and building crisis and security communication plans is a necessity for today’s workplace. Through a hands-on approach, students will learn the fundamentals of a crisis and security communication plan, analyze plans and begin to build their own.

Industrial and Systems Engineering courses

Industrial and Systems Engineering courses are offered through the R.B. Annis School of Engineering. Information about the school and its programs can be found in the section entitled Academic Units.

ISEN-210 Introduction to Industrial Engineering (3) SI
Students are introduced to the industrial and systems engineering profession, given a sense for the nature of problems and challenges addressed historically by industrial engineers, and the nature of problems and challenges they are likely to in the future. They are exposed to the fundamentals of data manipulation and analysis; holistic problem definition and problem solving. They are also introduced to the importance of communication skills, the nature of career opportunities, importance of professionalism, ethics, contemporary challenges, lifelong learning. Prerequisites: ENGR-196 and MATH-191 both with a grade of C- or better or permission of instructor.
ISEN-220 Process Modeling and Simulation (3) SII

Students are introduced to simulation as a process of designing a model of a system and conducting experiments to understand the behavior of the system and/or evaluate various strategies for the operation of the system. Topics include the modeling & simulation development process, fidelity, accuracy and resolution of models, verification and validation, methodologies: (Continuous, discrete, Monte Carlo, agent-based, system dynamics, games and virtual worlds). A series of case studies will be used to illustrate modeling in a variety of contexts. Prerequisites: MATH-330 and CSCI-155 both with a grade of C- or better or permission of instructor.

ISEN-300 Human Factors Engineering and Ergonomics (3) SI

Entrepreneurs play vital roles in creating solutions to many challenges facing society. They create enterprises that provide jobs, improve productivity, increase prosperity, and enhance the quality of life of the people. Many great companies have been founded by people with engineering and science background. The course introduces the students to critical concepts and tools they will need to identify opportunities, create solutions, and build successful enterprises, particularly technology ventures that are based on technological innovations. The course will be hands-on and will center around the customer development methodology. The students will learn how to work with team, identify business opportunities, and apply the customer discovery process to validate the opportunity and solution. They will also learn about legal formation, intellectual property protection, licensing, acquiring resources, financial planning, sources of funding, and leadership. The class will be highly interactive comprising of lectures, active discussions, and team activities focused on the customer discovery process for a start-up company. Prerequisites: ISEN-210 and MATH-270 both with a grade of C- or better, or consent of instructor.

ISEN-310 Operations Research II (3) SII

Operations Research (or management science) uses mathematical modeling to design, improve, and operate complex systems. The students will learn modeling and solution techniques for decision-making problems that are used by many companies to save or earn millions of dollars. They will be introduced to advanced concepts in deterministic and stochastic operations research, including integer programming, advanced linear programming, nonlinear programming, dynamic programming. They will be introduced to the models that are commonly used in the analysis of complex decision-making problems. They will learn how to formulate practical problems into mathematical models based on acceptable assumptions. The analysis, interpretation and effective presentation of results will also be covered. Prerequisite: Operations Research I (MATH-335) with a grade of C- or better, or consent of instructor.

ISEN-320 Facilities Planning (3) SII

Students will learn the theory, concepts, and methods for designing and analyzing facilities and material flow in manufacturing, storage, and distribution environments. Topic areas include material handling systems, facility layout, facility location, warehousing, distribution, logistics, and transportation. Prerequisites: MATH 270, Process Modeling (ISEN 220) both with a grade of C- or better, or consent of instructor.
ISEN-410 Introduction to Systems Engineering and Design (3) SI

Students are introduced to the fundamentals of systems engineering. Case studies and examples are used to convey the principles and concepts of systems engineering and design – and executed on a student selected team project. The emphasis is on a good understanding of competitive and customer drivers – development of system use scenarios, and generation of innovative solutions. The iterative influence of problem understanding and solution development on each other is emphasized. Students experience and reflect on design analysis, synthesis, and evaluation activities as they progress through the conceptual and preliminary design phases. Emphasis is placed on tools and methodologies for system evaluation during all phases of the design process with the goal of enhancing the effectiveness and efficiency of deployed systems as well as reducing operational and support costs. Prerequisites: Operations Research II (ISEN-310), and MATH-351 (Prob & Stats II) both with a grade of C- or better, or consent of instructor.

ISEN-420 Statistical Quality Control (3) SI

The students will learn how to apply statistical methods and probability models to monitor and control product quality. They will learn techniques for acceptance sampling by variables and attributes. They will examine Shewhart control charts for both classes of quality characteristics in depth. They will understand the motivation for each method, its theoretical development, and its application. The emphasis of the course is on developing an ability to design effective quality control procedures. Prerequisites: Process Modeling (ISEN-220), MATH-351 both with a grade of C- or better, or consent of instructor.

ISEN-430 Analysis of Networks and Strategies (3) SI

Our existence depends on very complex systems such as communications infrastructures that integrate billions of cellphones with computers and satellites. Given the important role complex systems play in our daily life, in science and in economy, their understanding, mathematical description, prediction, and control is of great importance. The course provides the students with an understanding of the complexity, structure and dynamics of a highly connected world. The students are introduced to an interdisciplinary perspective to reflect on economics, sociology, information science and applied mathematics to discuss fundamental features of networks and their behavior. In addition, the course will introduce the students to the four primary tasks that a network analyst typically concerns herself with: network data management, network visualization, network description, and network modeling. Prerequisites: Operations Research II (ISEN-310), Process Modeling (ISEN-220), Prob & Stats II (MATH-351) all with a grade of C- or better, or consent of instructor.

ISEN-440 Logistics and Supply Chain Management (3) SII

The world and the business environment is changing dramatically. Logistics and supply chain management continue to play increasingly important role in improving organizational efficiency, effectiveness, and competitiveness. This course provides the students with an introduction to supply and value chains, logistics, and supply chain management. Key topics that will be covered include metrics for performance of supply chains, inventory and sourcing, pricing, and transportation. The course will also address distribution networks, and planning for supply and
demand. Contemporary topics such as global supply chains, supply chain resilience, and use of information technology will also be covered. **Prerequisites:** Operations Research II (ISEN-310), Prob & Stats II (MATH-351) all with a grade of C- or better, or consent of instructor.

**ISEN-450 Lean Methods and Processes (3) SII**
The students are introduced to fundamental concepts of lean methods and processes from a practical and historical standpoint. The focus is on analyzing processes with the intent of maximizing value while reducing waste. The students are exposed to the application of key concepts such as value, flow and pull, and Kanban; and tools such as process maps, fishbone diagrams, and value stream maps. **Prerequisites:** Operations Research II (ISEN-310), Prob & Stats II (MATH-351) all with a grade of C- or better, or consent of instructor.

**ISEN-460 Introduction to System Architecture and Design (3) SII**
System Architecture is the study of early decision making in complex systems. The course provides a practical introduction to System Architecture and Design. Lectures and case studies will introduce students to the need for an architecture for a solution; different perspectives on a solution architecture; models and tools for defining solution behavior; representing logical/functional and physical partitioning; defining and managing interfaces. The students will learn how to assess the quality of an architecture, while also discussing aspects of system verification and validation. The students will learn how to use commercially available system architecture and design tools, and apply it on a class project. **Prerequisites:** Intro to Systems Engineering and Design (ISEN-410), Process Modeling (ISEN-220) all with a grade of C- or better, or consent of instructor.

**Interdisciplinary Courses**
The following interdisciplinary courses are offered through the Shaheen College of Arts and Sciences. Information about the college can be found in the section entitled Academic Units.

**INTD-101 New Student Experience (1) A**
New Student Experience is a transition course designed to facilitate students’ integration into the learning community of UIndy. The course helps new students in their first semester of enrollment to develop skills and relationships that will serve them well as they pursue their degree and career goals. The course uses a combination of in- and out-of-class experiences and covers topics relating to academics, career development, student involvement, campus culture, and Education for Service.

**INTD-150 Research Colloquium (1) D**
This course provides an introduction to research, learning, and professional skills in the multidisciplinary Research Fellows program. The Fellows’ interests will be investigated and developed through a weekly colloquium, in which emphasis is placed on technical reading, writing, discussion, and presentation of topics in a broad range of disciplines. **Prerequisite:** enrollment in the University of Indianapolis Research Fellows Program.
INTD-201/202 Lecture/Performance Series (.5) A

The Lecture/Performance Series complements the General Education Curriculum by providing an opportunity for students to attend programs of intellectual and/or cultural significance outside of the normal classroom setting. The format of the Lecture/Performance Series is designed to give students some choice in the events they attend and to provide for flexibility in scheduling. Varied events are scheduled throughout the semester. These events vary in length from one to three hours. To earn .5 hour of academic credit, a student must attend a total of 10 events. Requirement details are available on the UIndy intranet at my.uindy.edu.

INTD-205 Interdisciplinary Internship (1-3) A

This interdisciplinary course intends to help students associate their applied learning experiences to the University’s learning goals of performance, critical thinking, and creativity. Students participating in multifaceted internships may enroll in this course for academic credit, pending internship approval. Students may receive a maximum of 6 credit hours from the Interdisciplinary Internship course. Permission to enroll is granted by the course supervisor. Students must adequately meet the course’s academic and performance standards, receive satisfactory evaluations, and demonstrate learning and professional growth to be eligible for subsequent enrollment in the course. Internships are arranged during Semesters I or II and in the summer. Prerequisite: Sophomore status, good academic standing, ENGL-101, demonstrate MATH competency, and registration with Career Services via JobHoundConnect.

INTD-230 Communiversity (0-1) D

This course brings together current students, alumni, faculty, staff, and community members to model and promote life-long learning. In addition to our online discussions, the course is augmented by a lecture and performance series featuring scholars who will provide multi-disciplinary perspectives. While attendance at the lecture/performance series is not required, students are strongly encouraged to attend as many as possible to enrich the experience in the course.

INTD-301 ST: Early Developing Multicultural Competencies in Leadership & Service (3)

This is course that is a part of a series of interdisciplinary courses geared to the development of multicultural competencies in leadership and service. The course explores the culture, traditions and multifaceted experiences of the Burmese population who have resettled in Indianapolis, Indiana over the past few years. Through in-class discussions, guest speakers, experiential learning activities, and community-based service-learning projects, the course will examine the strengths and vulnerabilities of this population and the inherent challenges involved in the process of resettling in an unfamiliar country and culture. The course will incorporate a substantial service-learning component in which students will engage with Burmese community members and work alongside them to address areas of need. The course will also foster leadership skills by challenging students to leverage their natural strengths in order to lead small teams in the development of collaborative community projects.
INTD-305 Vulnerability: An Interdisciplinary Perspective (3)
This interdisciplinary course will explore the problematic of vulnerability from a range of perspectives. To aid in our approach to vulnerability, one of our guiding questions will be to access to what extent human vulnerability is intrinsic (a consequence of human embodiment) and to what extent it is extrinsic (vulnerability produced through social and geopolitical processes). Through discipline related discourses, we will also consider what's at stake in treating vulnerability as a source of pleasure as well as of pain.

International Business Courses
The international business course is offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

IBUS-201 International Business (3) A
Introduction to the field of international business: national economic and cultural differences; international trade policies and institutions; foreign direct investment; regional economic integration; global competition; and current international business trends and developments.

IBUS-310 Global Leadership Seminar (3) SII
The increasingly global economy, as well as the more diverse domestic environment, creates a need for individuals to increase international knowledge and skills. Consumer marketing, human resources, multinational manufacturing, recruiting, team coordination, negotiations, and conflict resolution are examples of business areas directly affected by domestic and international diversity. This course is focused on these issues and is designed to smooth the way for students who will face complex business issues in the global arena.

International Relations Courses
International relations courses are offered through the History and Political Science Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

IREL-100 World Regional Geography (3) A
Survey of world regions examining the environmental, cultural, historical, and economic processes that make each region unique, as well as its connections and commonalities with other world regions. The course considers cultural landscapes, human relationships with the natural environment, spatial patterns of human interaction including diffusion and settlement, and the uniqueness of place around the world.

IREL-101 Introduction to International Relations (3) A
An introductory survey of the issues and problems in relations among states. The principal objective is to introduce students to the discipline of international relations and to encourage a critical appreciation of contemporary international issues. Topics covered include international organizations and their role, international law and diplomacy, global and ethnic conflicts, and the functioning of the global economy.
Courses numbered 300 or above are not open to freshmen.

IREL-300 Model United Nations (1) SI
Study of contemporary international relations through simulation of the United Nations Security Council and other international organizations. Students research and prepare position papers and resolutions on issues from the perspective of various nations and participate in intercollegiate Model UN and European Union meetings. This course is not open to freshmen. Prerequisites: IREL-101 and ENGL-102.

IREL-302 Model European Union (1) SII
Study of contemporary European relations through a simulated exercise of the EU councils. Students participate as members of a country’s delegation and research their own and other states’ positions on EU affairs, culminating in an intercollegiate summit where they interact with other teams. This course is not open to freshmen. Prerequisites: IREL-101 and ENGL-101.

IREL-309 Economic Geography and Globalization (4) O
This course is an introduction to basic principles and different approaches to economic geography and globalization, including an historical perspective on contemporary issues of development, trade, and migration. This course is not open to freshmen. Prerequisite: IREL-100 and ENGL-101.

IREL-335 Comparative Politics (4) D
The course introduces students to types of government as well as to the methodology of comparison. This course is not open to freshmen. Prerequisite: ENGL-101 and IREL-101 or PSCI-101.

IREL-336 Political Development (4) D
This course will examine the nature of political development in different states and analyze why different trajectories have been and are being chosen. It introduces the notion of change through an examination of the developmental paths taken by developed and developing states and their respective problems. The course combines theory, history, and geography in its study of political development. Therefore, it will familiarize students with contemporary problems within the developing world, as well as fulfill the objective of introducing students to one of the three subfields of comparative politics. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-343 Foreign Policy Analysis (4) D
This course examines the leading theoretical approaches to the study of foreign policy. It seeks to provide students with the ability to critically evaluate theoretical literature on foreign policy. Theories representing all the major approaches including decision-making, leadership, public opinion, and psychology are explored. Topics covered include examination of Realist vs. Liberal paradigms, models of decision-making, and the role of culture in the making of foreign policy. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.
IREL-345 International Relations Theory (4) SI
Survey of major theoretical schools and important concepts in the study of international relations. Areas covered include Realism and its variants, Neo-Liberal and Regime theories, and cognitive and perceptual decision-making models. Attention also is given to appropriate methods and research strategies in the study of international relations. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-346 U.S. Foreign Policy: Decision-Making and Process (4) D
Study of the processes of making and implementing foreign policy decisions in the United States federal government. Major topic areas include a survey of relevant federal agencies and branches of government, their inputs to the foreign policy decision process and their interactions; and theories of decision-making, including rational choice, bureaucratic and political models, and individual psychological explanations of foreign policy choice. Students should acquire a working knowledge of the mechanics of the U.S. federal government in the realm of foreign policy. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-347 International Conflict and Conflict Resolution (4) D
A study of causes, dynamics, and resolution of international conflict. Topics covered include theories of the causes of war at various levels of analysis; decision and social/psychological models of conflict dynamics; the role of military force in international conflict; theories of escalation and de-escalation; mediation and conflict resolution strategies; and problems of peace maintenance. Students are expected to research and analyze a recent international conflict. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-348 International Organizations and Interdependence (4) D
This course is designed to examine the efforts of the international community in instituting global governance and rules in varying areas of states’ common interests. Apart from theoretical debates and approaches within the subfield, the course will highlight significant international organizations such as the UN and the Bretton Woods system and international regimes in the areas of human rights, nuclear nonproliferation, trade, and the environment. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-354 Terrorism: Past, Present, and Future (4) D
Examines the origins of terrorism and how the motives and methods of modern terrorists reflect both continuities and differences with those of the past. Topics include the psychological, socioeconomic, political, and religious causes of terrorist violence, as well as the strengths and weaknesses of various counterterrorism strategies. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-438 Politics of South Asia (4) D
This course addresses South Asian politics from the end of the colonial period in 1947 to the present. In addition to topics concerning India and Pakistan, the course examines the politics and foreign affairs of Bangladesh, Sri Lanka, and Nepal. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.
IREL-450 Internship in International Relations (1–15) D
Work experience in international relations (for example, with government offices, public agencies concerned with foreign affairs, lobbying organizations, or nongovernmental interest groups and agencies). Students are supervised on a day-to-day basis by the office staff and report to the instructor on a regular basis. A full-time internship of at least four weeks may be arranged during Semester I or II or in the summer. Up to eight hours of credit may be applied toward a major or minor; additional hours will be credited as elective. This course is not open to freshmen. Prerequisite: IREL-101 and ENGL-101.

IREL-475 Capstone Seminar (1) D
Provides a culminating experience for senior International Relations majors by helping them make connections among various courses taken in the major. This seminar builds on the skills students have developed through reading, research, writing, and presenting. It also strengthens community among International Relations majors. This course is not open to freshmen. Prerequisite: PSCI-301.

IREL-480 Special Topics in International Relations (1–4) D
Comprehensive examination of an international relations topic not covered in depth in another advanced international relations course. Topics vary, and students may repeat the course for credit if the topic is different. This course is not open to freshmen. Prerequisite: ENGL-101.

Kinesiology Courses
Kinesiology courses are offered by the Kinesiology Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

KINS-100 Methods of Teaching/Coaching Volleyball (2) SI
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of volleyball. This course will include evaluations of a collegiate and high school match. Working at least one match will be required for practical experience.

KINS-101 Wellness/Fitness for a Lifetime (1) A
KINS-101 meets the criteria for achieving competency in the Health & Physical Education General Education Core. This one-hour course introduces students to the eight dimensions of wellness and assists the student in determining his or her own overall “wellness level.” This course is approached with a multi-dimensional view of wellness inclusive of all eight components: physical, mental, social, spiritual, intellectual, environmental, occupational and financial. The concept of BALANCE is the overall goal to everyday living, every day function and in people’s everyday outlook. Balance is attained through high levels of understanding and being active in EACH dimension of wellness. Student-selected physical activity-based sessions are also included in this course with yoga/Pilates, strength training, cardio/strength or cardio/self-defense as options. Lab fee: $30.

KINS-102 Advanced Wellness and Fitness for a Lifetime (1) A
The purpose of this course is to provide a reflection and an expansion to the eight dimensions of wellness (physical, mental, social, spiritual, intellectual, environmental, occupational, and financial) addressed in KINS-101 and offers
experiential and interdisciplinary activities, assignments, and projects to the advanced wellness student. As it is an advanced wellness course, students will be expected to apply critical thinking to their personal wellness dimensions through various authentic assignments. The concept of balance is key to everyday living, function, and outlook. Balance is attained through high levels of understanding and being active in each dimension of wellness. This course is open to Healthy Diploma™ students only. Prerequisite: KINS-101. Lab fee: $50.

KINS-103 Aquatics (1) SI
This course covers the basic aquatic skills for personal survival in the water. Topics/skills covered include treading water, basic strokes of the front crawl and back crawl, and the survival strokes of the elementary backstroke and sidestroke. Student must either test out of the course (as determined by the instructor) or satisfactorily complete this course prior to taking KINS-310 Water Safety Instructor, which is required for PED5 majors. Lab fee: $50.

KINS-104 Honors Wellness/Fitness for a Lifetime (2) A
The purpose of this course is to introduce the student to the eight dimensions of wellness and to assist the student in determining his or her own overall “wellness level.” This course is approached with a multi-dimensional view of wellness inclusive of all eight components—physical, mental, social, spiritual, intellectual, environmental, occupational, and financial—and offers experiential and interdisciplinary activities, assignments, and projects to the student. The concept of balance is key to our everyday living, our everyday function, and our everyday outlook, and balance is attained through high levels of understanding and being active in each dimension of wellness. As it is an advanced wellness course, students will be expected to apply critical thinking to their personal wellness dimensions through various authentic assignments. This course is open to honors students and Healthy Diploma Students only. Lab fee: $50.

KINS-105 Methods of Teaching Dance (1.5) SI
Study of the fundamentals of movement and rhythm necessary to all types of rhythmic activities, with attention given to the methods and materials involved in teaching these fundamentals.

KINS-106 New Student Experience: Kinesiology (1) SI
New Student Experience (NSE) is a transition course designed to facilitate students’ integration into the learning community of UIndy. The course helps new students in their first semester of enrollment to develop skills and relationships that will serve them well as they pursue their degree and career goals. The course uses a combination of in-and out-of-class experiences and covers topic relating to academic, career development, student involvement, campus culture, and Education for Service. In addition, the NSE for Kinesiology students includes topics and activities designed to inform students of career settings, acclimate students with scholarly literature, and encourage professional development.
KINS-110 Methods of Teaching/Coaching Basketball (2) SI
Study of the rules, techniques, fundamentals, organization, and teaching and coaching methods of basketball. This course will include the analysis of coaching systems of different leading basketball coaches as well as teaching methodology for physical education.

KINS-112 Social Dance (1) SII
This course is designed to teach the fundamentals of various forms of social dance. Students will develop their technique through increased complexity in class combinations, musical phrasing, and choreography. Group discussions center on dance vocabulary, dance history, current events, and choreography. Students will develop their skills in social dance through laboratory experience. Through the course, students will gain knowledge and skills needed to develop lifelong patterns of cardiovascular physical activity through dance. Dances may include merengue, social foxtrot, salsa, tango, mambo, Lindy, and jitterbug. Prerequisite: KINS-101 or KINS-104 or equivalent. Open to Healthy Diploma™ students only. Lab fee: $50.

KINS-113 Group Cardio Fitness (1) SII
This course will provide students with a background on the relationships between physical activity, physical fitness, and various health-related outcomes. Students will complete assessments of their health-related fitness and plan a personalized program to track their levels of physical activity. Through the course, students will gain knowledge and skills needed to develop lifelong patterns of cardiovascular physical activity. Activities may include cardio kickboxing, aerobics, and step aerobics. Prerequisites: KINS-101 or KINS-104 or equivalent. Open to Healthy Diploma™ students only. Lab fee: $50.

KINS-114 Cardio Hip Hop (1) SII
This course is designed to teach the fundamentals of various forms of hip hop dance for cardiovascular benefits. Students will develop their base skills and technique through increased complexity in class combinations, musical phrasing, and choreography. Group discussions center on dance vocabulary, dance history, current events, and choreography. Students will develop their skills in cardio hip hop through laboratory experience. Through the course, students will gain knowledge and skills needed to develop lifelong patterns of cardiovascular physical activity through dance. Students will begin to master these synchronized skills in an upbeat and fun environment while learning that movement and dance is an energized way to stay fit and active. Prerequisites: KINS-101 or KINS-104 or equivalent. Open to Healthy Diploma™ students only. Lab fee: $50.

KINS-115 Yoga (1) SI
This course is designed to teach yoga through a beginner’s working knowledge of yoga positions, knowledge of the benefits associated with yoga, and knowledge of skills needed to pursue independent training as part of their lifetime wellness program. Prerequisites: KINS-101 or KINS-104 or equivalent. Open to Healthy Diploma students only. Lab fee: $50.
KINS-120 Methods of Teaching/Coaching Football (2) SII
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of football. This course includes terminology and number systems used as a means of communication between coach and player.

KINS-130 Methods of Teaching/Coaching Track and Field (2) SII
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of cross country and track and field. Students will be required to master, at a novice level, several track and field events. Working at least one track meet will be required for practical experience.

KINS-140 Methods of Teaching/Coaching Baseball (2) SII
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of baseball. Techniques for teaching baseball in physical education also will be covered.

KINS-150 Methods of Teaching/Coaching Softball (2) SII
This course is designed to prepare students for teaching and/or coaching softball. Study of the rules, techniques, fundamentals, organization, teaching techniques, and statistical methods will be included. Instructional cues and sequencing of fundamental skills will be addressed. The student will learn the important aspects of both slow- and fast-pitch softball.

KINS-160 Methods of Teaching/Coaching Soccer (2) O/SI
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of soccer.

KINS-170 Methods of Teaching/Coaching Competitive Swimming (2) O/SI
Study of the rules, techniques, fundamentals, organization, and teaching/coaching methods of competitive swimming.

KINS-180 Teaching Individual and Dual Activities (2) SII
Course focuses on skill development, teaching methodology, and curricular models for selected individual and dual games for K–12 students (e.g., tennis, badminton, golf, tennis, and pickleball) through participation and guided reflection. Analysis of skills, progressions, error analysis and correction, teaching techniques, unit planning, skill assessment, evaluation, and teaching experiences also will be addressed.

KINS-185 Teaching of Team Activities (2) SI
Course focuses on skill development, teaching methodology, and curricular models for selected team field, court, and invasion games for K–12 students (e.g., soccer, basketball, volleyball, team handball, and football) through participation and guided reflection. Analysis of skills, progressions, error analysis and correction, teaching techniques, unit planning, skill assessment, evaluation, and teaching experiences will be addressed.

KINS-190 Introduction to Kinesiology, Health, and Sport Sciences (2) A
This course is concerned with the comprehension and interpretation of the principles and philosophies of modern kinesiology, and health and sport science related programs. Contributions of historical programs related to development of current trends in program structure will be discussed. The foundations of sport, physical
activity, physical education, and health through civilizations and cultures will be a primary focus. Students will receive orientation to the majors of exercise science, sport management, health and physical education, and public health education and promotion.

**KINS-195 History and Culture of Sport (3) A**
The student will be able to recognize that sport is a microcosm of society and is influenced by cultural traditions, social values, and psychosocial experiences. The student also will be able to understand that sport managers are immersed in the sociocultural milieu, with sport as the focus.

**KINS-200 Lifeguarding/CPR-PR (2) SII**
Course supplying the hours and skills necessary to fulfill lifeguarding requirements for the American Red Cross Advanced Lifeguarding Certification. It includes personal water safety, lifesaving/lifeguarding skills, CPR for the Professional Rescuer, and AED (Automated External Defibrillator) training. **Prerequisites:** Swimming 500 yards, treading in deep water for two minutes, and surface diving to eight feet to retrieve a 10-lb. Object. **Lab fee $50**

**KINS-201 Governance and Ethics in Sport (3) A**
Sport activities are governed by various agencies. The student will become familiar with these agencies, their authority, organizational structure and functions. Many sport activities occur in settings in which a person will have to choose a course of action based on ethical principles. Students will recognize and identify moral issues related to sport in its intrinsic and extrinsic dimensions and develop a personal philosophy regarding social responsibility in the sport management setting.

**KINS-210 Introduction to the Business of Sports (3) A**
This course is designed to provide students with an overview of the basic organizational structure of the sport, fitness, and leisure industries. This course is intended to provide the foundational knowledge necessary for students pursuing careers in sport management, sport marketing, sport communication, or other careers within the sport industry.

**KINS-220 Techniques and Methods of Conducting Physical Education (3) SII**
Laboratory experiences providing opportunities for students to develop physical education teaching strategies, as well as classroom and laboratory experiences providing opportunities for the student to develop instructional strategies for leading and developing physical activity. Teaching methods and learning environments are analyzed; organizational and administrative techniques in sport and physical education areas also are discussed. This course prepares the student to teach physical skills effectively and lead learners through an effective physical activity program. **Prerequisites:** EDUC-220, KINS-180, KINS-185. **Lab fee:** $20.

**KINS-230 Officiations (1) SI**
Course designed to equip the prospective teacher/coach with the skills necessary to maintain class and/or game control. Emphasis is on officiating techniques in baseball, softball, volleyball, track and field, basketball, wrestling, and football. Students have practical experiences in implementing various officiating procedures. An opportunity to acquire an IHSAA officiating license is offered. **Lab fee paid during class.**
KINS-235 Motor Learning (3) SII
This course is designed to provide the undergraduate student with an introduction to motor skill learning, performance, and control. A scientific approach will be used to identify and critically examine the psychological and neurophysiological factors that facilitate and/or inhibit the acquisition, refinement, and retention of motor skills.

KINS-236 Theories of Health Behavior (3) SI
This course will explore the contribution that basic behavioral and social science theories can make to the design and implementation of public health programs. Given that many public health interventions have as their goal to change the health behavior of a population or community, understanding the process of behavior change is critical to designing effective programs. In addition to theories that address individual motivations and obstacles to behavior change, public health practitioners also must draw upon constructs and concepts that explain how health behavior is shaped by the individual’s relationships to other individuals (interpersonal factors), to their geographic and cultural communities (community factors), and to the larger society (sociopolitical factors). Students will be capable of creating and implementing an individualized change program through a process of risk analysis, individualizing a behavior change program, counseling the client/student/ patient toward success, and evaluating the impact of the program on the individual. Prerequisites: KINS-260 and PSY-120 OR EDUC-203.

KINS-240 Recreational Principles and Games (2) SI
Study of the purpose of recreational activity. Knowledge of recreational group activities and games for all ages, as well as exploration of methods used to develop desirable behavioral traits through their use.

KINS-245 Introduction to Exercise Physiology and Performance (4) A
This course is an overview of the fundamental concepts concerning the interaction of biological and mechanical aspects of human movement as well as the human physiology parameters related to physical exercise and work. Three hours lecture, two hours laboratory per week. Prerequisites: BIOL-103 and 104.

KINS-249 Basic Sport and Community Nutrition (2) A
The course focuses on nutrition for health. It will help prepare students for eating healthy throughout their lifespan. Students will exit the course being able to (1) describe where the scientific literature pertaining to nutrition comes from, what it is, and how it can aid in discerning fact from fallacy; (2) describe the basics of digestion; (3) describe what carbohydrates, fats, proteins, vitamins, minerals, and fluids are and what foods/sources they come from; (4) describe how each of the above nutrients affects sports performance; (5) describe how diet can be used to aid in body weight manipulation; and (6) describe the need and function of the above-listed nutrients in health and disease.

KINS-250 First Aid and CPR-PR (1) A
Class designed to teach emergency response procedures. Topics include rescue breathing; cardiopulmonary resuscitation; airway obstruction emergencies that include adult, child, and infant CPR; rescue breathing; and principles of responding to emergencies. Student certified by American Red Cross upon satisfactory completion of course requirements. Lab fee $50.
KINS-251 Sports Nutrition (3) SII
The course focuses on nutrition for sport and its application in physical conditioning to the competitive athlete and various special populations. It will help prepare the future physical educator, coach, athletic trainer, or other sports medicine personnel to better advise sport participants at all levels on sound nutritional practices. Prerequisites: BIOL-103, BIOL-104, and CHEM-150.

KINS-252 Weight Management (1) A
The Healthy Diploma curriculum is attentive to the leading health indicators that reflect the major public health concerns in the United States. A major goal of the program is to foster student self-responsibility to lead a healthy lifestyle, in particular the best practices of responsible weight management. Thus, the purpose of this course is to provide students with an opportunity to focus on behavior modification through having positive associations with food and eating, being mindful of one’s cues and signals when eating, weight management and nutritional balance in action, and to demonstrate their competency by extending the basic nutrition skills learned in KINS-249. This course is open to Healthy Diploma students only. Prerequisites: KINS-249. Lab fee: $50.

KINS-260 Introduction to Community Health in Diverse Communities (3) A
This course is intended to serve as an undergraduate-level introduction to community health practice, including the latest trends and statistics in community health, the organization of the public health system, health advocacy, and delivery of community health services. Core topics will include epidemiology, community organization, program planning, minority health, health care, mental health, environmental health, drugs, safety, and occupational health. Emphasis will be on developing the basic knowledge and skills necessary for a career in community or school health education. The course will serve as a basis for the necessary Health Education Content Knowledge and also address the Indiana Standards for Teachers of Health Education.

KINS 265 Current Topics in Public Health Content I (2)
This course covers a spectrum of the most common public health concerns facing current society. Issues that are crucial to the lives and health of community members are examined with an emphasis on the relationship between lifestyle and health. The course enables students to examine more effectively many of the most pressing public health problems faced across the lifespan. These issues may include stress, sexuality, nutrition, mental health and illness, aging, chronic and communicable disease, drug and alcohol use, dealing with death, and other selected topics.

KINS-266 Sexuality and Human Health (3) SII
This course is designed to provide Community Health, Health Education Teaching majors and other interested students with an introduction to issues associated with human sexuality and the impact it has on health. This course will focus on three primary goals: enhancing knowledge, increasing comfort with subject matter related to sexuality, and facilitating communication about sexuality. The purpose of this course is to (1) provide the student with opportunities to apply knowledge and skills related to sexuality and human health in the delivery of instruction; (2) enable the student to develop a broader knowledge and understanding of sexuality, particularly related to human health; and (3) enable the student to develop skills needed to engage in responsible sexual behaviors.
KINS-268 Stress Management and Human Health (3) A
This course is focused on stress, the impact of stress on human health, and the practice of stress management techniques. The course is designed to enable the student to develop an understanding of stress and stress management, the physiology of stress, the psychology of stress, the relationship between stress and disease, and the relationship of emotional or mental well-being to physical health. Methods of relieving and preventing distress and creating eustress will be discussed and explored. Prerequisite: KINS-101 or KINS-104 or equivalent. Lab fee: $50.

KINS-271 Methods of Teaching/Coaching Golf (1) O/SI
Study of the rules, techniques, fundamentals, organization, and teaching and coaching methods of golf.

KINS-272 Methods of Teaching/Coaching Gymnastics (1.5) O/SII
Study of the rules, techniques, fundamentals, organization, and teaching and coaching methods of gymnastics.

KINS-273 Methods of Teaching/Coaching Wrestling (1) O/SII
Study of the rules, techniques, fundamentals, organization, and teaching and coaching methods of wrestling.

KINS-274 Methods of Teaching/Coaching Tennis (1) O/SII
Study of the rules, techniques, fundamentals, organization, and teaching and coaching methods of tennis.

KINS-275 Current Topics in Public Health Content II (2)
This course covers a spectrum of the most common public health concerns facing current society. Issues that are crucial to the lives and health of community members are examined with an emphasis on the relationship between lifestyle and health. The course enables students to examine more effectively many of the most pressing public health problems faced across communities. These issues may include physical activity, nutrition and obesity, as well as other personal behaviors that influence health. Prerequisites: BIOL-103 and KINS-245.

KINS-280 Sport, Exercise, and Health Behavior (3) A
This course examines psychological theories and research related to sport, exercise and health behavior. This course provides students with a comprehensive view of sport, exercise and health-related behavior models and theories and bridges the gap between theory, research and practice. It allows students to gain a foundational understanding of behavior within sport, exercise and health while learning how critical these factors are in preparing and designing effective environments and programs within diverse populations including athletes and non-athletes. This course also includes historical and theoretical perspectives of sport, exercise and health behaviors; intrapersonal, interpersonal and environmental/situational roles and factors that affect performance, adherence and psychological development in sport, exercise and health-related settings; and skills to develop intervention strategies and techniques related to behavior maintenance or change or increases in performance. Prerequisites: KINS-190 or permission of instructor.
KINS-285 Teaching Physical Education in the Elementary Schools (3) SII
Study of educational games, educational dance, and educational gymnastics, fitness, and wellness appropriate to the age and development of the child. The course focuses on the need for a high-quality physical education program in the elementary school and the unique outcomes of such a program. Developing curriculum, effective planning, discipline techniques, and legal liability are all areas that are covered in this course. For specialists in physical education, classroom teachers, and elementary school administrators.

KINS-286 Elementary Physical Education Field Experience (.5) SII
Provides a field experience component to KINS-285 Teaching Physical Education in the Elementary Schools. Lab experiences will be provided in a school system for the student to observe current teaching practices and teach mini-lessons to current students. A minimum of 15 hours in the school system is required. Must be taken concurrently with KINS-285 Teaching Physical Education in the Elementary Schools.

KINS-290 Introduction to Adapted Physical Education (2) A
Study of conditions that require physical education programs to be adapted to special needs of individuals. Principles and practices in application of exercises and activities appropriate for specific handicap conditions will be discussed. The course will identify various kinds of handicapped and learning-disabled students respective of characteristics and needs. One focus will be defining and understanding terms applicable to adapted, handicapped, and mainstreaming concepts. Principles and organization of specific programs for the physically handicapped and learning disabled will be outlined.

KINS-295 Applied Adapted Physical Education (3) SII
A study and application of physical activity practices of persons with common disabilities found across the lifespan. A review of the historical and philosophical basis for adapted physical activity and the impact of state and federal legislation are included. Analysis of the roles and responsibilities of the adapted physical education specialist and the inclusive educational environment also are examined. The main focus of this course will be applying and practicing concepts in a teaching environment. Various placements will be utilized throughout the city. This course is applicable to all disciplines pertaining to the disabled individual. Prerequisite: KINS-290.

KINS-301 Sport Finance and Economics (3) SII
Practitioners in the sport and recreation industry need to be knowledgeable of basic financial principles and terminology. They may also be required to develop and adhere to budgets as part of managing an organization. Lastly practitioners need to understand the impact the sport industry has upon the economy at large and vice versa. Therefore, this course will focus upon basic financial and economic principles and practices present within the sport and recreation industry. Prerequisites: ACCT-210, MKTG-290, ECON-110, KINS-201, and KINS-210.

KINS-305 Grant Writing in Health and Kinesiology (2) SI
This course is designed for students in the fields of health, exercise science, education, and sports to establish basic skills necessary in seeking financial assistance
in the form of grants for projects and/or programs. The student will learn how to locate agencies and organizations that have funding available, how to contact them, how to read the requirements for preparing a grant proposal, and how to follow general guidelines for preparing a grant proposal. Students will prepare grant proposals for an individual or group project and develop the tools necessary to be a useful resource to a nonprofit organization or business as part of a grant-writing proposal team.

KINS-305 Grant Writing in Health and Kinesiology (3) SI
This course is designed for students in the fields of health, exercise science, education, and sports to establish basic skills necessary in seeking financial assistance in the form of grants for projects and/or programs. The student will learn how to locate agencies and organizations that have funding available, how to contact them, how to read the requirements for preparing a grant proposal, and how to follow general guidelines for preparing a grant proposal. Students will prepare grant proposals for an individual or group project and develop the tools necessary to be a useful resource to a nonprofit organization or business as part of a grant-writing proposal team. This course fulfills the Writing/Speaking Across the Curriculum requirement of the General Education Core. Prerequisite: KINS-260.

KINS-310 Water Safety Instructor (2) SI
Designed to give the student the knowledge and skills to be a certified American Red Cross Water Safety Instructor. This WSI certification will certify students to teach aquatic skills. Student will be American Red Cross-certified upon satisfactory completion of course requirements. Prerequisite: KINS-103. Age: Minimum 16 years of age by the last day of the course. Skills: At level 6 proficiency (swim test): Front crawl, 25 yards; Back crawl 25 yards; Breaststroke, 25 yards; Elementary backstroke, 25 yards; Side stroke, 25 yards; Butterfly, 15 yards; Supine floating or sculling, 1 minute; and Tread water, 1 minute (all benchmarks must be met by the first day of class). Lab fee: $50.

KINS-315 Professional Seminar in Kinesiology (2) A
This course is designed to equip students with the skills necessary to obtain an internship position and find employment in the fields of Kinesiology. Students will examine the expectations of professionals in these fields and participate in exercises that will enhance their job application, job interview, and job retention abilities. Prerequisites: Junior or senior year, KINS majors only.

KINS-320 General Safety (3) O/SI
The study of the nature and scope, cause and prevention, and statistical analysis of the various kinds of accidents that occur in our society. Occupational and recreational safety as well as natural and man-made disasters will be researched. This course focuses on home, school, and traffic safety, including all aspects of safety instruction and providing a safe environment.

KINS-325 Group Exercise Leadership and Programming (3) SII
This course is designed to provide students with an overview of the educational concepts, performance techniques, program design, and leadership skills needed to teach group-led exercise programs and design personal training programs. The course will include basic analysis and application of safe and effective exercise procedures
for all fitness levels. The students will be expected to lead and perform aerobic and other group exercise activities. Prerequisite: BIOL-103 and KINS-190.

**KINS-330 Methods in Public Health Education (3) SI**
This course is designed to provide students with the necessary skills to plan and implement a variety of health promotion lessons and methods in the school, clinical, hospital, or worksite settings. Emphasis will be on facilitating prepared units/lessons to respective target populations, such as students, employees, patients, or community members. The course will enable the student to select methods and develop a presentation or lesson in order to effectively communicate an educational session with specific learning or behavioral objectives. Prerequisite: KINS-236.

**KINS 331 Wellness Coaching (3)**
This course is designed to provide students with an overview of the concepts of wellness coaching within community/public health and fitness or worksite wellness environments. A health and wellness coach is an educated professional and support system who motivates individuals and/or groups to cultivate positive health choices through lifestyle and behavior modification. This course will help individuals develop effective, efficient, and integrative interpersonal coaching skills while maintaining a supportive and holistic environment for behavior change. The course prepares individuals to work with diverse groups of people and have the tools necessary to meet client needs by combining a strong coaching emphasis along with competencies in nutrition, mindfulness, physical health and chronic disease prevention or management. Prerequisites: KINS-190 and KINS-280.

**KINS-340 Administration of Athletics (3) SII**
This course is designed to provide students with the knowledge and skills needed to serve in an administrative capacity within various sport-related occupational settings. Sport administrators are responsible for managing people, finances, programs, and facilities. The student will engage in activities that will allow them to appreciate the multi-faceted nature of administration. Prerequisites: ACCT-210, ECON-110, MKTG-290, KINS-201, and KINS-210.

**KINS-345 Legal Issues and Risk Management in Sport (3) A**
Most sport activities occur in settings that are potentially litigious. Students will become familiar with the legal concepts in those areas that they are most likely to encounter in the workplace and learn to develop strategies for dealing with the risks inherent in sport and sport activities. Prerequisites: ACCT-210, ECON-110, MKTG-290, KINS-201, and KINS-210.

**KINS-350 Exercise Physiology (4) A**
A study of physiological changes that occur with acute and chronic exercise. Integration of cardiorespiratory, muscular, and biochemical system responses and training adaptations are emphasized. Three hours lecture, two hours laboratory per week. Prerequisites: BIOL-103, 104, CHEM-150/151, and KINS-245. Lab fee: $35.

**KINS-351 Physical Education Methods for Elementary Classroom Teachers (1) A**
Study of classroom organization and curriculum development in physical education. Students learn to design and implement a variety of instructional and assessment strategies. Activities relate research and theory of teaching methodology to practical problems faced in the field. Must be taken concurrently with student teaching.
KINS-352 Health Education Methods for Elementary Classroom Teachers (1) A
This course is designed to provide elementary education teachers with the knowledge and skills they will need to teach health education in elementary schools and be a partner in a coordinated school health program. This course is designed to align with the Indiana Professional Teacher Standards for the Early and Middle Childhood Generalist, such that pre-service teachers of early and middle childhood will be able to create opportunities for student development and practice of skills that contribute to good health.

KINS-355 Management and Design of Sports Facilities (3) A
This course is designed to provide students with an orientation to the various theories, structural makeup, design, operations, and functions as related to recreational facilities. Following an overview of the foundations of management and its various resources as they relate to facilities, the course will address facility development, its usage considerations, and auxiliary functions that have an impact on the manager’s role. Understanding of organizational involvement, social and ecological issues, development of administrative and professional policy, management of programs, and current research findings relative to programming also will be included as topics. *Prerequisite: ACCT-210, ECON-110, KINS-201, KINS-210, and MKTG-290 or instructor permission.*

KINS-356 Exercise Science Programming and Management (3) A
The course is designed to provide students with an orientation to various theories, structural make-up, design operations, and functions as related to health, fitness, and sport performance facilities. Following an overview on the foundations of management and its various resources as the relate to facilities, the course will address program development and sustainability, facility development, and auxiliary functions that have an impact on the manager role. Understanding organizational involvement, legal issues, trends in programming and management, development of administrative and professional policy, and current research findings relative to programming will also be included as topics. *Prerequisites: KINS-280, KINS-325, and KINS-376.*

KINS-360 Organizational Leadership in Sport (3) SI
This course will study the necessary leadership skills and competencies of sports leaders. Throughout the course, personal styles of leadership will be addressed and students will learn to recognize leadership components. This course will allow students to learn leadership skills through theoretical study and assessment of leadership strengths and weaknesses. A key to this course will involve the students’ willingness to learn and take responsibility for applying leadership skills in their organization’s productivity. The intent of this course is to enhance the student’s leadership development. *Prerequisites: KINS-201, KINS-210, ACCT-210, ECON-110, and MKTG-290.*

KINS-365 Worksite Health Promotion (3) SII
This course covers the design and implementation of worksite health promotion programs and the benefits these programs have for both employees and employers. Special attention will be paid to developing programs in the high need areas of healthy eating, physical fitness, and stress management. Students will review various health risk appraisals and plan theory-based incentive programs designed to promote
positive lifestyles. Prerequisites: KINS-190 and KINS-260 or permission of the instructor.

KINS-370 School Health Methods (3) SII
This course focuses on the organization and development of the school health program and the coordination of the school health program with community health practices. This course offers practical experience in the state-mandated topics of school health: HIV/AIDS, drugs, organ donation, immunizations, and breast and testicular self-exams, in addition to other health issues. Health education teaching methods are explored and practiced. Prerequisites: KINS-260, KINS-266, KINS-420.

KINS-375 Resistance Exercise Assessment and Programming (2) A
This course focuses on practical aspects of assessing strength and power, and creating resistance exercise programs, for the recreational or competitive athlete. Other topics include exercise programming to increase agility, and the use of plyometrics.

KINS-376 Strength and Conditioning (3) A
The course focuses on progressive resistance training and aerobic conditioning, the various modes, and its application in physical conditioning to the competitive athlete, the physical education teacher, and various special populations. It is not designed as a general weight training or conditioning course for the average student. Prerequisites: BIOL-103, BIOL-104, KINS-350, KINS 470, and KINS 490.

KINS-390 Health Communication and Social Marketing (3) SII
This course introduces the role of health communication in public health programs. The course will focus on the use of communication strategies to inform and influence individual and community decisions regarding health. Core topics will include health communication theory; the role of social marketing and mass media; management of communication programs; interpersonal communication; social networks and social change; legal and ethical concerns in health communication; and the design of health campaigns. Prerequisites: KINS-236 or permission of the instructor. Lab fee: $175

KINS-395 Professional Experience in Exercise Science (6-12) A
This course is the Exercise Science internship, in which the student culminates the degree in a career-related work experience. Prerequisites: KINS-280, 350, 376, 410, 470, 485 or 487, and 490. Lab fee: $210

KINS-400 Assessment and Research Principles of Physical Activity and Health (3) SII
This course will provide students with an understanding of the critical role of evaluation in assessing the effectiveness of community/school health and physical education programming. The course is designed to develop an understanding of the importance of utilizing various types of tests, measurement procedures, and assessment tools related to health and physical activity as an integral part of programming, curriculum, and instruction. Students will be exposed to the basic theoretical concepts as well as the methodology of program evaluation. The primary focus will be on the practical application of evaluation principles and methods. The study of elementary statistical techniques and terminology are included as well as developing class norms. Physical education and health principles and grading philosophies are discussed. Students will learn to conceptualize, design, implement,
and evaluate the impact of a new or existing intervention. *Prerequisites: Math elective.*

**KINS-405 Cardiovascular Exercise Assessment and Programming (2) A**
This course focuses on practical aspects of assessing cardiovascular fitness, and creating cardiovascular exercise programs, for the recreational or competitive athlete. Other topics include exercise programming to increase speed.

**KINS-406 Clinical Exercise Physiology (3) SI**
This course provides practical information on exercise for persons with a wide range of special diseases and disabilities. An overview of each unique physiology, effects of the condition on the exercise response, effects of exercise training on the condition, and recommendations for exercise testing and programming is presented in a selected topics format. *Prerequisites: KINS-490 and current CPR certification.*

**KINS-410 Motor Control and Biomechanics (4) A**
Students will study the following aspects of human movement using the ecological dynamics approach: (a) developmental change; (b) postural control; (c) prehension; (d) neuromuscular power; (e) resistance training; (f) movement efficiency and economy; (g) locomotion; (h) movement skill acquisition; (i) effects of fatigue; and (j) effects of injury. *Prerequisites: BIOL 103, BIOL 104, and PHYS-150.*

**KINS-420 Drugs and Social Involvement (3) SI**
Study of drugs and their effects, both physical and mental, as seen in the behavior of the abuser toward his or her environment. Included in the course is a section on the health aspects of drug use and abuse along with community involvement. Also included is a discussion of the relevant issues of contracting HIV. The course relies heavily on open discussion, visual aids, and guest lecturers.

**KINS-440 Epidemiology (3) SI**
Epidemiology is the study of how disease is distributed in populations and of the factors that influence or determine this distribution. This course introduces the basic methods and tools epidemiologists use to study and enhance the health of populations, as applied to both clinical and public health settings. Three basic themes are covered: (1) the epidemiological approach to disease and intervention; (2) using epidemiology to identify the cause of disease; (3) applying epidemiological principles to disease prevention. *Prerequisites: KINS-400 or MATH-245 or MATH-220.*

**KINS-445 Skill Applications in Diverse Public Health Settings (3)**
This course facilitates translation of public and community health knowledge and concepts learned in the classroom into application and practice in selected community based organizations. Faculty will collaborate with the ULindy Health Pavilion and other agencies to organize a semester-long public health education project that the students will complete to serve the needs of the agency and build their skill set across the core areas of public health education and promotion. *Prerequisites: KINS-330 and KINS-236.*

**KINS 450 Health Disparities (3)**
Understanding health disparities involves a critical analysis of the what, where and how questions such as: what is health disparity?; where does it exist?; how have the trends in disparities manifested? Related questions around health disparities, such as
these, have gained considerable attention from the publications of the Healthy People 2010 Reports. Furthermore, one of the main goals of the Affordable Care Act of 2010 (ACA) is the elimination of health disparities. Given these recent contextual developments, the broader purpose of this course is to introduce basic issues that underlie health disparities and promote a discussion on how myriad overlapping conditions interact to give rise to health differences. Gaining familiarity on these determinants of disparities that include, but are not limited to, social and environmental conditions, socioeconomic status, gender and race, and geography will be the focus of this class. A secondary goal of this course would be to explore the role of health care and public health responses to disparities. **Prerequisites:** KINS-260.

KINS-452 Health Policy and Advocacy (3)
This course introduces students to the fundamentals of public health policy and advocacy. The course will foster an appreciation of the complexity of policy development, as well as the ways in which health advocacy plays a role in the policy development process. Students will learn about the role of public health professionals in policy analysis, design, implementation and evaluation. **Prerequisite:** KINS-260.

KINS-455 Personal Health Project (1) A
Seminar and capstone experience for senior students enrolled in the Healthy Diploma program. Students will propose and develop their personal health project and work with an adviser to complete. This is a self-directed course consisting of a research project, self-reflection, service project, or other project concept accepted by the Healthy Diploma faculty committee and Healthy Diploma coach. Projects must be personal and based on at least one of the eight dimensions of wellness: physical, mental, social, spiritual, intellectual, environmental, occupational, and/or financial. Each student completing the requirements for the Healthy Diploma will be expected to apply critical thinking and creativity to his/her personal wellness dimension project. Students will present their projects to a larger audience near the end of the term. The course fulfills the Capstone requirement of the General Education Core. **This course is open to Healthy Diploma students only. Prerequisites:** KINS-101 or KINS-104, KINS-249, and two of the following: KINS-266, KINS-268, and KINS-420.

KINS-460 Field Experience in Sport Management I (6) A
This course is designed to provide in-depth practical experiences to help the student bridge the gap between classroom learning and practical application in sport settings. This course will allow students to explore career options, develop management skills, and gain a greater understanding of the total operation of sport organizations. **Prerequisites:** senior standing; KINS-301, 340, 345, and 355.

KINS-461 Field Experience in Sport Management II (6) A
This course is designed to provide in-depth practical experiences to help the student bridge the gap between classroom learning and practical application in sport settings. This course will allow students to explore career options, develop management skills, and gain a greater understanding of the total operation of sport organizations. **Prerequisites:** senior standing; KINS-301, 340, 345, and 355.

KINS-465 Planning, Implementation, Evaluation in Public Health (3) SI
Careful planning and evaluation of public health programs are essential competencies for public health professionals. Students will gain a basic understanding of how to plan, implement, and evaluate the effectiveness of a community health program. This 390
Course Descriptions

course is designed to be grounded in community health practice. Students will select a community organization interested in implementing a health education program, then work with the organization to plan, implement, and evaluate the effectiveness of the desired program. Prerequisites: KINS-330, KINS-336, and KINS-400.

KINS-470 Exercise Science Lab (4) A
This laboratory is designed to provide students with practical experience in the collection of scientific and clinically relevant data in exercise science. Methods studied include (but are not limited to) assessment of aerobic and anaerobic capacities, body composition, muscle strength, endurance, and flexibility. Prerequisites: KINS-350, KINS-410, CPR and First Aid certification required. Lab fee: $20.

KINS-480 Special Topics in Kinesiology (1–3) D
Comprehensive examination of a health or physical education topic not covered in depth in another health or physical education course. Topics vary, and students may repeat the course for credit if the topic is different.

KINS-481 Applied Event Management (2) SII
The purpose of this course is to provide the student with an opportunity to participate in all of the processes required to successfully plan and implement a special event in the area of sport. Prerequisites: Instructor Permission

KINS-485 Readings and Practical Experience in Exercise Science (1) A
Students in this course will be expected to read and discuss papers, texts, and lay literature pertaining to exercise science. Readings can include original scientific literature, critiques of lay articles or lay websites, textbooks, society position statements, certification exam materials, review papers, meta-analyses, and other related materials. This course involves an introduction to field experience in exercise science in which students will learn how to apply knowledge and skills obtained in core course work to an exercise setting as well as becoming familiar with the operational and procedural aspects of a clinically-based exercise facility. Prerequisites: KINS-490, current CPR certification.

KINS-486 Directed Readings in Public Health (1)
This course provides students with a review of the major responsibilities and competencies required of an entry-level health educator. Students also will review the major theories and tools utilized by health educators. This review will increase student success during internship placements, as well as better prepare students for the job market as they begin to search for their first professional positions.

KINS-487 Readings and Practical Experience in Strength and Conditioning (1) A
This course involves an introduction to field experience in strength and conditioning in which students will learn how to apply knowledge and skills obtained in core course work to a sport performance setting. Prerequisites: KINS-376, KINS-490, current CPR certification

KINS-490 Exercise Prescription (3) A
A study of current science-based methods of prescribing exercise. Applications to various populations will be discussed, including the elderly, children, and medically
at-risk individuals. Prerequisites: KINS-350 and KINS-410 (KINS-410 can be taken concurrently with KINS-490)

KINS-495 Field Experience in Public Health Education and Promotion (6) SII
The purpose of this course is to provide the student a link between classroom theory and professional practice through supervised work experience in a selected community health setting. Prerequisites: Senior status and all major courses.

KINS-499 Professional Seminar in Physical Education and Health Education (1) A
Seminar for senior students in teaching physical education and health. History and philosophy of physical education and health education as it affects curriculum, grading, professional development, public relations, and other critical issues in teaching of physical education and health will be addressed. Professional portfolio completion and exit interview will be included. Prerequisite: EDUC-390.

Language Studies Courses
Language studies courses are interdisciplinary courses offered through the Global Languages Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

LANG-300 Language without Borders (1-4)
This course is a trilingual (French, German, Spanish) service learning course with emphasis on volunteer services at school district levels around the city of Indianapolis. Students and instructors will create Centers of Excellence (ACEs) at selected middle and high schools. The purpose of these centers will be to initiate collaboration between foreign language professors at the University of Indianapolis and world language instructors at middle and high schools. This joint venture will not only build a bridge between our university and pre-college academic institutions but will also serve as a recruitment tool for the Department of Global Languages. Permission of instructor is recommended.

LANG-321 Introduction to Translation Studies (2) SI
This course is designed to provide learners with instruction and supervised practice in translation from French, German, or Spanish into English. During the course, learners will work on texts of moderate to high difficulty. Several text typologies will be included into the corpus of works to be used in the course: generic (non-specialized), specialized, technical, and literary. The overarching intent of the course is to provide learners with training in the theory and practice of translation, including an in-depth analysis of cultural, semantic, and syntactical aspects of source texts. Students will acquire the tools they need to translate a variety of texts successfully, paying keen attention to denotative and connotative semantics of the source text (ST), and target text (TT).

LANG-324 Masterpieces in Translation (3) N/SII
This class includes a survey of the major Spanish, French, and German language works and provides both breadth and depth in the student’s understanding of world literature in the languages offered by the Global Languages Department. Specific attention is paid to how to address the problem of translation when reading world literature. Through the study of periods and genre, the course offers a broad understanding of literary movements that spread across languages and helped to shape
thought across space and culture. In addition to gaining a broad understanding of literary history and genre, students will practice critical thinking skills through the analysis of close reading.

**LANG-398 Multilingual Translation (French, German, Spanish) (3) N/D**
This course rotates between language pairings of French, German, and Spanish. Students from their own majors will learn the basics of a second language in order to experience the value of the multilingual context and expose students to another language. Students will gain knowledge in specific vocabulary sets as well as basic dialogue experiences. *Prerequisite: 201-level of one of the languages.*

**LANG-401 Multilingual Translation and Conversation (4)**
This course continues to concentrate on the multilingual language pairings of French, German, and Spanish. Students from their own majors will learn the basics of a second and third language in order to experience the value of the multilingual context in a global world. Students will gain knowledge in specific multilingual vocabulary sets as well as basic multilingual dialogue experiences. *Prerequisite: LANG-398.*

**LANG-450 Internship in Modern Languages (1-8) Y/D**
Students will have the opportunity to work at a local, national, or international business using their language skills. The internship is directed through the internship director at the location of the internship.

**LANG-480 Selected Cross-Cultural Topics in Cross-Cultural Understanding (3)**
This course is a special topics class designed to engage students in an array of cross-cultural topics.

**LANG-485 Capstone Seminar (2) D/SII**
The capstone course for Global Languages majors will tie together the experiences of the language major in all areas of study: literature, business, and teaching. Students will take an exit exam to ensure proficiency in all areas and will prepare a portfolio in order to ensure proficiency particular areas of study.

**Management Courses**
*Management courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.*

**MGT-234 Organizational Behavior (3) A**
This course focuses on understanding and learning how to change organizations by working on issues related to individual motivation and development, group process and development, and organizational formation and development. Topical areas include ethics, time utilization, stress management, international/intercultural issues, self-management, and learning from experience.

**MGT-281 Management (3) A**
Study of the functions of management—including planning, organizing, leading, and controlling the business enterprise. Decision-making techniques, international management, human resource management, production management, and the importance of financial management are emphasized.
MGT-334 Group Dynamics (3) D
Course focuses on development and application of individual skills required for effective group membership and group leadership. Students will participate in an experientially based group development program. A major focus of the course will be application of developed skills in organizational contexts. **Prerequisite: Junior standing.** (May substitute HRM-481 or HRM-483.)

MGT-460 Business Leadership (3) D
The course is about leadership, with focus both on an individual and an organizational basis. Class time will be spent exploring ideas from reading, applying them to experience, interpreting and feeding back data from exercises, and applying knowledge. The class will require students to be both introspective and participative. **Prerequisite: Senior standing.**

Marketing Courses

Marketing courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

MKTG-290 Marketing (3) A
Overview of marketing planning and decision-making for the firm. Product planning, distribution strategy, promotional strategy, and pricing strategy are emphasized.

MKTG-295 Consumer Behavior (3) SII
Study of the basic principles of consumer behavior, including a review of the scientific investigations on which knowledge of this behavior is based. The student should develop an awareness of how these consumer behavior findings can be applied practically to the professional practice of marketing. **Prerequisite: MKTG-290.**

MKTG-393 Advertising (3) SII
Introduction to the problems and principles of effective advertising, including a study of advertising messages, layout, selection of advertising media, and evaluation of the advertising program. **Prerequisite: MKTG-290.**

MKTG-394 Sales and Sales Management (3) SII
Focus on developing modes of effective relationships, both as salespeople and sales managers. Renewed conceptions in the business of helping others solve problems (relationship sales) guide coursework through knowledge patterns about products/services, people interactions, industry processes, and competing companies. Inextricably linked, personal selling and managing sales are bound up narratively through field projects, cases, technology, and structures and tooled to compete effectively, ethically, and globally. “Learning by doing” is stressed. **Prerequisite: MKTG-290.**

MKTG-396 International Marketing (3) A
Application of basic marketing principles and tools to the international environment. International marketing programs are analyzed from the determination of objectives and methods of organization through implementation of research, production, pricing, advertising, and distribution activities. **Prerequisite: MKTG-290.**
MKTG-420 Marketing Topics (3) D
Course focusing on a different marketing topic each time it is offered. Topics might include sports marketing, marketing for the arts, or marketing for nonprofit organizations. MKTG-420 also may be offered as a travel course with on-site visits to several European countries and with field experiences that show how culture influences marketing exchanges and institutions. Topics will rotate depending on demand. Prerequisite: To be determined by topic.

MKTG-494 Marketing Research (3) SI
Course designed to help the student develop an understanding of the types of information that can be made available through marketing research. The marketing research process and marketing decision process are presented and practically applied. The computer and statistical tools are used in this applied approach. Prerequisite: MKTG-290, MATH-220, and junior standing.

MKTG-495 Marketing Strategy (3) SI
An advanced, team-oriented, case-study course emphasizing the study of the synthesis of marketing concepts with the total decision-making activity of management, including the study of marketing as the strategic revenue-producing arm of a company and the complexity of the marketing function. Prerequisite: MKTG-290, ACCT-210, ECON-110 and -111, and senior standing in the School of Business.

MKTG-497 Marketing Simulation (3) SII
This capstone, team-oriented course is designed to offer students the experience of analysis, planning, and business-decision making in a marketing environment, and in which they must integrate what they have learned in prior marketing courses. The course will be conducted through hands-on student engagement with a real-world organization and/or an appropriate computer simulation exercise. Prerequisite: MKTG-495 and senior standing in the School of Business, or consent of the instructor.

Mathematics Courses
Mathematics courses are offered by the Department of Mathematical Sciences. Information about the department and its majors and minors can be found in the section entitled Academic Units.

MATH-090 Elementary Algebra (*) A
A review of basic mathematics, essentially at the level of ninth grade algebra. Decimals, fractions, proportions, percentages, introductory algebra, and geometry. This course may not count toward any degree program. A preparatory course, it does not carry college-level credit (earned hours) nor a grade. May not be taken on an audit basis. Does not satisfy the mathematics component of the core.

*M Although the course does not carry college-level credit (earned hours), it counts for three hours toward athletic and financial eligibility. Three hours also will be applied to athletic and financial aid progress on successful completion of the course.

MATH-105 Intermediate Algebra (3) A
Review of rational expressions; exponents, roots, and radicals; linear equations and inequalities; quadratics; quadratic equations and inequalities; systems of linear equations; matrices; graphing; introduction to functions. Designed as a bridge to more
advanced coursework in mathematics for students with a particularly weak background in algebra. Students who have had a previous course in calculus will not be admitted into MATH-105. *May not count toward any major or minor program in mathematics. Does not satisfy the mathematics component of the core.*

**MATH-108 Discovery in Mathematics (3) A**
Focuses on areas of management science (including graph theory, scheduling, etc.), statistics, and additional selected topics from linear programming, probability, combinatorics, and consumer finance. The course emphasizes problem-solving and real-world applications relating to these topics and is intended to promote critical thinking and mathematical skill. *May not count toward any major or minor program in mathematics. Prerequisite: MATH-090 or its equivalent. Cannot be substituted for MATH-105 or used as a prerequisite for any other course.*

**MATH-150 Finite Mathematics (4) A**
Graphical and algebraic methods for solving systems of equations and inequalities, matrices, linear programming (graphical and simplex methods), sets, counting techniques, and probability. Applications in a variety of fields. *May not count toward any major or minor program in mathematics. Prerequisite: MATH-105 with a grade of C- or better or mathematics competency (see page 74).*

**MATH-180 College Algebra and Trigonometry (4) A**
Products, factoring, fractions, linear and quadratic equations, graphs, inequalities, functions, exponents, logarithms, polynomials, complex numbers, and systems of equations. Trigonometric functions, solution of plane triangles, multiple-angle formulas, trigonometric identities, graphs of trigonometric functions, and inverse trigonometric functions. *May not count toward any major or minor program in mathematics. It is recommended that students who have succeeded in a trigonometry course take a more advanced mathematics course. Prerequisite: MATH-105 with a grade of C- or better or mathematics competency (see page 74).*

**MATH-185 Orientation to the Mathematical Sciences (1) SI**
A course for majors in mathematics, mathematics teaching, and computer science. This course is intended to acquaint students with the academic programs and facilities of the department and those of the University at large and to inform students about professional, educational, and technological issues and opportunities that they will confront in the long-term transition from student to professional. Should be taken as soon as possible by all majors in mathematics, mathematics teaching, and computer science.

**MATH-190 Calculus and Analytic Geometry I (4) A**
Limits, derivatives of algebraic and trigonometric functions, continuity, techniques of differentiation. Applications to graphing, optimization, velocity, and rate of change. Introduction to differential equations. *Prerequisite: MATH-180 with a grade of C- or better or its equivalent, or consent of department. (Most students whose background includes success in three years of high school mathematics will be well-prepared for this course.)*

**MATH-191 Calculus and Analytic Geometry II (4) A**
Antiderivatives, definite and indefinite integration; applications to area. Techniques of integration; applications of the definite integral. Indeterminate forms; infinite
sequences and series. Differential equations. *Prerequisite: MATH-190 with a grade of C- or better or its equivalent.*

**MATH-195 Discrete Mathematics (4) SI**
A study of discrete structures, with topics selected from sets, functions, and relations, Boolean algebra, combinatorics, and graph theory. *Prerequisites: MATH-150 or 180 with a grade of C- or better or either equivalent.*

**MATH-208 Elementary Teachers’ Mathematics I (3) SII**
A constructivist approach to fundamental arithmetic concepts for elementary teachers. Topics include problem solving and algebraic reasoning, whole numbers, numeration systems, integers, rational numbers, real numbers, functions, patterns, and both inductive and deductive reasoning. *May not count toward a mathematics major or minor. Prerequisites: Passing the Mathematics Placement Exam at the MATH-090 level or above, or subsequent successful completion of MATH-090.*

**MATH-209 Elementary Teachers’ Mathematics II (3) SI**
A constructivist approach to fundamental concepts of number theory, set theory, statistics, and probability for elementary teachers. Topics include number theory, sets and Venn diagrams, data collection, visual representations of data, data analysis including measures of central tendency, normal distributions, experimental probability, and basic theoretical probability. *Prerequisite: MATH-208 with a grade of C or higher.*

**MATH-210 Elementary Teachers’ Mathematics III (3) SII**
A constructivist approach to fundamental concepts of measurement and geometry for elementary teachers. Topics include proportional reasoning, units of measure in the metric and U.S. customary systems, unit conversions, congruence, perimeter, area, volume, figures in one, two, and three dimensions; transformational geometry, symmetry, similarity, and tilings. *Prerequisite: MATH-208 with a grade of C or higher.*

**MATH-220 Elementary Statistics (4) A**
A non-calculus introduction to concepts of probability and statistics in various fields: graphical and numerical displays of data, descriptive linear regression and correlation, statistical design, probability, sampling distributions, interval estimation and hypothesis testing, and one-way analysis of variance. Computer lab sessions form an important part of the course. *May not count toward a mathematics major. Prerequisite: MATH-150, 180, or 190 with a grade of C- or better or the equivalent of any of these, or consent of department.*

**MATH-230 Calculus Sequence Seminar (1) SII**
This course is to be taken during a student’s second year at the university. Students will explore how they can apply their knowledge from calculus and problem solving to meaningful real-world applications and within their chosen career field. Students will also be introduced to the portfolio that will be required for successful completion of MATH-460. Students will begin work on their portfolio this semester which will continue until a student complete MATH-460. *Prerequisites: MATH-190 and 191 with a grade of C- or better or consent of the department.*
MATH-245 Statistics for the Sciences (4) Y
An introductory course in statistics for the life sciences. Graphical and numerical techniques of description, probability, random variables, discrete and continuous distributions, sampling distributions, confidence intervals, hypothesis testing, statistical design, goodness-of-fit tests, contingency tables, analysis of variance, and simple linear regression. Computer lab sessions form an important part of this course. Prerequisite: MATH-150, 180, or 190 with a grade of C- or better or the equivalent of any of these, or consent of the department.

MATH-270 Calculus and Analytic Geometry III (4) SI
Vectors, curves, and surfaces in three dimensions; partial differentiation; multiple integrals; vector analysis. Parametric equations. Prerequisite: MATH-191 with a grade of C- or better or its equivalent, or consent of department.

MATH-280 Linear Algebra (4) SII
Systems of linear equations, matrices, canonical forms, fundamental theorems of matrix algebra. Vector spaces and subspaces; dimension. Linear transformations and their matrix representation. The course will place equal emphasis on the geometric motivation of topics, the theoretical import of major theorems, and the application of concepts. Prerequisite: MATH-191 with a grade of C- or better or its equivalent, or consent of department.

MATH-300 Foundations of Abstract Mathematics (4) SII
A course for majors in mathematics and mathematics teaching, also appropriate for mathematics minors. This course emphasizes exploration, discovery, and proof as techniques crucial to the mathematician. It provides a conceptual “bridge” between the largely calculation-based mathematics encountered in the calculus sequence and the more abstract and theoretical expectations of later coursework. Topics include logic, set theory, graphs, and trees. Prerequisite: MATH-191 with a grade of C- or better or its equivalent, or consent of the department. (MATH-280 is a recommended pre- or corequisite.)

MATH-320 Problem Solving (1/2-1) SII
Techniques of problem solving in the mathematical sciences. Since the problems and topics studied in this course will vary from year to year, the course may be taken for credit up to four times. Prerequisite or corequisite: MATH-190 with a grade of C- or better or its equivalent or consent of the department.

MATH-325 Special Topics in Mathematics (.5–4) D
Advanced or special topics not covered in other mathematics courses, such as advanced number theory, topics in advanced abstract algebra or real analysis or topology, differential geometry, mathematical logic, set theory, complex analysis, graph theory, actuarial mathematics, advanced statistics, directed student research, or operations research. Students may enroll in this course more than once, but only once for a given topic. Prerequisite: Consent of the department.

MATH-330 Differential Equations (3) SI
Ordinary differential equations, techniques for their solution, and various applications. Prerequisite: MATH-191 with a grade of C- or better or its equivalent or consent of department.
MATH-335 Introduction to Operations Research (3) D
The course focuses on an operations research approach to mathematical modeling. Topics include linear and integer programming, sensitivity analysis, duality, network models, heuristic methods and simulation modeling. Developing models, solving with software, and interpreting and communicating results will be emphasized. Prerequisites: MATH-280 Linear Algebra.

MATH-345 Applied Statistical Methods (3) SI
The course focuses on linear models for regression and analysis of variance. Topics include simple and multiple regression, analysis of variance, analysis of covariance, logistic regression for binary outcomes, and nonparametric methods. Model checking and refinements as well as interpretation and communication of results will be emphasized. Examples will come from such fields as Biology, Business, Economics, and Engineering. Prerequisites: MATH-220, 245 or 350 or departmental consent.

MATH-350 Probability and Statistics I (3) SI
An introduction to the calculus of probability; includes the axioms and properties of probability, conditional probability, independence, random variables, discrete and continuous distributions, mathematical expectation, moment generating functions, and multivariate and conditional distributions. Prerequisites: MATH-191 and 280 with grades of C- or better or consent of the department.

MATH-351 Probability and Statistics II (3) SII
Continuation of MATH-350; a course in mathematical statistics that includes sampling distributions, central limit theorem, point and confidence estimation, tests of hypotheses, linear regression, correlation, goodness-of-fit tests, contingency tables, analysis of variance, and nonparametric methods. Prerequisites: MATH-350 with a grade of C- or better or its equivalent.

MATH-356 Financial Mathematics (4) SI
An introduction to financial mathematics. Topics include compound interest, annuities, amortization schedules, bonds, yield rates, immunization, and introduction to financial derivatives. Prerequisite: MATH-191 with a grade of C- or better.

MATH-360 Proof & Linear Algebra Seminar (1) SII
This course is to be taken during a student’s third year at the university. Students will explore and develop mathematical connections between proof writing, problem solving, and linear algebra. Exploration of how these topics will intertwine with their future career paths will also be included. Students will continue their work on their portfolio; work on this portfolio will continue until a student completes MATH-460. Prerequisites: MATH-260 and 280 with a grade of C- or better or consent of the department.

MATH-365 Time Series Analysis (3) SII
This course is an introduction to time series analysis, the study of variables observed sequentially in time. Topics include simple methods that describe trends, seasonal patterns, and autocorrelation in time series data; regression methods to analyze trends; stationary time series; non-stationary time series; forecasting; seasonal models. Examples will come from a variety of fields. Prerequisites: Math 345 or consent of the department.
MATH-380 Modern Geometries (3) SII
Plane geometry is developed rigorously from Hilbert’s axioms with an eye toward understanding the dilemma of Euclid’s fifth (parallels) postulate. The development of non-Euclidean geometry then is covered from Euclid through the 19th century, and theorems of Euclidean and hyperbolic geometry are explored. **Prerequisite: MATH-300 with a grade of C- or better, or consent of the department.**

MATH-400 History of Mathematics (3) D
Within the framework of the history of mathematics from Ancient Greece to the mid-19th century, certain developments will be studied in detail. Among possible topics are Greek geometry, Islamic mathematics (algebra and mathematical astronomy), Renaissance mathematics (algebra), the development of the calculus, and the development of non-Euclidean geometry. **Prerequisite: MATH-191 with a grade of C- or better or its equivalent, or consent of the department.**

MATH-415 Bayesian Analysis & Statistical Decision Making (4) D
This course is an introduction to the concepts and methods for making decisions in the presence of uncertainty. The first topic is the formulation of decision problems and the quantification of their components. The course then focuses on learning about unknown features of a decision problem based on data via Bayesian analysis. It then turns to characterizing and finding optimal decisions. Techniques and approaches, computational methods, needed for practical implementation of the theory are presented. The course concludes with reviews and simple examples of selected advanced topics. Throughout the course, the emphasis is on the practice of decision-making and hence describes case studies and provides students opportunities to implement the theory. **Prerequisite: MATH-351.**

MATH-420 Number Theory (3) D
Numbers and their representations, divisibility and factorization, congruences, modular arithmetic, Diophantine equations and their solution, quadratic residues, Pell equations. Primes and their distribution, number-theoretic functions, number-theoretic algorithms. **Prerequisite: MATH-300 with a grade of C- or better or consent of the department.**

MATH-425 Statistical Learning (4) D
This course provides an introduction to the principles of statistical learning and standard learning techniques for regression, classification, clustering, dimensionality reduction, and feature extraction. **Prerequisite: MATH-351.**

MATH-430 Abstract Algebra I (3) O/SI
A course on group theory. Groups, subgroups, and normal subgroups, factor groups, product groups, homomorphisms, and isomorphisms. Fundamental homomorphism theorems, structure of finite abelian groups. **Prerequisites: MATH-280 and 300 with grades of C- or better or consent of department.**

MATH-431 Abstract Algebra II (3) O/SII
Continuation of MATH-430; a course on rings and fields. Rings, integral domains, fields and field extensions. Algebraic extensions, splitting fields, Galois theory. **Prerequisite: MATH-430 with a grade of C- or better or its equivalent.**
MATH-435 Capstone: Research in Data Analysis (4) D
This course is designed to consolidate your knowledge in Data Science by applying the statistical and computational concepts in to real world applications. Independent directed reading and literature review are the main sources of knowledge in this course. This supports the learning and understanding in the discipline of data science, and improves the growth toward academic and professional success. Student will utilize the fundamental concepts of statistics as well as tools from the latest research in data science. Student will formulate a chosen problem, analyze the problem and interpret the results. Students may work in groups depending on the capacity of the chosen project. Student(s) will be evaluated for their individual contribution as well as successful completion of the project. Students may discuss any material or analysis with the advisor.

MATH-440 Topics in Actuarial Science (3) D
Advanced or special topics in actuarial science, such as advanced actuarial models, Bayesian statistics, and stochastic processes. Students may enroll in this course more than once, but only once for a given topic. Prerequisite: Consent of the department.

MATH-456 Actuarial Mathematics I (3) SI
An introduction to actuarial models and their application to insurance. Topics include survival distributions, life tables, life insurance, life annuities, premiums and reserves. Prerequisites: MATH-356 and MATH-350 with grades of C- or better.

MATH-457 Actuarial Mathematics II (3) SII
This course is a continuation of MATH 456. Topics include multiple state models, multiple state and multiple decrement models, valuation theory of pension plans, and insurance models. Prerequisite: Math 456.

MATH-460 Mathematics Capstone (1) SI
This is the senior capstone experience for mathematics and mathematics teaching majors. Students will continue the exploration of connections between all mathematics courses taken as an undergraduate, as well as career/real-world applications. At the end of the course students will submit a portfolio including work samples from major related courses, problem solving/contest participation, and their research, with reflection upon and revision of this work. Prerequisites: MATH-350, 360 and either 430 or 480 with a grade of C- or better or consent of the department.

MATH-466 Loss Models (3) SII/D
A study of loss models in an actuarial context. Topics include frequency and severity models, compound aggregate models, and ruin models. Prerequisite: MATH-350 with a grade of C- or better.

MATH-470 Capstone in Actuarial Science (3) SI
This course is designed to consolidate students’ knowledge in Actuarial Sciences by applying the concepts to real world applications. Independent directed reading and literature review are the main sources of knowledge in this course. Students will formulate a chosen problem, analyze it mathematically and interpret the results. Prerequisites: Math 456 or consent of department.
MATH-480 Real Analysis I (3) O/SI
Basic set theory, sequences and subsequences, structure of the real numbers, topology of the real line and Euclidean n-space, limits, convergence, continuity, derivatives, and functions of bounded variation. Prerequisite: MATH-300 with a grade of C- or better or consent of the department.

MATH-481 Real Analysis II (3) O/SII
Continuation of MATH-480. The Riemann-Stieltjes integral, Fourier series and integrals, sequences of functions, the Lebesgue integral, and L_p spaces. Prerequisite: MATH-480 with a grade of C- or better.

MATH-485 Topology (3) D
A course in elementary point-set topology. The basic topology of Euclidean and metric spaces. Topological generalizations of ideas of limit and continuity. Topological invariants, separation axioms, connectedness, compactness, topological morphisms; the classification of topological spaces. Prerequisite: MATH-480 with a grade of C- or better or consent of the department.

MATH-492 Research in Mathematics (1-3) D
The purpose of this course is to enable a student to conduct a research project in theoretical or applied mathematics under the guidance of a faculty member. A student may approach a faculty member with an idea for a research project or a student may become involved in a faculty member’s research. Independent directed reading and literature review are the main sources of knowledge in this course. The student formulates a chosen problem, analyzes the problem mathematically and interprets the results. Students may work alone or in groups depending on the nature of the chosen project. Formal structure is minimal to give the student an experience in self-direction and self-management in learning. After completion of research analysis, a student will produce two deliverables: a written paper, and an oral presentation to the mathematics and computer science department. Depending on the nature of the project, the student may produce a mathematical model or some software. The faculty member supervising the research project reviews each deliverable and issues a grade based upon the quality and value of the work. Student(s) are evaluated for their individual contribution as well as successful completion of the project. Students may discuss any material or analysis with the supervising faculty member. The course may be repeated but no more than eight hours of research in mathematics will be awarded.

Mechanical Engineering Courses
Mechanical Engineering courses are offered through the R.B. Annis School of Engineering. Information about the school and its programs can be found in the section entitled Academic Units.

MENG-120 Engineering Graphics (1) SII
Principles of orthographic and auxiliary projections, pictorial presentation of engineering designs, dimensioning and tolerance, sectional and detail views, assembly drawings. Descriptive geometry. Engineering figures and graphs. Solid modeling introduction to computer-aided design and manufacturing (CAD/CAM) using numerically-controlled (NC) machines. Course is scheduled as a lab with 3
contact hours. Prerequisite: ENGR-196 with a grade of C- or better or permission of instructor.

MENG-210 Statics (3) SI
Principles of mechanics, vectors, force systems, equilibrium of particles, rigid bodies, simple structures, distributed forces, center of gravity, centroids, friction, moments of inertia. Course is scheduled as 2 hours of lecture and 3 contact hours of lab. Prerequisite: PHYS-153 with a grade of C- or better or permission of instructor.

MENG-220 Thermodynamics I (3) SII
An introduction to basic concepts of thermodynamics to include properties, property relationships, states, and presentation of the basic equations of first and second laws of thermodynamics, an introduction and properties of fluids, fluid statics, Bernoulli and energy equation, momentum analysis and mechanisms of heat transfer. Prerequisite: MATH-270, CHEM-150, PHYS-153 all with a grade of C- or better or permission of instructor.

MENG-300 Mechanics of Solids (3) SI
Stress, strain, deflections, and stability of deformable bodies, including axial loading, torsion, beam bending, introduction to member design, column buckling analysis, and principal and compound stresses and matrix structural analysis. Prerequisite: MATH 270, MENG 210 both with a grade of C- or better or permission of instructor.

MENG 310 Thermodynamics II (3) SI
Continuation of MENG 220 - Thermodynamics I. Application of principles of cycles and reactive systems, energy relationships and equilibrium requirements. Concepts of energy, heat and work; thermodynamic properties of substances and property relationships, phase change; First and Second Laws for closed and open systems including steady and transient processes and cycles; using entropy; representative applications including vapor and gas power and refrigeration cycles. Prerequisite: MENG-220 with a grade of C- or better or permission of instructor.

MENG-320 Materials Processing (3) SI
An introduction is provided to the important engineering properties of materials, to the scientific understanding of those properties and to the methods of controlling them. This is provided in the context of the processing of materials to produce products. Prerequisites: CHEM-150, ENGR-196 both with a grade of C- or better or permission of instructor.

MENG-330 Design of Machine Components (3) SII
Application of the principles of strength of materials to the analysis and design of machine parts. Stress and deflection analysis. Curved bars, multi-support shafts, torsion, cylinders under pressure, thermal stresses, creep, and relaxation, rotating disks, fasteners, springs, bearings, gears, brakes and other machine elements are considered. Failure of structural materials under cyclic stress. Prerequisites: MENG-210, MENG-320 both with a grade of C- or better or permission of instructor.
MENG-340 Mechanical Modeling and Simulation (3) SII
Modeling and simulation methodologies including model-block building, logical and data modeling, validation, simulation and trade-off analysis, decision-making, and optimization. Product and assembly modeling; visual simulation; process modeling; production modeling; process plans and resource modeling, entity flow modeling including conveyors, transporters, and guided vehicles; Input and output statistical analysis. Several CAD/CAE simulation software are used. Prerequisites: MATH-330, PHYS-360, and MENG-220 all with a grade of C- or better or permission of instructor.

MENG-350 Heat Transfer (3) SII
Introduction to heat transfer by conduction, convection, and radiation; steady and transient states; steady periodic states; heat transfer in engineering apparatus. Prerequisites: MATH-330, and MENG-220 both with a grade of C- or better or permission of instructor.

MENG-360 Fluid Mechanics (3) SII
Properties of a fluid, basic flow analysis techniques, fluid kinematics, hydrostatics, manometry, pressure distribution in rigid body motion of a fluid, control volume analysis, conservation of mass, linear and angular momentum, Bernoulli and energy equations, dimensional analysis, viscous flow in pipes, flow metering devices, external flows, estimation of lift and drag, turbo-machinery, open channel flow. Prerequisites: MATH-330, MATH-270, MENG-210, MENG-220 and PHYS-360 all with a grade of C- or better or permission of instructor.

MENG-410 Machine Dynamics and Mechanisms (3) SI
The principles of dynamics as applied to the analysis of the accelerations and dynamic forces in machines such as linkages, cam systems, gears trains, belts, chains and couplings. The effect these dynamic forces have on the dynamic balance and operation of the machines and the attending stresses in the individual components of the machines. Some synthesis techniques. Formation of student teams on a semester long project associated with the design of a mechanical system from recognizing the need through a detailed conceptual design. Prerequisites: MATH-330, MATH-270, PHYS-230, PHYS-360, and MENG-210 all with a grade of C- or better or permission of instructor.

MENG-420 Control Systems (3) SI
Analysis and synthesis of feedback control systems to achieve specified stability and performance criteria, stability via root-locus techniques, Nyquist's criterion, Bode and Nichol's plots, effect of various control laws and pole-zero compensation on performance, applications to servomechanisms, hydraulic and pneumatic control systems, analysis of nonlinear systems. Prerequisites: MATH-330, MATH-270, PHYS-230, PHYS-360 all with a grade of C- or better or permission of instructor.

MENG-430 Manufacturing Processes and Systems (2) SII
Analysis of both bulk-forming (forging, extrusion, rolling, etc.) and sheet-forming processes, metal cutting, and other related manufacturing processes; physics and stochastic nature of manufacturing processes and their effects on quality, rate, cost
and flexibility; role of computer-aided manufacturing in manufacturing system automation; methodologies used to plan and control a manufacturing system, forecasting, production scheduling, facility layout, inventory control, and project planning. Prerequisites: MENG-340, MENG-330 all with a grade of C- or better or permission of instructor.

MENG-440 Mechatronics (3) SII
The integration of electronics and digital controls with mechanical systems; microprocessor control, control theory, actuators, and sensors. Prerequisites: MENG-420 with a grade of C- or better or permission of instructor.

Music Courses
Music courses are offered through the Music Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

MUS-100 Music Fundamentals (3) SI
Basic music theory skills for students with no previous experience or those requiring remediation in the areas of rhythm, pitch, time signatures, key signatures, major and minor scales, intervals, and triads, basic music reading skills, sight-singing and ear training. The course does not count toward a music major or minor but meets the fine arts lecture/theory requirements in the core.

MUS-104 Explorations in Music Education (2) SII
An introduction to teaching music in the public schools required of all students considering a music education major. Students are introduced to the K–12 National Music Standards, INTASC standards, and Indiana licensing procedures. Through reading, writing, field experiences, and discussions, student consider the implications of a particular philosophy of music education, various styles of teaching/learning, and music knowledge and skills, as well as dispositions necessary to become an excellent music teacher. Issues related to music assessment, classroom management, and different types of school settings are considered. Field experience.

MUS-105 Foundations for the Collegiate Musician (1) SI
Provides a foundation for music literacy including music vocabulary, music resources, perceptive listening skills, and writing skills for music. Required of all freshman music majors.

MUS-106 Freshman Experience in Music (1) SI
A transition course designed to facilitate student integration into the collegiate learning community. Strategies and resources for a successful college experience are introduced. Students are made familiar with the requirements, expectations, responsibilities, and opportunities associated with both the liberal arts component and the music component of their selected degrees.

MUS-110 Introduction to Music (2) A
Chronological survey of the Western world’s great music, with an emphasis on listening to specific elements of music and on the relationship of music to cultural
Course Descriptions

and social forces of its time. Units on jazz, American popular music, and non-Western music may be included. For non-music majors.

MUS-112 Introduction to Jazz (2) A
An introduction to jazz styles and jazz history from Dixieland, swing, and bebop to such contemporary performers as Herbie Hancock and Chick Corea. Elements of improvisation within a basic theoretical framework.

MUS-113 Voice Class (2) A
Practical study of the basic techniques of singing: breath control, register balance, and tonal focus. Rudiments of sight-singing to be learned in preparation of simple songs. For non-music majors.

MUS-114 Guitar Class I (2) A
Practical study of the basic techniques of guitar playing: note reading, chords, and finger-picking accompaniment. For non-music majors.

MUS-115 Guitar Class II (2) A
Continuation of MUS-114. For non-music majors.

MUS-116 Piano Class I (2) A
Practical study of the basic techniques of piano playing: note reading, technical exercises, and solo and ensemble playing. In a laboratory of digital pianos with disk drives, students will use accompaniment software written for graded repertoire, digitally record their own performances for playback analysis, and have the opportunity to create and record their own orchestrations. For non-music majors.

MUS-118 Keyboard Skills I (1) SI
Level I keyboard skills (scales, arpeggios, harmonization, transposition, improvisation, sight-reading, repertoire) for music majors and minors whose primary applied area is not piano. This is an entry level course designed to meet the needs of both beginners and students with some keyboard experience but who have not yet mastered the gamut of skills required to successfully complete the Level I Keyboard Proficiency exam. Prerequisite: Note-reading proficiency.

MUS-119 Keyboard Skills II (1) SII
Level II keyboard skills (scales, arpeggios, harmonization, transposition, improvisation, sight-reading, repertoire) for music majors and minors whose primary applied area is not piano. Prerequisite: MUS 118 and/or successful completion of Level I Keyboard Proficiency exam.

MUS-120 Contemporary Dance (1) D
Contemporary dance forms is a beginning to intermediate dance class encompassing contemporary dance styles such as jazz dancing, contemporary modern, lyrical, and music theatre.

MUS-121 Elementary Theory (3) A
Introduction to the tonal procedures of the Common Practice Period with an emphasis on related musicianship skills. Principles of chord progression and succession, triad inversion, figured bass, harmonization, part-writing, analysis, sight-singing, and
rhythmic, melodic, and harmonic dictation. \textit{Prerequisite: Demonstrated proficiency in music fundamentals or successful completion of MUS-100.}

\textbf{MUS-122 Keyboard Skills III (1) SI}
Level III keyboard skills for Music Education majors who are piano secondaries. Music majors who have successfully completed MUS-119 and are not in Music Education are welcome on a space-available basis. Prerequisite: MUS 119 and/or successful completion of Level II Keyboard Proficiency exam.

\textbf{MUS-123 Keyboard Skills IV (1) SII}
Level IV keyboard skills for Music Education majors who are piano secondaries. Focus on Level IV Keyboard Proficiency requirements including accompanying, open score reading, and preparation for the Upper Divisional Piano Examination. Music majors who have successfully completed MUS-119 and are not in Music Education are welcome on a space-available basis. \textit{Prerequisite: MUS 122 and/or successful completion of Level III Keyboard Proficiency exam.}

\textbf{MUS-125 Microcomputer Applications in Music (2) SI/SII}
Introduction to applications of personal computers for the musician and music teacher. Laboratory experiences in word processing, database management, Web page design, Musical Instrument Digital Interface (MIDI), sequencing, music notation, and composition programs. Exploration of commercial software for music instruction and management. \textit{Prerequisite: MUS-121 or consent of instructor.}

\textbf{MUS-126 Ukulele Class I (2) A}
Ukulele Class I is open to both music majors and non-music major students with little or no experience with ukulele. This class is designed as a comprehensive introduction to the basics of the instrument, and will also provide students with usable knowledge in both fundamental music theory and note-reading. Ukulele techniques to be learned include both finger-picking single melodic lines, as well as strumming patterns for the most common chord shapes.

\textbf{MUS-127 Electronic Music Notation (2) SII}
Introduction to music notation for the musician, composer, and music teacher. Laboratory experience in Sibelius, Photoscore Lite, and Audioscore Lite. Exploration of commercial software for music notation. \textit{Prerequisite: MUS-121 or consent of instructor.}

\textbf{MUS-128 Introduction to Music Therapy (2) SI}
Intro to Music Therapy is an examination of the history and current uses of music in rehabilitation, special education and therapy. It includes an introduction to the influence of music on cognition, and physical, social, and emotional behaviors and involves participation in both class simulations and community observations.

\textbf{MUS-131, 232, 233, 332 Music History Survey I, II, III, IV (2, 2, 2, 2) SI, SII, SI, SII}
Evolution of Western musical style from ancient Greece to the present day. Introduction to composers, schools of thought, and examination of representative works from all periods within the framework of cultural context, historical perspective, and stylistic influences. MUS-131 includes antiquity, Middle Ages, and
Renaissance periods. MUS-232 includes Baroque and Classical periods through Mozart. MUS-233 includes Beethoven through 19th-century Romanticism. MUS-332 includes the 20th and 21st centuries.

**MUS-132 Aural Skills I (2) SI**
Aural Skills I is a skills practicum for the materials of tonal music. You will learn to read, sing, and perform melodies, harmonies, and rhythms basic to understanding tonal music. You will also learn to take music dictation; that is, the skill of hearing melody, harmony, or rhythm and notating it accurately. This course will also help you to develop your basic tonal writing and improvising skills. Each week, class time will be spent on several of these activities.

**MUS-133 Music Theory I (2) SI**
Music Theory I is an introduction to the workings of tonal music. You will learn basic tonal writing and improvising skills, and analyze music literature. By practicing these skills, you will learn how to read, hear, and understand musical lines and harmonies and how composers build on simple structures to create more complex melodies and phrases. By the end of the semester, you will be familiar with common progressions and voice leading patterns and be able to find them in literature. You will be able to compose melodies, write harmonizations, and think critically about your own work. While acquiring new techniques, we will always keep aesthetics in mind, and relate our technical choices to expressive effects. Ultimately, you will learn to use techniques creatively to make your own musical statements.

**MUS-135 Introduction to Compositional Techniques (2) A**
Classroom instruction for the novice composer. Written compositional exercises and short pieces for a solo instrument and/or a small ensemble are required. *Prerequisite: MUS-121.*

**MUS-140, 340 Private Applied Keyboard (1, 2, 3) A**
(Section designation: 01-06, 09-Piano, 07-Organ, 08-Harpsichord)

**MUS-141, 341 Private Applied Strings (1, 2, 3) A**
(Section designation: 01, 07-Violin, 02-Viola, 03-Cello, 04-Bass, 05, 06-Guitar)

**MUS-142, 342 Private Applied Brass (1, 2, 3) A**
(Section designation: 01, 05-Trumpet, 02-French Horn, 03-Trombone, 04, 06-Tuba)

**MUS-143, 343 Private Applied Woodwinds (1, 2, 3) A**
(Section designation: 01, 06-Flute, 02, 07-Clarinet, 03-Oboe, 04-Bassoon, 05-Saxophone)

**MUS-144, 344 Private Applied Percussion (1, 2, 3) A**

**MUS 145, 345 Private Applied Voice (1, 2, 3) A**

**MUS 146, 346 Private Applied Composition (1) A**

**MUS-147 Applied Sight Singing (1) A**
Systematic investigation of sight singing elements through the study of vocal exercises and literature.

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MUS-148 Applied Musicianship (1) A
Additional training in musicianship through sight singing, keyboard harmony, and score reading studies. Prerequisite: MUS-122.

MUS 150-01-08 Performance Disciplines: (1) A

MUS 150-01 Woodwinds (1) A
MUS 150-02 Brass (1) A
MUS 150-03 Piano (1) A
MUS 150-04 Percussion (1) A
MUS 150-05 Voice (1) A
MUS 150-06 Strings (1) A
MUS 150-07 Guitar (1) A
MUS 150-08 Composition (1) A

MUS 150-UD Upper Divisional (0) SII of the sophomore year (or as determined by the music department chair)
An area-specific class required of all music majors in which the assessment evaluations for masterclass, departmental recitals, juries, and/or recital hearings are housed. Scheduled fees are assessed per specific instrumentation and support the accompaniment requirements necessary for that discipline. The MUS 150-UD is specifically for the Upper Divisional performance assessments and must be registered for concurrently with another MUS-150 PD class in the second semester of the sophomore year or for transfer students as determined by the music department chair.

MUS-160 Concert Choir (.5/1) A
Mixed (SATB) choral ensemble that performs literature from the Renaissance to the 20th century, both a cappella and with instrumental accompaniment, and major works with orchestra. Concert tours to Europe periodically. Meets four hours weekly. Audition required.

MUS-161 Symphonic Wind Ensemble (.5/1) A
This wind and percussion ensemble presents multiple concerts each semester, with each designed to reflect great variety and a high level of musicianship. Musical repertoire includes highly regarded original band works as well as select transcriptions of orchestral repertoire. In addition to on-campus performances, the ensemble conducts regional and international tours. Meets four hours weekly. Audition required.

MUS-162 Pep Band (.5/1) A
This instrumental ensemble performs at all home football games and select home basketball games, with the primary goal of enhancing the atmosphere by providing
spirited music. The ensemble meets one hour weekly; no audition is required. *No audition required.*

**MUS-163 UIndy Jazz Ensemble (.5/1) A**
A big band jazz ensemble of 15 to 18 members. Development of sight-reading and performance skills in various big band styles. Performs on campus and occasionally in local jazz clubs. Meets three hours weekly. *Audition required.*

**MUS-165 Crimson Express (.5/1) A**
A vocal ensemble that performs music in both popular and jazz genres, arranged and performed with acoustic and electronic accompaniment. Meets three hours weekly. *Audition required.*

**MUS-166 Women’s Chorus (.5/1) A**
A choral ensemble made up of women’s voices performing a cappella and accompanied literature of all periods. Meets two hours weekly. *Audition required.*

**MUS-167 Musical/Opera Production (.5/1) SII**
Full-scale opera or musical production with scenery, properties, costumes, and orchestral accompaniment. Jointly produced by the music and theatre departments. Occurs in opposite years. *Audition required.*

**MUS-170 Small Ensembles (Vocal and Instrumental) (.5/1) D**

**MUS-171 Brass Chamber Music Experience (.5/1) D**
A coached ensemble with varied brass instrumentation. Meets two hours weekly. Performs on student recitals and for other functions. *Audition required.*

**MUS-172 Baroque Ensemble (.5/1) D**
A coached ensemble for varied baroque chamber music instrumentation. Meets two hours weekly. Performs on student recitals and for other functions. *Audition required.*

**MUS-173 Guitar Ensemble (.5/1) D**
A coached ensemble. Meets two hours weekly. Performs on student recitals and for other functions. *Audition required.*

**MUS-174 African Drum Ensemble (.5/1) A**
Performs (by ear) percussion music based in the African tradition in a concert each semester. Meets 90 minutes weekly. *No audition required.*

**MUS-175 Percussion Ensemble (.5/1) A**
Performs standard literature as well as ethnic and original works for mallet and other percussion instruments. Meets two hours weekly. *Audition required.*

**MUS-176 Beginning Handbell Ensemble (.5/1) A**
Development of the art of English handbell ringing. Ensemble performs in student recitals and participates in major concerts. Meets two hours weekly. Note-reading is not required, but recommended. *No audition required.*
MUS-178-01 Woodwind Chamber Experience Flute Choir (.5/1) D
Meets two hours weekly. Performs each semester in a chamber music concert. 
*Audition required.*

MUS-178-03 Woodwind Chamber Experience – Woodwind Quintet (.5/1) D
Meets two hours weekly. Performs each semester in a chamber music concert. 
*Audition required.*

MUS-179 Collaborative Piano (.5/1) D
Meets two hours weekly. Pianists work with soloists in a collaborative role and perform in a concert. 
*Audition required.*

MUS-180 Chamber Orchestra (.5-1) A
The Chamber Orchestra is open to all violinists, violists, cellists, and bassists with at least one year of playing experience. The ensemble rehearses twice per week and performs one or two concerts per semester. The winds and percussionist are selected from players in the Symphonic Wind Ensemble. 
*Audition required.*

MUS-207 Jazz Keyboard (2) SI
Practical study of jazz piano technique: voicings for the ii-V-I progression, recognition of form, the blues progression, chord substitutions, and study of jazz piano players and styles.

MUS-208 Jazz Improvisation I (3) SI
Beginning jazz theory: scale/chord relationships, beginning chord substitution, listening, and methods of practice. 
*Prerequisite: MUS-121.*

MUS-209 Jazz Improvisation II (3) SII
Advanced jazz improvisation theory, chord substitutions, song forms, licks, scale patterns, transcription. 
*Prerequisite: MUS-208.*

MUS-210 Music in World Culture (3) SII
Focus on musical traditions of the non-Western world, including folk and cultivated music of India, the Far East, the Middle East, and Africa. Emphasis on the role and meaning of music in human society. Field project. Meets core requirement for cross-cultural understanding.

MUS-213 Diction for Singers I (2) O/SI
An introduction to the International Phonetic Alphabet and rules of articulation and pronunciation of English and Italian. Geared for the vocal music major or minor. 
*Prerequisite: MUS-145 or consent of the instructor.*

MUS-214 Diction for Singers II (2) O/SII
An introduction to the rules for articulation and pronunciation of sounds in the German and French languages using the International Phonetic Alphabet. Geared for the vocal music major or minor. 
*Prerequisite: MUS-145 and 213 or consent of instructor.*
MUS-220 Intermediate Theory (3) A
Continued study of diatonic practices with an introduction to chromatic alteration and modulation. Seventh chords, secondary function, tonicization. Related musicianship skills. Written exercises, analysis, aural discrimination, sight-singing, dictation. Prerequisite: MUS-121.

MUS-221 Aural Skills II (2) SII
Continued study of musicianship skills including sight singing, composition, and rhythmic, melodic, and harmonic dictation. Prerequisites: MUS-132 and 133.

MUS-222 Music Theory II (2) SII
Continued study of diatonic harmony with an introduction to chromaticism and modulation including figured bass, harmonization, part-writing, analysis, keyboard skills, and score reading. Prerequisites: MUS-132 and 133.

MUS-223 Advanced Theory (3) A
Detailed study of chromatic harmony, including altered chords and modulation to remote keys. Small part forms, late Romantic procedures, and an introduction to nonfunctional usage. Written exercises, analysis, aural comprehension, sight-singing, dictation, keyboard harmony, score reading. Prerequisite: MUS-220.

MUS-224 Aural Skills III (2) SI
Development of musicianship skills with chromatic materials including sight singing, composition, and rhythmic, melodic, and harmonic dictation. Prerequisites: MUS-221 and MUS-222.

MUS-225 Music Theory III (2) SI
Detailed study of chromatic harmony including figured bass, harmonization, part-writing, analysis, keyboard skills, and score reading. Prerequisite: MUS-221 and MUS-222.

MUS-226 Electronic Music Media I (3) SI
An introduction to the individual system components and their integration in a computer-based MIDI workstation. Students will acquire basic knowledge of synthesizer architecture and elementary sequencing techniques. Students will be encouraged to explore and develop their creative skills in the electronic medium. Prerequisite: MUS-125.

MUS-227 Audio Recording I (3) SII
An introduction to the principles of live stereo recording. Students will learn components of the recording chain, including basics of acoustics and sound, signal flow, microphone types and usage, console operation, and fundamentals of the digital audio workstation. Course is split between classroom instruction and hands-on experience in basic recording environment.

MUS-228 Observation and Measurement (1)
Observation of professional music therapy sessions in a variety of settings with client populations of varying needs. Prerequisites: MUS-128, PSY-120
MUS-234 Form and Analysis (3) SII
Study of tonal and post-tonal forms and techniques from all musical style periods with an emphasis on synthesis of music theory and history concepts. Prerequisite: MUS-224 and MUS-225.

MUS-250 Voice Techniques (1) SI
Introduction to techniques of singing and pedagogy for teaching voice privately and in a group setting.

MUS-251 String Techniques (1) SI
Introduction to techniques of playing and pedagogy for teaching violin, viola, cello, and string bass privately and in a group setting.

MUS-252 Percussion Techniques (1) SII
Introduction to techniques of playing and pedagogy for teaching percussion instruments privately and in a group setting.

MUS-253 Woodwind Techniques (1) SII
This course prepares students who plan to teach instrumental music by addressing fundamental performance and pedagogical techniques on woodwind instruments (flute, oboe, clarinet, bassoon, and saxophone). Topics include teaching strategies, common performance problems, basic woodwind repair, equipment, and repertoire.

MUS-254 Brass Techniques (1) SII
Introduction to techniques of playing and pedagogy for teaching trumpet, French horn, trombone, baritone, and tuba privately and in a group setting.

MUS-257 Basic Conducting (2) SII
This required course for all music majors deals with the fundamental aspects of conducting, including basic baton technique, instrumental transpositions, and rehearsal technique. Students are in front of the instrumental/vocal group, made up of their classmates, at least twice per week. Prerequisite: MUS-121 or 132 and 133.

MUS-260 Tonal Forms (3) A
Classic forms and Romantic tropes, with an emphasis on structural function, large-scale tonal organization, motivic development, and linear connections. Includes some study of 20th-century neoclassicism as it relates to the music of previous eras. Prerequisite: MUS-223.

MUS-261 Guitar Techniques (1) SII
This course prepares students to teach individual and group guitar classes by providing an introduction to basic playing techniques and an overview of pedagogical resources and teaching strategies.

MUS-272 String Chamber Music Experience (.5/1)
A coached ensemble of varied string instruments. Meets two hours weekly. Performs on chamber music recitals and for other functions.
MUS-273 Jazz Combo (.5/1) A  
Faculty/student ensemble. Development of improvisation skills. Performs on and off campus. Meets two hours weekly. *Audition required.*

MUS-274 Piano Ensemble (.5/1) A  
Performs music (for four hands and two pianos) from the 18th through the 20th centuries. Meets 90 minutes weekly. Open to piano majors by permission of the instructor.

MUS-275 Schola (.5/1) A  
Chamber vocal ensemble of 14 to 16 singers performing primarily a cappella literature of all periods but concentrating on music of the Renaissance, the Baroque, and the 20th century. Meets three hours weekly. *Audition required.*

MUS-276 Advanced Handbell Ensemble (.5/1) A  
Meets two hours weekly. *Audition required.*

MUS-277 Woodwind Ensemble (.5/1) D  
A coached ensemble of varied woodwind instrumentation. Meets two hours weekly. Performs on chamber music recitals and for other functions. *Audition required.*

MUS-278 Saxophone Quartet (.5/1) D  
Meets two hours weekly, once a week with coach. *Audition required.*

MUS-289 Therapy Activities/Children (1)  
Therapeutic Activities for Children is an examination of music therapy techniques used with children of all ability in the educational, home, and sheltered settings. This course will explore current legislation related to education and care of students with different abilities. Methods of instruction will include lecture, group discussion, experiential approaches such as demonstrations and role play, self-evaluation, review of written material/texts, exams/quizzes, and assignment of a research paper and class presentation. *Prerequisites: MUS-128 and either MUS-114 or MUS-126*

MUS-290 Therapy Activities/Adult (1)  
Therapeutic Activities for Adults is an examination of music therapy techniques used with adults of all ability in the home, institutions, and sheltered settings. This class will examine the epidemiology and symptomatology relevant to adult populations including, but not limited to: cancer, neurological disorders, Parkinson’s, stroke, Brain Injury, Psychiatric disorders, etc.). Methods of instruction will include lecture, group discussion, experiential approaches such as demonstrations and role play, self-evaluation, review of written material/texts, exams/quizzes, and assignment of a research paper and class presentation. *Prerequisites: MUS-128 and either MUS-114 or MUS-126*

MUS-301 Opera Scenes (.5/1) A  
Meets three hours weekly. Open to all upper-division students studying voice, on recommendation of voice instructor.
MUS-307 Jazz History (2) O/SII
Study of the evolution of jazz including important periods and musicians, including listening. Eras covered: pre-jazz, New Orleans, swing, bebop, post-bebop, cool, hard bop, Avant Garde, fusion, and neoclassicism. Prerequisite: MUS-121 or permission of instructor.

MUS-308 Jazz Pedagogy (2) SI
Study of jazz instruction: rehearsal methods, instruments and rhythm section, programming, improvisation, and small and large ensembles.

MUS-309 Jazz Arranging (2) O/SI
Practical study of the techniques of arranging for small and large ensembles in jazz style including instruments, notation, form, voicings, and part and score preparation. Prerequisite: MUS-121 or permission of instructor.

MUS-311 Contemporary Vocal Styles (1) SII
Designed to acquaint students with the characteristics of vocal music in popular culture. Attention will be paid to the study of phrasing, diction, and tone color, as well as other performance practices unique to this genre. Equal emphasis will be placed on ensemble and solo singing. The development of music sight-reading skills also will be stressed.

MUS-323 20th-Century Masters (3) O/SII
Intensive study of the innovations of Debussy, Bartók, Stravinsky, and Schoenberg. Systematic writing assignments will synthesize the concepts of nonfunctional harmony, free tonality, atonality, and “emancipation of the dissonance.” Important works of European composers such as Berg, Hindemith, Messiaen, Shostakovich, and Britten as well as the American masters Ives, Copland, and Carter. Prerequisite: MUS-223.

MUS-324 18th Century Counterpoint (3) O/SI
Study of contrapuntal genres and voice-leading models of the Baroque, with an emphasis on the works of J. S. Bach. Writing assignments in styles under consideration. Prerequisite: MUS-223.

MUS-325 Compositional Studies in Electronic Music (2) SII
Introduction to the fundamental compositional techniques used in the creation of musique concrète. Technical knowledge covered may include principles of acoustics, digital and analog synthesis, sampling, and sequencing, as well as audio recording and editing software. Emphasis is placed on composition of art music.

MUS-326 Electronic Music Media II (3) SI
A more in-depth study of sequencing techniques. Students will gain familiarity with a wider variety of electronic instruments. Students will meet for one hour of class discussion and one hour of private tutoring weekly. Taught in the Music Technology Lab. Students are expected to complete several projects in their area of interest. Prerequisite: MUS-226.

MUS-327 Audio Recording II (3) SI
Continuation of the study of components in the recording chain with focus on the principles of multi-track recording/mixing techniques and the use of signal processing
equipment. Students will learn the basic operation of hard disk recording and editing as well as the operation of digital audio workstation. Prerequisite: MUS-227.

MUS-334 16th Century Counterpoint (2) A
Study of contrapuntal genres and voice-leading models of the Baroque, with an emphasis on the works of Palestrina. Writing, performance, and analysis assignments in styles. Prerequisite: MUS-223.

MUS-340-346 Private Applied Lessons (1-3) A
(See MUS-140-146 for specific designations.) Prerequisites: Music majors only, on successful completion of the sophomore evaluation.

MUS-351 Music Methods for Elementary Classroom Teachers (2) A
Designed for the classroom teacher, an introduction to music fundamentals with methods, materials, and rationale for integrating music into the elementary curriculum. Skill development in playing classroom instruments, note reading, and singing. Prerequisite: Junior standing or consent of instructor.

MUS-362 Advanced Instrumental Conducting I (1) SII
The intellectual and expressive aspects of instrumental conducting using high-quality literature from several musical periods as the basis for this exploration. Additional focus will be on conducting and rehearsal techniques, score reading, score study and preparation, and introduction to the concept of comprehensive musicianship. Prerequisite: MUS-257.

MUS-363 Advanced Choral Conducting I (1) SII
The intellectual and expressive aspects of vocal conducting using high-quality literature from several musical periods as the basis for this exploration. Additional focus will be on conducting and rehearsal techniques, score reading, score study and preparation, and introduction to the concept of comprehensive musicianship. Prerequisite: MUS-352.

MUS-364 Advanced Instrumental Conducting II (1) SI
A continuation of the work begun in Advanced Instrumental Conducting I and the third year of the conducting curriculum. In addition to providing the opportunity for future conductors to be in front of and work with a real ensemble, the course will deal on a much more advanced level with such topics as score study and internalization, rehearsal psychology, and effective nonverbal communication. Prerequisite: MUS-362.

MUS-365 Advanced Choral Conducting II (1) SI
A continuation of the work begun in Advanced Choral Conducting I and the third year of the conducting curriculum. In addition to providing the opportunity for future conductors to be in front of and work with a real ensemble, the course will deal on a much more advanced level with such topics as score study and internalization, foreign languages, rehearsal psychology, and effective nonverbal communication. Prerequisite: MUS-363.

MUS-370 Junior Recital (0) A
Required for Music Education and Performance majors. Contingent on approval of faculty committee.
MUS-390 Secondary Choral Methods (3) SII
This course will focus on the theoretical and pragmatic aspects of establishing, building, and maintaining a successful choral music program in the middle, junior high, and senior high school levels. Through weekly observation and assisting of master teachers, students will demonstrate teaching strategies for performing and nonperforming classes based on national and state standards. They will establish a firm philosophical ground for teaching music and acquire a basic knowledge of secondary school budgets, human resources, and technology. Field experience.

MUS-391 Secondary Instrumental Methods (3) SII
This course will focus on the theoretical and pragmatic aspects of establishing, building, and maintaining a successful instrumental music program in the middle, junior high, and senior high school levels. Through weekly observation and assisting of master teachers, students will demonstrate teaching strategies for performing and nonperforming classes based on national and state standards. They will establish a firm philosophical ground for teaching music and acquire a basic knowledge of secondary school budgets, human resources, and technology. Field experience.

MUS-401 Teaching of Elementary School Music (4) SI
Students refine their philosophy of music education and acquire knowledge and skill in various methodologies for teaching general music at the elementary level (K–8). Through peer teaching and field experience, they demonstrate their ability to teach music content appropriate to the elementary level based on K–12 national music standards. Simultaneously, they demonstrate their understanding of INTASC standards regarding writing lesson plans that take into consideration individual learning styles, the school setting, diverse populations, use of technology, etc. Field experience.

MUS-402 Church Music Administration and Special Topics (II) SII
This course will deal with the principles of administration in church music with specific emphasis on resources, recruitment and delegation, and the working relationship with clergy and congregation.

MUS-409 Jazz Styles (2) O/SII
Study of jazz improvisation innovators, styles of improvisation, selection of a performer to transcribe, and a project focusing on a performer of the student’s instrument. Prerequisite: MUS-121 or equivalent.

MUS-420 Special Topics in Music (1–3) D
Topics of special interest in music for the music major or non-major that cannot be offered on a regular basis. Students may enroll in this course any number of times as long as the topic is different.

MUS-423 Issues in Analysis and Criticism (3) D
Advanced study of selected masterworks from the past five centuries, with an introduction to a variety of analytical approaches (Réti, Schenker, Tovey, etc.). Related readings chosen from the important thinkers and writers of our own time with regard to musical perception, aesthetics, and criticism (e.g., Meyer, Cone, Rosen, Taruskin) will form a core component of the course. Prerequisite: MUS-322.
MUS-424 Contemporary Techniques (2) D
Important compositional trends of the past few decades with attention to the works of Lutoslawski, Crumb, Ligeti, Schwanter, Corigliano, and a wide variety of approaches taken by the musical pioneers of the last 50 years: European serialism, indeterminacy, musique concrète, eclecticism, minimalism, etc. Prerequisite: MUS-223.

MUS-428 Music Technology Capstone Project (1) SII
Student will oversee all production aspects involved in the successful completion of an independent recording or electronic music project of considerable size and length. Focus will be on pre- and post-production details of the recording session. Students will meet weekly to audition and discuss each other’s work.

MUS-429 Internship (1–3) D
Those students who possess the necessary skills and have faculty approval may elect to pursue an internship experience in a local commercial recording studio. Time commitment will vary depending on the facility in which the student is placed. Prerequisite: Consent of the instructor and studio manager.

MUS-430 Piano Literature and Pedagogy (3) D
Survey of intermediate and advanced piano literature, piano teaching methods, and reference materials available to the pedagogue. Study of teaching/learning styles through observation and practical experience. Prerequisite: MUS-131 and 140 or equivalent.

MUS-431 Song Literature (2) D
Survey of the basic repertoire of old Italian arias, German Lieder, French melodies, and American and English art songs with the application of techniques of song study, interpretation, and program building to this literature. Prerequisites: MUS-121 and 131.

MUS-433 Instrumental Literature and Pedagogy (1–2) D
Survey of solo and chamber music repertoire for a designated orchestral instrument through the 20th century, with the study of teaching/learning styles through observation and practical experience. Prerequisites: MUS-131 and one of the following: 341, 342, 343, or 344.

MUS-434 Survey of Church Music Literature and Hymnody (3) SI
General hymn survey, anthems, psalms, large and small choral forms, mass settings, music of different denominations in the U.S., global church music, and contemporary styles over the expanse of time, from Gregorian chant to contemporary Christian music. Hymnal sources will include the Hymnal 1982, Methodist Hymnal, Lutheran Book of Worship, and other collections from different world traditions in Asia, Africa, and Latin America.

MUS-435 HON Beethoven/Schubert Honors Seminar (3) O/SI
Study of musical genesis and structure, source writings and historical studies, analytical approaches, and critical interpretations relating to the works of Beethoven and Schubert. Prerequisite: MUS-223 or permission of instructor.
MUS-450 Senior Capstone in Music (1) A

MUS-454 Marching Band Techniques (1) A
This course for instrumental music education majors deals with the many aspects of directing a high school marching band. Topics include financial and logistical issues, traditional and corps style charting techniques, equipment and uniforms, and marching fundamentals. High school visitations are an important part of this course.

MUS-455 Instrumental/Choral Arranging (2) SI
Scoring procedures for small and large instrumental and choral ensembles, with emphasis on those used in public schools. Prerequisite: MUS-223.

MUS-470 Senior Recital (0) A
Required for Music Education and Performance majors. Contingent on approval of faculty committee.

MUS-472 Clinical Practicum in Therapy I (1)
Students will provide music therapy services to clients in a music therapy clinic setting. The primary focus of sessions will be developing assessment and observation skills. A secondary focus of the course will be developing documentation skills. Clients will be recruited from the community and agree to receive services from student clinicians receiving direct clinical supervision from a credentialed music therapy professional. Prerequisites: MUS -128, PSY-120, MUS-289 and MUS-290

MUS-473 Clinical Practicum in Therapy II (1)
Students will provide music therapy services to geriatric clients in either a music therapy clinic setting, university approved facility, or school. The primary focus of sessions will be developing assessment and observation skills. A secondary focus of the course will be developing documentation skills. Clients recruited from the community will agree to receive services from student clinicians receiving direct clinical supervision from a credentialed music therapy professional. Prerequisites: MUS -128, PSY-120, MUS-289, MUS-290, and MUS-472.

MUS-474 Clinical Practicum in Therapy III (1)
Students will provide music therapy services to pediatric clients in a music therapy clinic setting, university approved facility, or school. The primary focus of sessions will be developing assessment and observation skills. A secondary focus of the course will be developing documentation skills. Clients recruited from the community will agree to receive services from student clinicians receiving direct clinical supervision from a credentialed music therapy professional. Prerequisites: MUS -128, PSY-120, MUS-289, MUS-290, MUS-472, and MUS-473.

MUS-475 Clinical Practicum in Therapy IV (1)
Students will provide music therapy services in a hospital setting. This may include the area of psychiatry, rehab, high-risk maternity, or general hospitalization. The primary focus of sessions will be developing assessment and observation skills. A secondary focus of the course will be developing documentation skills. Student clinicians will receive direct clinical supervision from a credentialed music therapy professional. Prerequisites: MUS -128, PSY-120, MUS-289, MUS-290, MUS-472, MUS-473 and MUS-474.
MUS-479 Influence of Music on Behavior (3)
The influence of music on behavior examines music as a human function. Topics that will be discussed include, but are not limited to: music in society and culture, the function of music in a variety of settings, psychoacoustical foundations, rhythmic foundations, melodic and harmonic foundations, and affective behaviors and music. Prerequisites: MUS-128 and PSY-120.

MUS-481 Music Therapy Internship (Capstone) (1)
The Internship in Music Therapy is the Capstone experience of the Bachelor of Science in Music Therapy and Equivalency Certificate in Music Therapy. The internship must be at least 900 hours of on-site clinical practice at an AMTA national roster internship site. Students must complete internship before they are eligible to receive their degree and sit for the Board Certification Exam. Internships must be completed within two years of completing course work. Prerequisites: All coursework for Bachelor of Science Degree in Music Therapy.

Nonprofit Management Courses
Non-profit management courses are offered through the School for Adult Learning. Information about the school and its majors can be found in the section entitled Academic Units.

NPM-200 Introduction to Nonprofit Management (3) A (Accelerated)
While learning basic rules and principles to lead, manage and govern a nonprofit in the 21st century, students will gain insights into the history of the nonprofit sector, along with effective practices to work with boards, manage volunteers and staff members, and begin thinking about fund and program development and evaluation.

NPM-300 Program Management & Evaluation (3) A (Accelerated)
Program development and evaluation are fundamental pieces in any nonprofit organization. Through this course, students will learn the keys to developing and evaluating programs and then using the data to improve the organization and its future programs.

NPM-320 Strategic Planning for the Nonprofit Sector (3) A (Accelerated)
The key to successful nonprofit organizations is strategic planning. This course will lead students through the strategic planning process from preparation to implementation and evaluation.

NPM-350 Marketing & Communication for the Nonprofit Sector (3) A (Accelerated)
The best programs and services will not meet the needs of any community if people do not know about them. Through this course, students will learn and apply the basic principles of marketing to nonprofit organizations.
Nursing Courses
Nursing courses are offered through the School of Nursing. Information about the school and its majors can be found in the section entitled Academic Units.

NURB-225 Nutrition (2) SI or SII (BSN)/Summer (2nd Degree Accelerated BSN)
This foundational course will prepare the student with the basic knowledge of nutrition in a multicultural context. The role of nutrition in promoting and maintaining health is an important factor in the care of the well and ill health care recipient. The course emphasizes the importance of nutrition in the prevention and treatment of various diseases. The roles of communicator, collaborator, teacher, and counselor will be discussed and incorporated in the development of a nutrition health plan. The role of risk factors in the development of diseases will be discussed. Nutrition education strategies will be incorporated throughout the course. BSN Students: Corequisite: Concurrent enrollment in NURB-231 if not taken prior to current semester. 2nd Degree Accelerated BSN: Prerequisite: Must be admitted into the 2nd Degree Accelerated BSN program; Corequisite: NURB-340.

NURB-230 Health Assessment I (3) Summer (2nd Degree Accelerated BSN only)
This foundational course focuses on holistic health and assessment of the individual and families across the lifespan. Emphasis is placed on self-care, communication, growth and development, nursing process, and critical thinking. Introduction to professional nursing issues and practice is integrated throughout the course. Experienced students explore all nursing roles with emphasis on the roles of communicator, caregiver, and advocate. Opportunities to apply nursing roles are provided in a variety of health care environments. Prerequisite: for admitted 2nd Degree Accelerated Bachelor of Science in Nursing Program students; Corequisite: NURB340.

NURB-231 Health and Assessment of Individuals and Families I (6) SI or SII
This foundational course focuses on holistic health and assessment of the individual and families across the lifespan. Emphasis is placed on self-care, communication, growth and development, nursing process, and critical thinking. Introduction to professional nursing issues and practice is integrated throughout the course. Students explore nursing roles with emphasis on the roles of communicator, caregiver, and advocate. Opportunities to apply nursing roles are provided in a variety of health care environments. Prerequisite: Acceptance into the BSN program. Corequisite: Previous completion of or concurrent enrollment in NURB-225.

NURB-232 Health and Assessment of Individuals and Families II (5) Summer (2nd Degree Accelerated BSN)
This foundational course expands the concepts explored in NURB-230 by comparing wellness and illness of the individual and families across the lifespan. Emphasis is placed on physiologic and psychosocial needs of health care recipients and application of critical thinking and nursing process. The focus of role development includes the roles of caregiver, communicator, advocate, teacher, and leader/manager. Opportunities to compare wellness and illness of health care recipients are provided in a variety of health care environments. Prerequisites: Successful completion of NURB-230. Corequisite: NURB-340.
NURB-232 Health and Assessment of Individuals and Families II (5) SI or SII
This foundational course expands the concepts explored in NURB-231 by comparing wellness and illness of the individual and families across the lifespan. Emphasis is placed on physiologic and psychosocial needs of health care recipients and application of critical thinking and nursing process. The focus of role development includes the roles of caregiver, communicator, advocate, teacher, and leader/manager. Opportunities to compare wellness and illness of health care recipients are provided in a variety of health care environments. Prerequisites: Successful completion of NURB-225 and 231. Corequisite: NURB-285.

NURB-285 Pharmacology (3) SI or SII (BSN)/Summer (2nd Degree Accelerated BSN)
This course is designed for nursing students and focuses on nursing interventions related to patient care and drug therapy. Principles of drug administration and documentation, appropriate use, therapeutic effects, toxicity, adverse effects, therapeutic and toxic interactions, and cultural and lifespan considerations are discussed. Applicable oral, parenteral, and topical prototype drugs are presented for each classification. Case studies are used to enhance the application to clinical practice. Prerequisites: BIOL-103 and 104 with grade of C or higher. Corequisite (BSN students only): Previous completion of or concurrent enrollment in NURB-232. 2nd Degree Accelerated BSN: Prerequisite: Must be admitted into the 2nd Degree Accelerated BSN program;

NURB-325 Community Health Nursing (3) SI (2nd Degree Accelerated BSN)
This population-focused course prepares students for entry-level community health nursing and public health nursing practice. Health promotion, risk reduction, and disease prevention are the foci of care. Special emphasis is given to health from global, environmental, and public policy perspectives. Experienced students work with representatives of selected population groups to enhance the health status of a community. Nursing process is guided by the application of nursing and public health theories/models and standards for public health nursing practice. Prerequisite: NURB-230, 232, and 340. Corequisite: NURB-360.

NURB-330 Methods of Nursing Research (3) SI or SII
An introduction to basic research concepts and the research process as applied to evidence-based practice are presented in this course. Concepts include qualitative and quantitative research, statistics, and scientific writing. Knowledge of the research process and the concepts are demonstrated though writing critiques of published nursing research and a group presentation of an evidence-based project. This course provides the foundation for the reading and understanding of nursing research, incorporating nursing research into nursing practice, and collaboration on research teams. Prerequisites: All 200-level Nursing courses; NURB-331 and 340. Corequisite: NURB-332. 2nd Degree Accelerated BSN: Prerequisite: Must be admitted into the 2nd Degree Accelerated BSN program.

NURB-331 Health Promotion Across the Lifespan I (7) SI or SII
Health promotion is explored across the lifespan. A holistic approach is utilized to address the lifelong health requirements of diverse populations in the community. Knowledge of nursing, behavioral, and physical sciences is integrated and applied when providing nursing care. Reproduction, endocrine, and genitourinary body systems are included in the course content. Primary, secondary, and tertiary levels of
prevention will guide professional nursing care. Continued development of core competencies, core knowledge, and role development is emphasized. Prerequisites: All 200-level Nursing courses and BIOL-209. Corequisite: NURB-340.

NURB-332 Health Promotion Across the Lifespan II (8) SI or SII
Health promotion is explored across the lifespan. A holistic approach is utilized to address the lifelong health requirements of diverse populations in the community. Knowledge of nursing, behavioral, and physical sciences is integrated and applied when providing nursing care. Cardiovascular, respiratory, neurological, and gastrointestinal body systems along with behavioral health are included in the course content. Primary, secondary, and tertiary levels of prevention will guide professional nursing care. Continued development of core competencies, core knowledge, and role development is emphasized. Prerequisites: All 200-level Nursing courses; NURB-331 and 340. Corequisite: Previous completion of or concurrent enrollment in NURB-330.

NURB-335 Directed Studies in Methods of Nursing Research (1–2) D
This directed study experience is designed for the student who has completed and transferred in a class or classes in research in another area. The student works with the faculty member who teaches NURB-330 to gain the knowledge specifically needed to critically evaluate nursing research literature and apply evidence-based practice. Prerequisites: NURB-331 and 340, transfer work in statistics and/or research, and permission of instructor of NURB-330. 2nd Degree Accelerated BSN: Prerequisite: Must be admitted into the 2nd Degree Accelerated BSN program.

NURB-340 Pathophysiological Concepts for Professional Nursing (3) SI or SII
This foundational course focuses on holistic responses to changes in the internal and external environment. The concepts of adaptation and maladaptation are studied as they apply to holistic responses of persons across the lifespan. Pathophysiology and clinical manifestations of each disease are studied with emphasis given to defining scientific rationale for nursing actions. Prerequisites: Successful completion of all 200-level nursing courses and BIOL-209. Corequisite: NURB-331.

NURB-340 Pathophysiological Concepts (3) Summer (2nd Degree Accelerated BSN)
This foundational course focuses on holistic responses to changes in the internal and external environment. The concepts of adaptation and maladaptation are studied as they apply to holistic responses of persons across the lifespan. Pathophysiology and clinical manifestations of each disease are studied with emphasis given to defining scientific rationale for nursing actions. Prerequisite: Admission to 2nd Degree Accelerated BSN program. Corequisite: NURB-230 and 232.

NURB-360 Lifespan I (6) SI (2nd Degree Accelerated BSN)
Health promotion is explored across the lifespan. A holistic approach is utilized to address the lifelong health requirements of diverse populations in the community. Knowledge of nursing, behavioral, and physical sciences is integrated and applied when providing nursing care. Reproduction, endocrine, and genitourinary body systems are included in the course content. Primary, secondary, and tertiary levels of prevention will guide professional nursing care. Continued development of core competencies, core knowledge, and role development is emphasized. Prerequisite: NURB-230, 232, and 340. Corequisite: NURB-325.
NURB-370 Lifespan II (7) SII (2nd Degree Accelerated BSN)
Health promotion is explored across the lifespan. A holistic approach is utilized to address the lifelong health requirements of diverse populations in the community. Knowledge of nursing, behavioral, and physical sciences is integrated and applied when providing nursing care. Reproduction, endocrine, and genitourinary body systems are included in the course content. Primary, secondary, and tertiary levels of prevention will guide professional nursing care. Continued development of core competencies, core knowledge, and role development is emphasized. Prerequisite: All 200-level courses, NURB-325, 340 and 360.

NURB-398 Validation of Practica Skills for the BSN Program (1–3) D
This course is designed to allow new students who are transferring some nursing courses from another nursing program and University of Indianapolis students who have been out of nursing courses for a year to validate their practica skills. Successful completion of this course allows the students to continue their Bachelor of Science in Nursing education at the appropriate level. Prerequisite: Permission of the dean of the School of Nursing.

NURB-399 Independent Studies in Nursing (1–3) D
The student works independently with a selected faculty member to enhance learning in a defined area of nursing studies. Prerequisite: Permission of the dean of the School of Nursing.

NURB-431 Health Promotion Across the Lifespan III (6) SI or SII (BSN)/Summer (2nd Degree Accelerated BSN)
Health promotion is explored across the lifespan. A holistic approach is utilized to address the complex health problems and lifelong health requirements of diverse populations in the community. Musculoskeletal, hematological, and immune body systems along with end-of-life and behavioral health issues are included in course content. Knowledge of nursing and behavioral and physical sciences is integrated and applied when providing nursing care. Continued development of core competencies, core knowledge, and role development is emphasized. BSN Prerequisite: All 200- and 300-level courses. Corequisite: NURB-440. 2nd Degree Accelerated BSN Prerequisite: All 300-level nursing courses; Corequisite: NURB-445 and 465.

NURB-440 Promoting Healthy Communities (4) SI or SII
This population-focused course prepares students for entry-level community health nursing and public health nursing practice. Health promotion and protection, risk reduction, and disease prevention are the foci of care. Knowledge of global and environmental health is integrated and applied to public health. Special emphasis is given to public health policies, core functions in public health, standards of public health nursing, and the theories/models of public health. Students work with representatives of selected population groups to enhance the health status of a community. The application of nursing process is utilized for directing the care of public health. Prerequisites: All 300-level nursing courses. Corequisite: NURB-431.

NURB-450 Managing and Leading in Nursing (4) SI or SII
The role of the nurse as manager and leader is the focus of the course. Traditional leadership and management perspectives are integrated into contemporary nursing trends and practical application in various health care settings. Management and leadership theories, organizational characteristics, management functions, legal,
ethical, and cultural issues, data management and informatics, managed care concepts, health care policy, and professional development are included in the course content. Prerequisites: All 300-level nursing courses. Corequisite: NURB-460.

NURB-455 Nursing Leadership (2) Summer (2nd Degree Accelerated BSN)
The role of the nurse as manager and leader is the focus of the course. Traditional leadership and management perspectives are integrated into contemporary nursing trends and practical application in various health care settings. Management and leadership theories; organizational characteristics; management functions; legal, ethical, and cultural issues; data management and informatics; managed care concepts; health care policy; and professional development are included in the course content. Prerequisite: All 200- and 300-level Nursing courses; Corequisites: NURB-431 and 465.

NURB-460 Capstone Professional Nursing Practicum (4) SI, SII (BSN)/Summer (2nd Degree Accelerated BSN)
Students are provided an opportunity to develop an individualized plan of study in collaboration with faculty. The practicum assists students in synthesizing nursing knowledge and skills, thereby facilitating their transition to professional practice. Roles for development include caregiver, educator, counselor, leader, manager, change agent, political activist, researcher, and advocate. The experienced student will, in collaboration with faculty, develop an overall goal for the practicum, identify learning objectives and strategies, identify and negotiate a practicum experience, identify a site and preceptor. Prerequisites: All other 400-level nursing courses. Corequisite: NURB-450 for BSN program only. Corequisite for 2nd Degree Accelerated BSN students: NURB-431 and 455.

Nursing Courses for the Registered Nurse

NURN-320 Conceptual Basis of Professional Nursing (5)
This transitional nurse-centered course is designed for graduates of diploma and associate degree nursing programs. An overview of the BSN program’s major organizational concepts is presented. The concept of community-based care is introduced. Students explore the meaning of professionalism, commitment to personal and professional growth, and professional socialization from a nursing perspective. Students explore all nursing roles with an emphasis on the roles of political activist, advocate, researcher, and leader/manager. The concepts of wellness and illness are explored. Students select and apply nursing concepts in appropriate health care environments. Prerequisite: Acceptance into the program.

NURN-330 Methods of Nursing Research (3)
Basic research concepts, the research process, and evidence-based practice are introduced in this course. The differences between qualitative and quantitative research are discussed. Interpretation of statistics commonly found in nursing research is explored. A method of scientific writing is presented. Knowledge of the research process, statistics, scientific writing, and critical thinking is demonstrated through the writing and presentation of critiques of published nursing research. This course provides the foundation for the application of nursing research in nursing practice. Prerequisite: NURN-320.
NURN-340 Pathophysiological Concepts for Professional Nursing (3)
This foundational course focuses on holistic responses to changes in the internal and
evironment. The concepts of adaptation and maladaptation are studied as they apply to holistic responses of persons across the lifespan. Pathophysiology and clinical manifestations of each disease are studied, with emphasis given to defining scientific rationale for nursing actions. Prerequisites: NURN-320 and NURN-330.

NURN-416 Health Promotion across the Lifespan (7)
Health promotion is explored across the lifespan. A holistic approach is utilized to address the lifelong health requirements of diverse populations in the community. Knowledge of nursing, behavioral, and physical sciences is integrated and applied when providing nursing care. Continued development of core competencies, core knowledge, and role development is emphasized with primary focus on disease prevention/health promotion. Prerequisites: NURN-320, 330, and 340.

NURN-421 Promoting Healthy Communities (4)
This population-based course prepares students for entry-level community health nursing and public health nursing practice. Health promotion and protection, risk reduction, and disease prevention are the foci of care. Knowledge of global and environmental health is integrated and applied to public health. Special emphasis is given to public health policies, core functions in public health, standards of public health nursing, and the theories/models of public health. Students work with representatives of selected population groups to enhance the health status of a community. The application of nursing process is utilized for directing the care in public health. Prerequisites: All 300-level nursing courses, and NURN-416.

NURN-422 Managing and Leading in Nursing (4)
The role of the experienced nurse as manager and leader is the focus of the course. Traditional leadership and management perspectives are integrated into contemporary nursing trends and practical application in various health care settings. Management and leadership theories, organizational characteristics, management functions, legal, ethical, and cultural issues, data management and informatics, and managed care concepts are included in the course content. Prerequisites: All 300-level nursing courses, NURN-416 and 421.

NURN-480 Capstone Professional Nursing Practicum (4)
This course provides graduates of ASN and diploma programs an opportunity to direct their learning in a clinical area of interest. Students will design and implement their own learning experience. The course incorporates adult learning principles using a process-driven approach. Prerequisites: All nursing courses.

Elective Course for RNs

The following course is an elective only for RNs who have been in practice for at least three years. It can be taken for BSN or MSN credit or for continuing education.

NURN-420 Faith Community Nursing/Primary Health Ministry (3) D
The Faith Community Nursing Primary Health Ministry course provides a basis for understanding and initiating the faith community nursing role and health ministry programming within a congregational community. Emphasis is placed on discussion and application of theory as well as community assessments. Health promotion, health maintenance, and illness prevention programming are discussed, as well as
integrating faith and health within a congregational community and diverse community partnerships. A comprehensive paper and health promotion program plan using Healthy People 2020 guidelines will be completed. Prerequisites: Current RN license plus three years of experience, permission of the instructor, and partnership with sponsoring partner and congregation.

Organizational Leadership Courses

The organizational leadership courses are offered through the School for Adult Learning and are available only to students admitted to that school. Information about the School for Adult Learning and its majors can be found in the section entitled Academic Units.

**ORGL-302 Introduction to Leadership Theories and Models (3) A (Accelerated)**
The course will introduce students to current theories and models of leadership, including traits, situational, functional, and transformational. The class emphasizes that leadership is a lifelong process and recognizes that responsible leaders maintain the highest possible standards of ethics. Prerequisite: MGT-281.

**ORGL-304 The Ethical Leader (3) A (Accelerated)**
The focus of study is on characteristics of effective leadership. Personal traits or characteristics that bring credibility to the leader are presented by lecture, discussion, role-playing, case study, and audiovisual presentations. The ethical component to leadership is emphasized. Prerequisite: ORGL-302.

**ORGL-306 Behaviors of Effective Leadership (3) A (Accelerated)**
The focus of study is on behaviors of effective leadership including effective decision-making, role-modeling, strategic planning, crisis management, conflict management, negotiation, team building, mentoring, lifelong learning, and critical thinking. Various teaching/learning methods are used to support the focus. Prerequisite: ORGL-304.

**ORGL-308 Data Management (3) A (Accelerated)**
This course provides the student a nontechnical introduction to data acquisition and analysis and provides an opportunity to employ the use of qualitative and quantitative data in decision-making and strategic planning. Prerequisite: ORGL-306.

**ORGL-404 Project Management (3) A (Accelerated)**
This course is designed to introduce students to the concepts and process of project management. The course will include the project manager’s role, defining goals and objectives, ownership, scheduling and planning, executing, and monitoring the project. Prerequisite: ORGL-306.

**ORGL-405 Quality Management (3) A (Accelerated)**
This course is designed to introduce students to the background of quality management in the business setting. Students will become fluent in the key terms and concepts of total quality management and will be introduced to the work of recognized leaders in the field. Case studies will be used to acquaint students with the application of total quality management skills. Prerequisite: ORGL-306.
ORGL-406 Change Management (3) A (Accelerated)
This course is designed to introduce students to change models and the change process in contemporary business. Students will learn about factors necessary to effect change in organizations and about the impacts of political, economic, and demographic factors on employees. Students will gain experience in conflict management and conflict resolution and will be introduced to the meaning of cultural competence. Prerequisites: ORGL-404 and ORGL-405.

ORGL-410 Excellence in Leadership (3) Y (Accelerated)
This course provides a capstone experience for students majoring in organizational leadership. Students will be given case studies that integrate previous leadership challenges. Students will be expected to apply their knowledge from previous classes to demonstrate their learning. Basic concepts will not be reintroduced. Prerequisite: ORGL-406.

Philosophy Courses
Philosophy courses are offered by the Philosophy and Religion Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

PHIL-101 Introduction to Philosophy (3) A
Students explore selected philosophical problems, utilizing a wide range of texts from ancient through contemporary sources. One major objective is to investigate what philosophy itself is.

PHIL-109 Philosophy Freshman Seminar (1) SI
General orientation to the philosophy curriculum. Attention is given to general concepts, academic literature, library skills, and basic writing skills in this major. Required of all freshman departmental majors. (Cross-listed with REL-109.)

PHIL-110 Critical Thinking (3) A
Critical Thinking provides instruction for students to develop the practical skills necessary to think clearly and rationally. Areas covered include argument analysis, informal fallacies, deductive inference, inductive generalization, analogical reasoning, and explanation.

PHIL-130 Honors Philosophy (3) SI
A selective study of major philosophical topics such as moral responsibility, what makes a life meaningful, paradoxes, or other topics chosen by the instructor.

PHIL-201 Ethics (3) A
Ethics examines standards of conduct and the responsibilities they entail. Ascertaining these moral demands depends on sound strategies for justifying the theories that generate them. Hence, issues in metaethics, normative ethics, and moral psychology are discussed. Readings include treatments of current moral problems.

PHIL-215 Aesthetics (3) O
This course introduces students to fundamental philosophical problems in the fine arts and humanities (art, music, literature, theatre) with special attention given to the nature of artworks and character of aesthetic experience. Core questions the course
will examine include: What is the aesthetic? What makes something an artwork? How can we adequately judge or interpret artworks? Can artworks have moral and political implications, and if so, how should they affect our judgment of those works?

**PHIL-220 Medical Ethics (3) O**
This course looks at competing positions and supporting arguments for these positions, on a variety of topics in medical ethics. Sample topics include general theories of moral rightness (e.g. moral relativism, utilitarianism, the golden rule); topics concerning the physician-patient relationship (e.g. physician deception and the use of placebos), the beginning of life (e.g. abortion and human cloning), the end of life (e.g. active euthanasia and physical-assisted suicide), and the distribution of medical resources (e.g. how to ration limited medical resources and whether various kinds of health care systems are just).

**PHIL-240 Social and Political Philosophy (3) N**
What are the fundamental principles of political life? What is the proper role of government in the life of society? Where should the line be drawn between individual freedom and social control? This course is about how these and related questions have been addressed by political philosophers in the Western tradition. Although the main focus is on contemporary views (e.g., those of Rawls, MacIntyre, and Sandel), some attention is given to the historical antecedents of these views (e.g., those of Plato, Locke, Rousseau, Mill, and Marx).

**PHIL-250 Law, Philosophy, and Punishment (3) O**
The state sometimes intentionally inflicts harm on its own citizens. That is the nature of legal punishment. Can this be morally justified? If so, how? What are the limits of morally justifiable legal punishment? Is capital punishment morally justified? And what is the nature of the law and the legal systems by which all of this is done? Readings will come from both contemporary and classical sources in ethics, political philosophy, and the philosophy of law.

**PHIL-260 Asian Philosophy (3) N**
An introduction to some of the most important contributions to human thought by Asian philosophers in the Classical period. The course will focus primarily on Chinese philosophy and its two most influential movements: Confucianism and Daoism. Some attention will be paid to rival philosophical schools that flourished during this period (e.g., Legalism, Mohism). The study of these movements will enable participants in the course to engage in a comparative study of Western and non-Western philosophy. *(This course will satisfy the cross-cultural requirement in the General Education Core.)*

**PHIL-270 Ethics and Philosophy of Science (3) D**
This course explores ethical issues in science and issues in philosophy of science. Possible ethical issues include the nature and extent of scientific misconduct, the limits of permissible research on human subjects, scientific research into sexist and racist hypotheses, research on the dead, the teaching of creation science and intelligent design in public schools, and animal experimentation. Possible issues in
the philosophy of science include scientific explanation, scientific confirmation, the role of models in science, the distinction between science and pseudo-science, whether observation is theory-laden, and the relationship between the history of science and the nature of science. Two hours of lecture and one hour of discussion per week.

**PHIL-299 Issues in Philosophy (3) N**
A selected philosopher, tradition, or issue of philosophic interest constitutes the content of the course. The topic is selected by the instructor, who considers student interests in determining the nature of the course in a given semester.

**PHIL-301 Ancient and Medieval Philosophy (3) O**
This survey of philosophy from the pre-Socratics through the 15th century examines the birth of classical philosophy, its development, and its amalgamation into the great religious traditions of the West. Readings come from such pivotal figures in the history of Western ideas as Plato, Aristotle, Augustine, Aquinas, and Ockham. **Prerequisite: One prior Philosophy course or consent of instructor.**

**PHIL-302 Modern Philosophy (3) O**
With the breakdown of the medieval synthesis and rise of modern science, philosophy would never again look the same. Investigating the issues that separated the rationalists, empiricists, and idealists, this course focuses on the birth of modern philosophy in the 16th, 17th, and 18th centuries. Readings include works from Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, and Kant. **Prerequisite: One prior Philosophy course or consent of instructor.**

**PHIL-310 Theory of Knowledge (3) D**
A survey of contemporary and historical answers to some of the central questions in the theory of knowledge (or epistemology). These include: What is knowledge? What sorts of things do humans know? What is perceptual knowledge? What are the main arguments for skepticism? What is justified belief? What is truth? And what is the relationship between rational belief and rational action? **Prerequisite: One prior philosophy course or consent of instructor.**

**PHIL-315 Metaphysics (3) D**
A survey of contemporary and historical answers to some of the central questions in metaphysics. These include: What is it for something to exist? What kinds of things exist? Can a thing change and yet continue to exist over time? Could two or more things share the very same characteristics? What is it for something to be necessary, as opposed to possible? What is causation? What is the nature of space and time? Do we have free will? And why is there something rather than nothing? **Prerequisite: One philosophy course or consent of instructor.**

**PHIL-320 Philosophy of Mind (3) N**
Problems that surround the relationship of the mind and body constitute the core of Philosophy of Mind. Students study each of the major solutions that have been offered in response to these problems. In addition, the course includes discussion of such related topics as artificial intelligence, death, dreams, the status of animals, creativity, and action theory. **Prerequisite: One prior Philosophy course or consent of instructor.**
PHIL-340 Philosophy of Religion (3) O
Students study such issues as the existence of God, the nature and destiny of persons, the relation of faith and reason, and the nature and diversity of religious experience. These issues include such traditional problems as those concerning evil, free will, and religious language. (Cross-listed as REL-340.) Prerequisite: One prior Philosophy course or consent of instructor.

PHIL-360 Symbolic Logic (3) D
This course introduces the basic ideas and methods of modern symbolic logic. Students will learn the formal systems of propositional and predicate logic so that they are both able to accurately represent reasoning as it occurs in ordinary discourse and evaluate that reasoning. Prerequisite: PHIL-110 or consent of instructor.

PHIL-370 Kant and His Legacy (3) N
A close study of Immanuel Kant’s theory of knowledge and philosophy of mind, as well as reactions to his work as found in one or more of the following philosophical traditions: the analytic tradition (e.g., Frege, Russell, and Kripke), the pragmatist tradition (e.g., Peirce, James, and Dewey), and the continental tradition (e.g., Hegel, Husserl, Heidegger, and Sartre). Prerequisite: One prior Philosophy course or consent of instructor.

PHIL-410 Issues in Philosophy (3) N
A selected philosopher, tradition, or issue of philosophic interest constitutes the content of the course. The topic is selected by the instructor, who considers student interests in determining the nature of the course in a given semester. Prerequisite: One prior philosophy course or consent of instructor.

PHIL-430 Advanced Ethical Theory (3) N
An in-depth examination of select topics in metaethics and normative ethics. Possible topics in metaethics include moral truth, skepticism about morality, moral disagreement, and topics concerning moral psychology. Possible topics in normative ethics include detailed evaluations of consequentialism, deontology, and virtue ethics. Prerequisite: One prior Philosophy course or consent of instructor.

PHIL-440 Philosophy of Language (3) N
This course is an intensive survey of some of the main problems and theories in the contemporary philosophy of language. Among the issues that will be discussed include meaning, reference, attributions of attitudes, proper names, descriptions, and indexicals. Though many readings will be taken from contemporary philosophers (e.g., Saul Kripke, David Kaplan, John Perry, and Hilary Putnam), we will begin our discussions by examining some of the historically important attempts at resolving these problems (e.g., the work done by J. S. Mill, Gottlob Frege, and Bertrand Russell.) Prerequisite: One prior Philosophy course or consent of instructor.

PHIL-450 Metaphysics (3) D
A survey of contemporary and historical answers to some of the central questions in metaphysics. These include: What is it for something to exist? What kinds of things exist? Can a thing change and yet remain the same over time? Could two or more
things share the very same characteristic in common? What is it for something to be necessary, as opposed to possible? What is causation? What is the nature of space and time? Do we have free will? And why is there something rather than nothing? 

Prerequisite: One prior philosophy course or consent of instructor.

PHIL-460 Theory of Knowledge (3) D
A survey of contemporary and historical answers to some of the central questions in the theory of knowledge (or epistemology). These include: What is knowledge? What sorts of things do humans know? What is perceptual knowledge? What are the main arguments for skepticism? What is justified belief? What is truth? And what is the relationship between rational belief and rational action? Prerequisite: One prior philosophy course or consent of instructor.

PHIL-480 Portfolio Development (1) SI/D
A course for philosophy majors to develop papers required for the Philosophy Portfolio. Ordinarily, philosophy majors will take this course in semester II of their junior year.

PHIL-481 Portfolio Completion (2) SI/D
A course for philosophy majors to complete papers required for the Philosophy Portfolio. Ordinarily, philosophy majors will take this course in the first semester of their senior year.

Physical Therapist Assistant Courses
Physical therapist assistant courses are offered by the Krannert School of Physical Therapy in the College of Health Sciences. Information about the associate degree and its requirements can be found in the section entitled Academic Units.

PTA-105 Introduction to Physical Therapy (1) A
This course is an overview of the profession and practice of physical therapy, discussing the history and current practice of physical therapy. Topics explored include the scope of practice of physical therapists and therapist assistants, professional behaviors, ethical and legal issues, immobility, exercise principles, practice settings, patient communication and education, posture, gait, and assistive devices.

PTA-203 Clinical Leadership I (1.5)
This course will begin by reviewing note-taking, studying, and test-taking techniques. Then students will be introduced to basic information necessary to become a physical therapist assistant. An overview of the American Physical Therapy Association and brief history of the profession of physical therapy, including role delineation between a physical therapist and a physical therapist assistant, will be covered. The scope of practice and laws governing physical therapy practice will be included. Documentation, researching literature, and professional behaviors are among the topics that will be covered. Prerequisite: Admission into the Physical Therapist Assistant program.
PTA-205 Patient Care Orientation (1.5)
Basic patient care techniques such as infection control, vital signs, patient education, bed mobility, transfers, and gait training are taught in lecture, demonstration, and laboratory formats. An overview of the basic components of medical equipment, wheelchairs, and orthoses is given. The appropriate utilization of such equipment is practiced during simulated patient care. **Prerequisite:** Admission into the Physical Therapist Assistant program.

PTA-206 Cardiopulmonary Rehabilitation (1.5)
This course is an introduction to the cardiovascular and pulmonary systems in the human body as these systems relate to physical therapy. Wellness and prevention of cardiopulmonary conditions are addressed. Cardiovascular conditions and pulmonary disorders are introduced. Pulmonary hygiene is included. Students will apply knowledge from this course and prior courses to the acute care setting. Information will be presented in lecture and laboratory settings. **Prerequisite:** PTA-223, 291 with a C or better.

PTA-207 Clinical Rehabilitation I (3.5)
This course provides foundational information for measurement and treatment of patients in physical therapy. The concepts of normal kinesiology and functional and surface anatomy of the human body are introduced. **Prerequisite:** Admission into the Physical Therapist Assistant program. **Co-requisite:** BIOL-103, PHYS-103 or 150.

PTA-223 Integumentary Rehabilitation (2)
This course provides an introduction to the human integumentary system as it relates to the physical therapist assistant, including an introduction to skin conditions and the healing process. Medical and rehabilitation interventions are presented in relation to inflammation, skin conditions, burns, and wounds, as well as circulatory and edematous conditions involving the integumentary system, utilizing lecture and laboratory formats. Vascular conditions, lymphedema, amputations, and prostheses are also covered. The pathologies of medical conditions of the lymphatic, gastrointestinal, genitourinary, and endocrine systems will be covered in terms of the impact on physical therapy patient care. An introduction to diagnostic procedures is included. **Prerequisites:** BIOL-104; PTA-224, 226, 233, 290 with a C or better.

PTA-224 Rehabilitative Agents I (1)
The physiology and psychology of pain are presented and discussed in clinical context. Presentation of a variety of therapeutic agents is discussed in the context of their specific clinical applications in physical therapy. The basic physics of electromagnetic radiation is presented and applications of these interventions are practiced. Therapeutic interventions covered in this class include: superficial heat, cryotherapy, traction, ultrasound, massage, and soft tissue mobilization. **Prerequisites:** BIOL-103, PHYS-103 or 150; PTA-203, 205, 207 with a C or better.

PTA-226 Clinical Rehabilitation II (4)
This course builds on content from Clinical Rehabilitation I. Normal and abnormal functional use of the body, such as grasp, posture, and gait, are discussed. Students learn skills in muscle testing, measuring range of motion, passively ranging joints, peripheral joint and nerve mobilization, and provision of therapeutic exercise for strengthening, endurance, balance, range of motion, and flexibility. The healing processes of various musculoskeletal structures are discussed. The pathology of
musculoskeletal conditions is also included. At the end of the course, students have the opportunity to demonstrate their knowledge and skills learned during both Clinical Rehabilitation courses, in preparation for the Clinical Education I course. Prerequisites: BIOL-103, PHYS-103 or 150; PTA-203, 205, 207 with a C or better.

PTA-233 Clinical Leadership II (1)
This course discusses lifespan, cultural, and socioeconomic diversity, gender, and religious issues in light of the current healthcare environment. Students are introduced to the concept of interdisciplinary care and learn basic conflict management techniques for interactions with healthcare professionals, patients, and their caregivers. Prerequisites: BIOL-103, PHYS-103 or 150; PTA-203, 205, 207 with a C or better.

PTA-243 Clinical Leadership III (1)
This course presents professional issues and the relevance to clinical practice. Students are introduced to contemporary trends in the healthcare industry such as reimbursement, quality assurance, and administration. Professional skills such as résumé development, interviewing, continued education, and further professional development will be discussed. Prerequisite: PTA-223, 291 with a C or better.

PTA-244 Rehabilitative Agents II (1.5)
Presentation of a variety of rehabilitative agents is discussed in clinical context. The basic physics of electromagnetic radiation and electricity are presented. Specific therapeutic intervention techniques covered in this class include electrical stimulation, EMG, biofeedback, diathermy, and laser. Aquatic exercise and aquatic therapy are also presented. Prerequisite: PTA-223, 291 with a C or better.

PTA-246 Clinical Rehabilitation III (2.5)
Information from previous courses is applied to the treatment of individuals with neurological dysfunction. Relevant neurologic conditions are introduced. Movement analysis and patient handling are reviewed as they apply to neurologic diagnoses. Techniques and strategies are presented and integrated into intervention approaches for a variety of problems related to movement dysfunction related to postural control, motor control, sensation, and coordination. Additional concepts are presented as they relate to physical therapy intervention for individuals with neurological diagnoses include perception, communication, and cognition. Prerequisite: PTA-223, 291 with a C or better.

PTA-263 Neuromuscular Rehabilitation (3.5)
This course builds on content from Clinical Rehabilitation III and introduces more relevant neurologic conditions. Previously learned movement analysis, patient handling, and treatment techniques will be built upon and integrated into intervention approaches for individuals with a variety of progressive and non-progressive neurologic diagnoses. The pathophysiology of developmental anomalies common to the pediatric physical therapy setting is also presented along with age appropriate treatment approaches. Normal development, movement analysis, and handling techniques over the life span will be presented. Prerequisites: PTA-206, 243, 244, 246 with a C or better.
PTA-264 Musculoskeletal Rehabilitation (3)
This course will integrate the concepts learned in previous courses into the comprehensive treatment of patients with musculoskeletal conditions. Common disorders of the appendicular and axial skeleton will be presented along with current methods of treatment. Special topics related to musculoskeletal practice, such as orthoses, augmented soft tissue mobilization, and women’s health, are also presented. 
Prerequisites: PTA-206, 243, 244, 246 with a C or better.

PTA-275 Preparation for Entry-Level Practice (2)
This course will prepare students for transitioning from their role as a student to their role as a certified or licensed physical therapist assistant. The course will include information on applying to take and preparing for taking the national license examination, as well as maintaining and renewing the certification or license. The course will also include a comprehensive review of all course content presented in a series of patient case studies, demonstrating the complexities of patient care. 
Prerequisites: PTA-263, 264 with a C or better.

PTA-290 Preparation for Clinical Education (0.5)
This course will prepare the student for the first clinical education experience through discussion, lecture, and assignments. Students will learn about the clinical education process and what will be expected of them to allow for a successful first experience. Students will also be introduced to the evaluation tools that will be utilized to measure their growth on their first clinical experience. 
Prerequisites: BIOL-103, PHYS-103 or 150; PTA-203, 205, 207 with a C or better.

PTA-291 Clinical Education I (2.5)
The student participates in a five-week clinical rotation, in a facility affiliated with the program, that focuses on development of basic patient management skills including intervention. The rotation is scheduled during the summer time frame after the first year in the program. This is the first of three full time clinical rotations within the curriculum. 
Prerequisites: BIOL-104; PTA-224, 226, 233, 290 with a C or better.

PTA-292 Clinical Education II (3)
The student participates in six-week clinical rotation in a facility affiliated with the program. The rotation is scheduled during the summer time frame after the second year in the program. This is the second of three full time clinical rotations within the curriculum. 
Prerequisites: PTA-263, 264 with a C or better.

PTA-293 Clinical Education III (3.5)
The student participates in seven-week clinical rotation in a facility affiliated with the program. The rotation is schedule during the summer time frame after the second year in the program. This is the third of three full time clinical rotations within the curriculum. The student will return to the classroom for one day to discuss the clinical and overall curriculum experience. The student will also learn how to obtain and maintain a physical therapy license. 
Prerequisite: PTA-292, or concurrently.
Physics Courses

Physics courses are offered by the Physics and Earth-Space Sciences Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

PHYS-100 Elements of Chemistry and Physics (3) A
Elements of Chemistry and Physics is a one-semester integrative chemistry and physics course intended for students who wish to learn fundamental principles relating to the structure of matter, energy transformations, motion of objects and waves, and the forces of nature. Students will learn these fundamentals through active participation in “hands-on, minds-on” group activities. While doing the activities, the students will demonstrate scientific habits and gain insight into the nature of science. May be taken for chemistry or physics credit. (Cross-listed as CHEM-100.) Elements of Chemistry and Physics may not count for a chemistry or physics major or minor. Prerequisite: Math proficiency through MATH-105.

PHYS-103 Introduction to Physics (4)
Introduction to physics as applied to the allied health fields, primarily for the physical therapist assistant program. Topics covered include basic mechanics (including Newton’s Laws), energy, momentum, waves, fluids, electricity, magnetism, optics, and radioactivity. Fundamental principles will be presented along with applications related to human health and physiology. Five hours per week (lecture and lab combined). Cannot count toward a physics major or minor. Cannot be substituted for PHYS-150 or 160. MATH-105 with a grade of C- or better or consent of department.

PHYS-150 General Physics I (4) A
Kinematics, dynamics, statics, momentum, energy, rotational motion, heat, wave motion, and fluids. Applications in various disciplines. Students who have taken PHYS-100 may not receive double credit for both PHYS-100 and PHYS-150. Six contact hours per week (lecture and lab combined). Prerequisites should have been completed within one to two years (preferably one year) before taking this course. Prerequisite: MATH-180 with a grade of C- or better (C+ or better preferred) or consent of department.

PHYS-153 General Physics I, Calculus-Based (4) SII
Contents are the same as for PHYS-150; however, the course is designed for students whose background includes at least Calculus I (MATH-190) or equivalent, taken previously (within one to two years). The course will apply techniques of calculus to the subject matter. Six contact hours per week (lecture and lab combined). Prerequisite: MATH-190 with a grade of C- or better (C+ or better preferred), or consent of department.

PHYS-160 General Physics II (4) A
Electricity, magnetism, geometrical optics, some introduction to physical optics and to modern physics. Six contact hours per week (lecture and lab combined). For students whose background does not include calculus. Prerequisites should have been completed within one to two years (preferably one year) before taking this course. Prerequisites: PHYS-150 or 153 and MATH-180 both with a grade of C- or better, or consent of department.
PHYS-163 General Physics II, Calculus-Based (4) SI
Contents are the same as for PHYS-160; however, the course is designed for students whose background includes at least Calculus II (MATH-191) or equivalent, taken previously (within one to two years). The course will apply techniques of calculus to the subject matter. Six contact hours per week (lecture and lab combined). Prerequisites: PHYS-153 and MATH-191 both with a grade of C- or better, or consent of department.

PHYS-207 Astronomy (3) SI
Introductory course concentrating on three primary areas: (1) observational techniques, (2) solar system astronomy, (3) stellar and galactic astronomy. During each portion of the course there is a laboratory emphasis on observation and hands-on learning. Some observation is scheduled every clear night that the course meets, using the University’s Noblitt Observatory in Lilly Science Hall. Most years, the class takes an additional field trip to a local institutional observatory (e.g., the Link Observatory) or uses the University’s portable telescope. (Cross-listed as ESCI-207.) Prerequisite: Math proficiency through MATH-105 or consent of department.

PHYS-230 Laboratory Instrumentation I (3) SI
Properties of electronic components such as diodes, transistors, filters, and integrated circuits, and their uses in various digital and analog circuits; familiarization with laboratory instruments such as multimeters and oscilloscopes. Programming of microcontrollers, SOC’s or other embedded systems. Also includes theory of measurement and statistics as applied to the instrumentation domain. Two one hour lectures and a three-hour laboratory. Prerequisites: PHYS-163 with a grade of C- or better, or consent of department.

PHYS-250 Modern Physics (5) OI
Special relativity, wave and particle aspects of matter and electromagnetic waves, atomic and nuclear structure, nuclear reactions, and elementary particles. Four lectures and one two-hour laboratory. Prerequisites: PHYS-163, and MATH-191 both with a grade of C- or better, or consent of department.

PHYS-280 Scientific Computing I (3) SII
Scientific problem solving with computers that will include an introduction to the computer languages and methods used in scientific computing. This will include mathematical modeling of simple systems and the development of numerical estimates of their solution. Other numerical techniques such as estimation of derivatives and integrals, interpolation, extrapolation, and curve fitting will be presented. Applications of modeling to diverse physical and biological systems will be explored. Introduction to various simple forms of visualization will be used to aid interpretation of calculated results. Prerequisites: PHYS-153 and MATH-191 both with a grade of C- or better, or consent of department.

PHYS-310 Scientific Computing II (3) SII
Extension of PHYS-280 to include more complex situations, including many-body and continuous physical and biological systems. Application using both Fourier and finite element systems. Introduction to Monte Carlo, simulated annealing, and Markov techniques. Exploration of more advanced types of visualization. Prerequisite: PHYS-280 with a grade of C- or better, or consent of department.
PHYS-330 Optics (3) D
Geometrical, physical, and modern optics. Three lecture hours. Prerequisites: PHYS-390 with a grade of C- or better, or consent of department.

PHYS-360 Dynamics (3) SII
Kinematics and kinetics of particles and rigid bodies, work and energy, motion under a central force, simple harmonic motion, and introduction to Lagrange’s and Hamilton’s equations. Three lecture hours. Prerequisites: PHYS-163, MATH-270 and 330 all with a grade of C- or better, or consent of department.

PHYS-370 Physical Chemistry I (3) SI
This course provides an introduction to the study of heat and energy and their influence in chemical and physical changes. Particular attention will be given to the concept of chemical equilibrium. Application of mathematical models will be extensive. May be taken for chemistry or physics credit. (Cross-listed as CHEM-370.) Prerequisites: CHEM-160, MATH-190, and PHYS-160 or 163, or consent of instructor.

PHYS-375 Physical Chemistry Laboratory (2) SII
This laboratory course is designed to give junior and senior students practice with designing experiments, collecting and analyzing data, and presenting experimental results in a written format. Students in this course will be required to complete a series of laboratory projects. For each project, the student will design an experiment, complete the experiment, and write a report. Approximately four hours of laboratory per week. This course satisfies the capstone requirement of the general education core. (Cross-listed as CHEM-375.) Prerequisites: CHEM-310, MATH-191, and PHYS-150 or 153, or consent of instructor.

PHYS-380 Physical Chemistry II (3) SII
This course builds on the concepts mastered in CHEM-370 and extends the study of thermodynamics into electrochemistry and the study of chemical kinetics. In addition, the fundamentals of quantum mechanics will be discussed and applied to concepts of chemical bonding and molecular behavior. (Cross-listed as CHEM-380.) Prerequisite: CHEM-370, or consent of instructor.

PHYS-390 Electricity and Magnetism (3) O/SI
Electric circuits and electric and magnetic fields. Three lecture hours. Prerequisites: PHYS-163 and MATH-270 both with a grade of C- or better, or consent of department or consent of department.

PHYS-400 Special Topics in Physics (.5–3) D
The study of a selected area in physics not covered by the established curriculum. These subjects are timely or focused toward student and market needs. Topics will be announced prior to semester registration. A student may receive credit more than once for different topics.
PHYS-415 Physical Measurement I (2) O/SII
The course is designed so that the student can experience hands-on applications of the physics discussed in PHYS-360 Dynamics, PHYS-390 Electricity and Magnetism, PHYS-330 Optics or PHYS-460 Quantum Mechanics. Four laboratory contact hours per week. Prerequisites: PHYS-250, 330, 360, 390 or 460 (may be taken concurrently).

PHYS-420 Physical Measurement II (2) O/SII
The course is a continuation of PHYS-415 for students in the Laboratory Instrumentation concentration Prerequisites: PHYS-415 with a grade of C- or better or consent of department.

PHYS-460 Quantum Mechanics (3) O/SII
Experimental foundations of the Schroedinger equation and its applications to simple physical systems. Three lecture hours. Prerequisites: PHYS-250 and 280, and MATH-270 280 and 330, all with a grade of C- or better or consent of department.

PHYS-490 Senior Research (1–3) D
Introduction to the procedures and practices of scientific research. The student will be expected to pose a problem, suggest procedures to be used to solve the problem, and then work toward its solution. A final written report is required. Prerequisite: Senior standing or consent of department.

Political Science Courses
Political science courses are offered through the History and Political Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

PSCI-101 American National Government (3) A
Study of the federal government in its origins and development. Attention is given to political, economic, and philosophical factors in the formation of the Constitution and the role of the federal government in the present American system.

PSCI-205 State and Local Government (3) A
Study of the role of state and local government in the American political and constitutional system.

Courses numbered 300 or above are not open to freshmen.

PSCI-301 Research Design and Methods (4) SII
Study of the scientific method as applied to political and social phenomena. Topics covered include the nature of science as applied to politics; the basics of the scientific method; measurement and research design; how to work with quantitative data and statistics; and a basic range of statistical methods for analyzing data. Students will design a research project to answer an empirical question about political behavior and apply appropriate data and methods to their hypothesis to reach a conclusion. This course is not open to freshmen. Prerequisites: ENGL-101 and PSCI-101 or IREL-101, or consent of instructor.
PSCI-323 Public Administration (4) D
Study of the structure and function of public bureaucracy in the United States. The course focuses on the executive branch of the federal government, although comparisons will be made with state and local government. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-356 Political Theory (4) D
Study of major concepts and systems of political theory with emphasis on the history of political thought. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-410 Campaigns and Elections (4) O
This course examines the process and conduct of political campaigns and elections in the United States, from the state and local level to the national level. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-420 American Political Institutions (4) D
Provides an advanced overview of the main political institutions in American politics. Focuses on national level institutions, specifically, Congress, the Supreme Court, the Presidency, and the federal Bureaucracy, as well as their interactions with interest groups and political parties. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-440 Common Law (4) D
Provides an advanced overview of American jurisprudence. Students will gain a general understanding of American substantive and procedural law through the study of case law in a number of common law objects, specifically constitutional law, criminal law and procedure, torts, contracts, and property. Also covers legal and cultural history, jurisprudence, and ethics topics in order to promote a better understanding of the role that law plays in a modern, liberal, democratic society. Students will also participate as attorneys and witnesses in a mock trial. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-444 Constitutional Law I: Powers of Government (4) D
Students will learn to read, brief, analyze, and interpret U.S. Supreme Court decisions dealing with the power of judicial review, the separation of powers, federalism, and interstate commerce. Students also will participate as attorneys or justices in a moot court that hears and decides an actual case being appealed to the Supreme Court. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-445 Constitutional Law II: Civil Rights and Liberties (4) D
Students will learn to read, brief, analyze and interpret U.S. Supreme Court decisions dealing with First Amendment freedoms; the procedural rights of the Fourth, Fifth, and Sixth amendments; and with the Due Process and Equal Protection clauses of the Fourteenth Amendment. Students also will participate as attorneys and witnesses in a mock trial. This course is not open to freshmen. Prerequisite: ENGL-101.

PSCI-450 Internship in Political Science (1–15) D
Work experience in politics and government (for example, with government offices, other public agencies, law offices, lobbying organizations, or political campaigns). Students are supervised on a day-to-day basis by the office staff and report to the instructor on a regular basis. Internships may be arranged during Semester I or II or
in the summer. Up to eight hours of credit may be applied toward a major or minor; additional hours will be credited as elective. This course is not open to freshmen. 
Prerequisite: PSCI-101 for internships related to the federal government; PSCI-205 for internships related to state or local government. Prerequisite: ENGL-101.

PSCI-475 Capstone Seminar (1) D
Provides a culminating experience for senior Political Science majors by helping them make connections among various courses taken in the major. This seminar builds on the skills students have developed reading, through research, writing, and presenting. It also strengthens community among Political Science majors. This course is not open to freshmen. Prerequisite: PSCI-301.

PSCI-480 Special Topics in Political Science (1–4) D
Comprehensive examination of a political science topic not covered in depth in another advanced political science course. Topics vary, and students may repeat the course for credit if the topic is different. This course is not open to freshmen. Prerequisite: ENGL-101.

Psychology Courses
Psychology courses are offered through the School of Psychological Sciences in the College of Applied Behavioral Sciences. Information about the school and its majors and minors can be found in the section entitled Academic Units.

PSY-120 Introduction to Psychology (3) A
This course is an introduction to the scientific study of human behavior. Topics include research methods in psychology; biological bases of behavior; learning and cognition; influences of personality and sociocultural factors on behavior; and lifespan development. Historical background, major theoretical approaches, research findings, and applications are highlighted in each area.

PSY-124 Foundations of Psychological Science I: Methods (3) A
This course is part of the Research Methods content area of the psychology major and provides an introduction to research methods in psychology, including experimental and correlational techniques. Topics include design of experiments; surveys; observational research; single-case studies; writing research reports; ethics in research. Emphasis is on conceptual understanding of research issues and application of the principles of experimental design.

PSY-125 Foundations of Psychological Science II: Statistics (3) A
This course is part of the Research Methods content area of the psychology major and provides an introduction to statistical techniques used in psychology and social sciences research. Concepts such as measures of central tendency, variability, probability, and statistical techniques including: t tests (independent & dependent samples), Analysis of variance, Chi-square, correlation, and regression are introduced. The goal of the course is to present basic mathematical/statistical concepts and to emphasize application of these procedures. PSY-124 recommended.
**PSY-165 Educational and Career Pathways in Psychology (1) A**
This course examines several components of careers as they pertain to psychology majors and encourages students to make a plan for how they can prepare for entrance into the working world or graduate school upon completion of their undergraduate degree.

**PSY-210 Health Psychology (3) A**
This course will introduce you to health psychology and focus on the interaction of biological, psychological, and social factors on health, illness, and chronic disease. The topics we will cover in class include (but are not limited to): health promotion, health behaviors and health behavior change, stress and coping, chronic pain and pain management, chronic and terminal illness, psychoneuroimmunology and immune related disorders.

**PSY-215 Social Psychology (3) A**
This course is part of the Group & Individual Similarities & Differences content area of the major. Scientific study of how social situations influence the thoughts, feelings, and behaviors of individuals. Topics covered include attitude formation and change, conformity, aggression, pro-social behavior, interpersonal attraction, the formation and maintenance of relationships, group structure and dynamics, and social perception. Prerequisite: PSY-124 and PSY-125 recommended.

**PSY-225 Research Methods (4) A**
This course is part of the Research Methods core content area of the psychology major and provides an introduction to research methods in psychology, including experimental and correlational techniques. Topics include design of experiments, surveys, observational research, single-case studies, writing research reports, and ethics in research. Emphasis is on conceptual understanding of research issues and application of the principles of experimental design. Prerequisite: PSY-120; MATH-220 or MATH-245 strongly recommended.

**PSY-230 Brain & Behavior (3) A**
This course is part of the Biological Bases core content area of the psychology major and provides a survey of the biological bases of behavior. Topics include structure of the nervous system; neural function; neurotransmitters; and brain structures underlying behaviors such as sensation, sleep, memory, and language.

**PSY-235 Cognitive Psychology (3) A**
This course is part of the Cognitive core content area of the psychology major and provides a survey of cognitive approaches to the study of memory and thinking. The cognitive approach emphasizes mental processes and representations used in perception, language, memory, knowledge, and thinking. Prerequisite: PSY-120 or PSY-124 recommended.
PSY-245 Lifespan Development (3) A
This course is part of the Developmental core content area of the psychology major and provides a survey of psychological approaches to the study of development over the lifespan. As with any survey of a scientific discipline, this course will include three major components: theory, methodology, and empirical findings. Students will be introduced to the major theories of human development in the cognitive, social, and emotional realms. Additionally, the practical application of theories, methods, and basic-science findings will be examined. Prerequisite: PSY-124 recommended.

PSY-250 Personality and Sociocultural Factors (3) A
This course surveys various theoretical conceptions of personality and the different types of data they are based on. Each approach is evaluated critically in light of its ability to explain and apply both the unique and common characteristics of individual patterns of behavior, as well as the behavioral influences of social and cultural exposure. Prerequisite: PSY-120 or PSY-124 recommended.

PSY-255 Ethics, Advocacy & Social Responsibility in Psychology (1) A
This course will introduce students to topics in ethics, advocacy, and social responsibility. Students will learn about ethics and how ethical principles are applied in psychological research and practice. Concepts of social responsibility, social justice, and advocacy will be discussed as they relate to contemporary psychology. Prerequisite: PSY-124.

PSY-265 Educational and Career Pathways in Psychology (0.5) A
This course examines several components of careers as they pertain to psychology majors and encourages students to make a plan for how they can prepare for entrance into the working world or graduate school upon completion of their undergraduate degree. Prerequisite: PSY-120.

PSY-305 Tests and Measurement (3) SI
This course will introduce students to the methodological and mathematical underpinnings of testing. This course focuses primarily on test development and explores the psychometric properties of tests. Classical and modern methods of assessing psychometric properties are covered. Students should gain sufficient understanding to evaluate tests encountered and to be able to identify some of the major ethical and professional issues involved in test development and administration. Prerequisite: PSY-120; MATH-225 recommended.

PSY-315 Readings In Group & Individual Differences (3) A
This course is part of the Group & Individual Similarities & Differences core content area of the psychology major. The emphasis in the Readings in Social and Health Psychology course is to build upon the broad content to which students are exposed in the Social Psychology course (PSY 215) by reading research articles and book chapters related to more specific concepts within the field of Social and Health Psychology. Example topics include key concepts where social and health psychology intersect such as health behavior change, how personality influences health, stress appraisals, social relationships and health, management of chronic illness, and psychoneuroimmunology. Prerequisites: Permission of instructor.
PSY-325 Learning and Behavior (3) SI
This course focuses on the nature of behavior with applications ranging from training animals to the treatment of behavioral problems in children and adults. Topics may include: learning paradigms of classical conditioning, operant conditioning, and observational learning. Students will learn about how psychological researchers and clinicians employ theories and techniques to understand, enhance, and or modify learning and behavior. Prerequisite: PSY-120 or PSY-124 recommended.

PSY-330 Psychology of Gender (3) A
Gender and gender-related behaviors are studied from social and psychological perspectives. Major topics include the creation and development of gendered identities, gender in close relationships, social and cultural influences on the formation and maintenance of gender identity, gender issues in mental health, the influence of gender on work and achievement, and gender issues in aging.

PSY-335 Readings in Cognition and Emotion (3) A
This course is part of the Cognitive core content area of the psychology major. The emphasis in the Readings in Cognition and Emotion course is to build upon the broad content to which students are exposed in the Cognitive Psychology course (PSY 235) by reading research articles and books related to more specific concepts within the field of Cognitive Psychology. Example topics include key concepts where cognition and emotion intersect such as motivation, memory, the mind, higher order thinking and neuropsychology. Prerequisites: PSY-124, PSY-125, PSY-165, PSY-235.

PSY-345 Abnormal Psychology (3) A
This course examines the major forms of abnormal behavior. Topics include the symptoms and diagnostic criteria for various types of mental illness, theories about how different types of abnormal behavior develop and are maintained, and various therapeutic approaches used in treatment of mental disorders. Current research and empirical findings related to abnormal behavior are presented. Prerequisite: PSY-120 or 124.

PSY-360 Adult Development and Aging (3) D
This course examines individual and interpersonal aspects of development in adulthood and old age. Using an interdisciplinary orientation, this course covers topics involving biological, cognitive, emotional, behavioral, and social aspects of development during this period of the life course. Prerequisite: PSY-120 or 124.

PSY-365 Child and Adolescent Development (3) D
This course examines the major theoretical perspectives and research findings in the study of prenatal development, infancy, childhood, and adolescence. The class covers the description and explanation of cognitive, language, personality, social, emotional, and physical development during these age periods. This course also acquaints students with current controversies, research methods, and applied issues in developmental psychology. Prerequisite: PSY-120.

PSY-370 Advanced Topics in Psychology (3) D
Presents offerings of standard topics in psychology at an advanced undergraduate level; this class is offered on a rotating basis. Prerequisite: PSY-124 and 125.
PSY-385 Readings in Developmental Psychology (3) A
This course is part of the Developmental core content area of the psychology major. The emphasis in the Readings in Developmental Psychology course is to build upon the broad content to which students are exposed in the Lifespan Psychology course (PSY 245) by reading research articles and books related to more specific concepts within the field of Developmental Psychology. Example topics include key developmental areas such as parenting, marriage, dating, temperament, and attachment. Prerequisites: PSY-124, PSY-125, PSY-165, PSY-245.

PSY-405 Statistics and Research Methods (3) A
This course is part of the Research Methods content area of the psychology major and provides opportunities to explore research methods and statistical analysis used in the behavioral sciences, building upon techniques examined in Foundations of Psychological Science. The areas of project design, intermediate statistical analysis, and interpreting results are emphasized. In addition, focus is placed on application of techniques. Prerequisites: PSY-124, PSY-125, and PSY-165; MATH 150, 180, or 190.

PSY-415 Neuropsychology (3) SII
This course examines human brain-behavior relationships. Emphasis will be placed on adult conditions, and the most commonly used approaches in the assessment and measurement of human behavior and how the human brain is responsible for cognition, language, memory, spatial processing, emotion, and personality. Students will gain understanding of principles of brain organization, individual differences, and professional and clinical issues in neuropsychology. Prerequisite: PSY-120; PSY-230 recommended.

PSY-425 Foundational Skills of Helping Professionals (3) D
This course is part of the Sociocultural and Individual Differences core content area of the psychology major. The class examines the major theories of counseling and psychotherapy, such as humanistic, behavioral, cognitive, and psychodynamic. The course reviews various perspectives on how problems develop, how theories guide interventions, and ethical issues. In addition, students begin to learn about how these ideas are applied in therapeutic relationships. For instance, students learn the fundamentals of therapeutic relationships, basic listening skills, and defining and focusing of therapeutic goals. Prerequisite: PSY-120 or PSY-250 and PSY-345 or permission of instructor.

PSY-444 Application of Psychology in Clinical and Counseling Settings (3) D
This course examines the use of strategies to assess and intervene with those who are seen in clinical and counseling settings. In doing so, the class explores theoretical notions underlying clinical and counseling practice as well as methods used to evaluate and counsel/treat individuals, families and groups. Prerequisites: PSY-250, PSY-345.

PSY-460 Research Practicum in Psychology (2)
The purpose of this course is to engage students in research at various level (e.g. conceptualizing a study; collecting, entering, analyzing, and/or presenting data) as a part of a small group with the hopes of improving their understanding of and appreciation for the role of psychological research. This course consists of a regular in person meeting as well as activities assigned throughout the semester. Prerequisite: PSY 124, PSY 125, and Instructor permission.
PSY-470 Special Topics in Psychology (3) D
Study of a particular area of psychology not covered comprehensively in one of the other advanced courses. The topic for a given semester is announced prior to registration for the semester, having been selected in response to student needs and interests. Examples of special topics include psychology and the law, human sexuality, clinical psychology, industrial psychology, and child psychopathology. A student may receive credit more than once for PSY-470 if a different topic is covered each time. Prerequisite: PSY-120.

PSY-475 Applied Psychology Capstone (3)
This course serves as a capstone for the Applied Psychology major, assisting students in both synthesizing their educational experience thus far and considering their educational and career trajectory upon completion of the program. Although there are elements of the class that are consistent for all students, some of the assignments are highly individualized based on the track/concentration the student is completing in the major and the specific career or educational goals of the student. The course makes use of a discussion format with experiential components as well. Some activities may take place outside of the scheduled class time (e.g. interviewing a professional), so students will need to consider their schedules when signing up for the course. Prerequisite: PSY-124 and PSY-125, Junior or Senior status, and a major in psychology or applied psychology.

PSY-476 Capstone in Psychological Science (3) A
The capstone in psychological science is a semester long experience available for psychology majors with at least junior standing who have satisfied the requisite requirements including successfully passing PSY 405: Advanced Statistics and Research Methods with at least a C. The course provides students an opportunity to develop research and writing skills through working in groups to carry out a research project that may include collecting, entering, and analyzing data as well as working individually to write and orally present the results of the research project. Prerequisites: PSY-124, PSY-125, PSY-165, PSY-405.

PSY-485 Emerging Adulthood (3) D
This course is part of the Developmental core content area of the psychology major. This course offers an introduction to the developmental period of Emerging Adulthood. A brief overview of developmental science as a whole, key ideas in the field, and significant themes that affect one’s entrance into and exit out of Emerging Adulthood will be discussed followed by an in-depth exploration of Emerging Adulthood. Prerequisite: PSY-120; PSY-245 recommended.

PSY-495 Interpersonal Relationships (3) D
This course is part of the Developmental core content area of the psychology major. This course offers an examination of the research on and theories about human relationships (their development, maintenance, and dissolution) including practical application of this knowledge. Topics include elements of successful relating (e.g. communication and conflict resolution), the effects of troubled relationships, and predictors of positive relationships. Of primary importance in this course is the integration of information from previous psychology classes in order to develop a comprehensive view of the science behind successful interpersonal relationships. Prerequisite: PSY-120; PSY-245 recommended.
Religion Courses

Religion courses are offered by the Philosophy and Religion Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

REL-100 Christianity (3) A
An introductory examination of the Christian movement from its Jewish background to its present status as a diverse world religious community. Particular attention is given to the historic traditions (Catholic, Orthodox, Protestant), different forms of worship and ritual, major religious tenets, and the corresponding variety of models for Christian community.

REL-109 Religion Freshman Seminar (1) SI
General orientation to Religion, Pre-Theology, and Youth Ministry curricula. Attention is given to general concepts, academic literature, library skills, and basic writing skills in these majors. Required of all freshmen departmental majors. *(Cross-listed with PHIL-109. Does not satisfy the Religion requirement.)*

REL-110 World Religions (3) Y
This course uses comparative methods to explore and understand the diverse phenomena of religion, both Western and Eastern, around the world. It emphasizes both the cultural context of religious practice and the lived experience of the practitioners.

REL-130 Honors: Readings in Christianity (3) SI
The Honors Religion course provides academically motivated students with a set of primary and secondary readings that allow them to engage texts and issues from the Christian tradition in a manner that satisfies the University’s religion requirement. The format of the course will be primarily discussion. The Honors Religion course combines primary source material (texts produced during the particular historical period under consideration) and the secondary sources (books, articles, etc., by scholars of that historical period). Within this format, different historical periods and different sets of primary source material can be offered, depending on the expertise of the individual instructor.

REL-200 Old Testament Life and Literature (3) A
This course attempts to understand the literature of the Old Testament in the context of the history and culture of the Ancient Near East. Students are introduced to what contemporary scholarship contributes to this endeavor.

REL-210 New Testament Life and Literature (3) A
This course attempts to understand the literature of the New Testament in the context of the history and culture of the Greco-Roman world. Students are introduced to what contemporary scholarship contributes to this endeavor.

REL-220 Christian Theology I (3) Y
This course introduces students to Christian theology as an ecumenical discipline. It is organized around several classical and contemporary questions: Who is God and what does God do? Who was Jesus and what did he do? How do we understand the Holy Spirit? What is the purpose of the church? What are sacraments and how are
they to be understood? What is the nature of salvation? What is the relationship between reconciliation with God growing in the life of holiness and love? As a discipline that arises out of historical traditions (Orthodox, Catholic, Protestant), references are made to key theological texts and influential thinkers past and present. Consideration also is given to Christianity’s relationship to Judaism and other religions.

REL-230 Sociology and Religion (3) N
Study of religion as a social institution and of the Christian church as a social organization. Attention is given to the interrelations of religion and other major institutions and the effect of religion on the individual. (Cross-listed as SOC-230.)

REL-250 History of Christianity I: 30–1500 (3) O/SI
This course focuses on the development of Christian thought and practice from the apostolic period through the medieval period to the eve of the Protestant Reformation.

REL-260 History of Christianity II: 1500–Present (3) O/SII
This course focuses on the development of Christian thought and practice from the era of the Protestant Reformation into the modern period.

REL-270 Judaism (3) Y
An introductory examination of the Jewish tradition from the biblical period to its present status as a set of diverse world religious communities. Particular attention is given to the various communities that make up contemporary Jewry (Orthodox, Reform, Conservative, Reconstructionist), different forms of worship and ritual, major religious tenets, and the ways festivals and life-cycle events are celebrated. Other topics may include contemporary debates about the basis of Jewish identity, the relationship of American Judaism to the state of Israel, and the implications of the Holocaust for the ongoing dialogue between Jewish and Christian traditions.

REL-275 Islam (3) Y
An introductory examination of the Islamic tradition from its origins, its development and geographical spread, to its present status as a set of diverse world religious communities. Particular attention is given to the basic teachings of Islam as they appear in various communities that make up contemporary Islam. Attention is also given to contemporary issues (such as modernity, current conflicts), interfaith efforts, and the situation of Islamic communities in America.

REL-280 United Methodist Ecclesiology and Polity (3) N
Students gain a working knowledge of the nature, organization, and polity of the United Methodist Church against the historical backdrop of the pan-Methodist origins of contemporary institutions and movements. (This course is available only to Youth Ministry Training Program concentrations and may not be used to satisfy the Religion requirement for the General Education core.) Offered only at Christian Theological Seminary campus.

REL-299 Issues in Religion (3) N
A special topic in Religion is chosen for study. The topic is selected by the instructor, who considers student interests in determining the nature of the course in a given semester.
REL-310 Christian Ethics (3) SII
In this course, we will explore some of the concerns and interests that Christian ethicists have in common with secular philosophers, including the nature of deontological, utilitarian, and virtue ethics. Also explored will be some of the many ways that Christian ethics has its own distinctive set of concerns, especially ethical decision-making’s relations with scripture and doctrine.

REL-320 Interpretation of the Bible (3) N
Taught as a seminar, this course studies how the Bible has been and is being interpreted. Attention is given to the early church’s ways of reading scripture and to the multiple readings of scripture present in contemporary society. Prerequisite: REL-200 or REL-210.

REL-330 Jesus (3) O
Central to Christian tradition, Jesus has appeared in different ways to Christians. The primary objective of this course is to reconstruct Jesus’ message and ministry on the basis of available sources and historical methods. A secondary objective examines some of the ways in which Jesus’ significance was expressed in the early church. Prerequisite: REL-200 or REL-210 or permission of instructor.

REL-350 Religion and Magic (3) O
Review of traditional, non-Western religious practices, providing a cross-cultural perspective on topics such as spirit beings, natural and supernatural forces, taboos, magic, witchcraft, sorcery, divination, healing, shamanism, totemism, death, ghosts, afterworlds, and revival cults. (Cross-listed as ANTH-310.)

REL-390 Honors Religion (3) N
A study of historical and/or contemporary developments in the Jewish and Christian traditions. Special attention may be given to the importance of Jewish and Christian practices in relation to each other and with other religious traditions.

REL-410 Issues in Religion (3) D
An advanced topic in religion is chosen for study. The instructor selects a topic considering student interests in determining the nature of the course in a given semester. Prerequisite: Any 200-level Religion course or higher.

Respiratory Therapy Courses
Respiratory Therapy classes are offered through the Biology Department and Clarian Health. Information about the department and its majors and minors can be found in the section entitled Academic Units.

Note: Respiratory Therapy courses may be taken by only students who have applied for and received admission to the clinical component of the Respiratory Therapy Program.

RESP-303 Introduction to Human Diseases for Respiratory Therapists (2) Y
This course gives respiratory therapy students a general introduction to a broad variety of human diseases. Etiology, diagnosis, and treatment will be discussed.
RESP-311 Cardiorespiratory Physiology (3) Y
This course focuses on the normal anatomy and physiology of the cardiorespiratory system, including lung mechanics, ventilation, perfusion, diffusion, gas transport, and acid-base balance.

RESP-315 Cardiorespiratory Assessment and Patient Care (3) Y
Basic cardiorespiratory assessment, vital signs, laboratory studies, and charting. Includes required preclinical skills and practice.

RESP-325 General Respiratory Care (4) Y
This course focuses on basic respiratory therapy procedures. Physiologic applications, effects on the cardiopulmonary system, and hazards for each therapeutic procedure are discussed. Topics include physical principles, airway care, humidity and aerosol therapy, medical gas therapy, hyperinflation therapy, and chest physical therapy.

RESP-326 Respiratory Care Techniques I (2) Y
This course focuses on the most important clinical laboratory procedures and on procedures used by the respiratory therapist. Specifically, this course instructs students in patient assessment, oxygen administration, humidity and aerosol therapy, chest physical therapy, hyperinflation therapy, and monitoring expired gases.

RESP-333 Cardiorespiratory Pharmacology I (2) Y
This course provides an overview of the basics of pharmacologic therapeutics, focusing on dosages and solutions and bronchodilator drugs. Indications, side effects, mechanism of action, and route of administration are discussed.

RESP-350 Cardiorespiratory Diseases (3) Y
This course outlines general cardiorespiratory diseases of the adult, including acute and chronic disorders. Respiratory therapeutics applied to these disorders are discussed.

RESP-355 Life Support (3) Y
This course includes care of the artificial airway, cardiovascular monitoring and supportive therapy, principles of ventilatory care and maintenance, and physiologic effects and complications of airway pressure therapy.

RESP-356 Respiratory Care Techniques II (2) Y
This course focuses on the most important clinical laboratory procedures and equipment used by the respiratory therapist to support critically ill patients. Specifically, this course instructs students in mechanical ventilators, pressure and heart rate monitors, pulmonary mechanics devices, and arterial blood gas sampling.

RESP-371 Pulmonary Diagnostics (3) Y
This course outlines and discusses both normal and abnormal lung volumes and capacities, mechanics of ventilation, inspiratory and expiratory flows, and diffusion of the lung. Additionally, specialty diagnostic techniques such as x-rays, bronchoscopy, ventilation/perfusion scans, and exercise testing are overviewed.
RESP-385 Respiratory Care Practicum I (3) Y
This course applies cardiopulmonary assessment techniques, information gathering, and communication skills in providing general respiratory care in the clinical setting, including medical gas, humidity and aerosol therapy delivery, and treatment modalities.

RESP-395 Respiratory Care Practicum II (4) Y
This clinical practicum introduces students to variations in oxygen delivery and basic mechanical ventilation. Treatment modalities and hemodynamic monitoring on mechanically ventilated patients will be integrated.

RESP-405 Neonatal-Pediatric Respiratory Care (3) Y
This course outlines fetal physiology, cardiorespiratory transition, and respiratory management of neonatal pathologies, including respiratory distress syndrome. Cardiorespiratory techniques for the pediatric patient as well as pediatric trauma and transport are reviewed.

RESP-420 Introduction to Research in Respiratory Care (2) Y
This course examines research in respiratory care and applies basic statistics and concepts of research design.

RESP-430 Management and Leadership for Respiratory Care (3) Y
Specific theory and practice applied to directing and managing a respiratory therapy department, including the managerial functions of budgeting, controlling, organization, planning, staffing, and coordinating. Leadership and skills pertinent to these functions as well as effective communication and professionalism are included.

RESP-440 Advanced Cardiac Life Support (2) Y
This course introduces students to the didactic and technical skills needed for successful completion of the advanced cardiac life support proficiencies set forth by the American Heart Association.

RESP-444 Cardiorespiratory Pharmacology II (2) Y
An overview of pharmacologic agents and their effects on the various body systems. Drug effects on the respiratory, circulatory, and nervous systems are emphasized.

RESP-445 Seminar in Cardiorespiratory Care (3) Y
Specialty and expanded practice areas of emphasis for respiratory care presented in a seminar format. Emphasis will be placed on critical thinking, judgment skills, and communication abilities.

RESP-451 Cardiorespiratory Monitoring and Special Techniques (3) Y
This course reviews electrocardiograms, intracranial pressure monitoring, capnography, and pulmonary artery monitoring techniques. Case studies emphasizing these special procedures are presented.

RESP-456 Respiratory Care Practicum III (6) Y
This course allows students to provide advanced patient assessment techniques, information gathering skills, and communication and leadership skills in the neonatal/pediatric and adult critical care clinical settings.
RESP-461 Pulmonary Rehabilitation and Geriatrics (3) Y
This course gives an overview of rehabilitation therapies and techniques applicable to chronic lung disease, as well as respiratory home care. Basic concepts of gerontology and geriatrics are presented.

RESP-480 Patient Education Techniques for Respiratory Therapists (3) Y
Education techniques for patients and families dealing with chronic respiratory disease. Topics include asthma, COPD, and smoking cessation education. Assessment of learning readiness, reading levels, and patient comprehension will be addressed.

RESP-485 Respiratory Care Practicum IV (6) Y
Students will manage patients in critical care settings with emphasis on cardiopulmonary assessment and monitoring. They will participate in pulmonary rehabilitation, homecare, advanced life support, pulmonary function, polysomnography, and other clinical specialties.

Science, Interdisciplinary Courses

SCI-210 The Science of Food (4) D
A science course designed for non-science majors. Scientific principles will be explored with food and food preparation as a central theme. Students will use the scientific method and mathematical modeling to investigate the chemistry, biology, physics, and mathematics principles underlying various types of foods and food preparation. Topics include the chemical structure of sugars and starch, the biology and physics of making bread, exploration of animal development through observations of eggs, genetic engineering of corn, the ecology and evolution of apple trees, and the chemistry of fermentation. Three laboratory sessions per week emphasizing learning by inquiry.

SCI-230 Gender and Ethnicity in Mathematics and Science (3) D
Students will explore the history of women and minorities in math and science, including their contributions and the obstacles they overcame. Students will gain further insight into how societal influences have shaped the status of these groups within the scientific community. Topics also will include contemporary gender and ethnic issues related to math and science such as sexism and racism in classrooms and textbooks, single-sex classrooms, scientific research supporting stereotypical differences in abilities, math and science anxiety, and efforts to encourage the participation of underrepresented groups in scientific and math-related careers. This will be a discussion-based course with student-driven readings.

SCI-300 Science Writing (3) O
The goal of this course is to familiarize students with the style, culture, and discourse for writing in the sciences. Students will analyze and obtain experience with several formats of science writing, including research reports, grant proposals, conference poster presentations, and science essays or bibliographies. The influence of technology on scientific communication, the format of professional online forums and blogs will also be analyzed. Two 75 minute class periods per week. Prerequisite: Prior enrollment in two science courses or permission of instructor.
School for Adult Learning Courses
The following courses are offered through the School for Adult Learning and are available only to students admitted to that school. Information about the School for Adult Learning and its majors can be found in the section entitled Academic Units.

SAL-101 Return to Learning (3) A (Accelerated)
This course assists adult learners in returning to an academic environment. Topics covered include course registration, financial aid, and career services programs. Students complete a learning style assessment. Specific learning methods are discussed for each learning style.

SAL-280 Special Topics (1–3) Y (Accelerated)
Examination of a special introductory topic of interest to adult learners that is not covered in the regular curriculum. Topics vary, and students may repeat the course for credit if the topic is different.

SAL-410 Excellence in Liberal Studies (3) A (Accelerated)
Serves as the capstone experience for all adult students earning the Bachelor of Liberal Studies degree. Provides the venue for assessing at the program level the four University-wide learning goals.

SAL-480 Special Topics (1–3) Y (Accelerated)
Examination of a special, advanced topic of interest to adult learners that is not covered in the regular curriculum. Topics vary, and students may repeat the course for credit if the topic is different.

Social Practice Art Courses
Social practice art courses are offered through Multidisciplinary Programs in the Shaheen College of Arts and Sciences. Information about the program can be found in the section entitled Academic Units.

SPA-150 Introduction to Social Practice Art (3)
This course provides students with a survey of the kind of art that influences and predicted social art (SPA): work that may be audience-centered, activist, ephemeral, collaborative, participatory, social, focused on performance and process. The course examines ideas, theories and practices of artists and their work from the Dada and the Surrealists in the early 1900s to Fluxus and happenings in the 1960s and 1970s to the more recent process- and time-based art, relational aesthetics/participatory art, activist art, community art, and social practice art.

SPA-430 Special Topics (1–4)
A course in a specialized area in Social Practice Art or Creative Placemaking. This course may be cross-listed with approved courses from other departments. A student may receive credit more than once for SPA 430 if a different topic is covered each time.
Social Work Courses

Social Work courses in the Phylis Lan Lin Social Work program are offered through the College of Applied Behavioral Sciences. Information about the department and its majors and minors can be found in the section entitled Academic Units. Please refer to the Social Work Program Handbook for all policies regarding the Social Work Program.

SOWK-110 The Field of Social Work (3) A
Introduction to the social work profession. Course examines social work concepts, functions, roles, and value base. The class examines social conditions and problems for vulnerable populations and the service delivery systems in which social work is practiced. Tours of local agencies and interviews with professional social workers are included. Open to all majors, this course is required for admission into the Social Work Program.

SOWK-111 Field of Social Work Service Learning Lab (1) D
The lab introduces students to experiences of fieldwork related to the social work profession by allowing them to learn through practice within a community agency/organization. The students spend 28 working hours at a social service agency during the semester. Students perform assigned agency duties and keep a reflective journal of experiences at the placement site. Corequisite: SOWK-110.

SOWK-200 Working with and for Children and Youth (3) D
Survey of child welfare services and intervention strategies. Course examines developmental, health, risk, service, legal, and advocacy problems and issues for human services professionals engaged in practice with children and youth. Assessment and intervention strategies for children and adolescents are included as determined by student interest. Elective: Open to all students.

SOWK-201 Working with and for Children and Youth Service Learning Lab (1) D
The lab allows students to learn child welfare services through 28 hours at a social service agency during the semester. Students perform assigned agency duties and keep a reflective journal of experiences as well as other assignments.

SOWK-230 Foundations for Social Work Practice (3) A
Course examines generalist intervention strategies on a systems perspective. Various models for problem solving at the level of individuals, families, groups, neighborhoods, organizations, and communities are studied. Fundamental skills in interpersonal communications and interviewing are included. Laboratory experiences include simulations, role plays, and videotaping. Satisfactory completion of or concurrent enrollment in SOWK-110 is highly recommended. This course is required for admission into the social work program.
SOWK-250 Micro/Mezzo Human Behavior in the Social Environment (3) A
Course integrates and consolidates theories from prerequisite social, behavioral, and biological sciences courses from a human growth and development perspective. Themes include assessing and understanding human diversity in varying social contexts, social injustice, oppression, cultural heritage, and concerns for specific vulnerable populations. Emphasis is on individuals, families, and groups, and the reciprocal interactions between them.

SOWK-260 Macro Human Behavior in the Social Environment (3) A
This course is similar to SOWK-250 in that it integrates and consolidates theories from prerequisite social, behavioral, and biological sciences courses. Themes include assessing and understanding human diversity in varying social contexts, social justice, oppression, cultural heritage, and concerns for specific vulnerable populations. Primary focus is on organizations, communities, institutions, and the reciprocal interactions between individuals and these systems.

SOWK-310 Social Work Practice with Micro Systems (3) A
Social work practice with emphasis on small-systems perspectives. Emphasis is on theories, methods, and techniques of practice within the contexts of individuals, families, and small social networks. Documentation, assessment, networking, and the development and use of resources are examined. Approaches for integrating practice with larger systems are included. Laboratory work includes role playing, simulations, and videotaping as an integral part of the course. Prerequisite: Admission to Social Work Program and completion of SOWK-250.

SOWK-320 Social Work Practice with Mezzo Systems (3) A
Social work practice with emphasis on medium-sized systems perspectives. Emphasis is on theories, methods, and techniques of practice within the contexts of secondary social systems such as reference, peer, and supportive groups. Approaches for integrating practice with smaller and larger systems are included. Laboratory work includes role playing, simulations, and possible field work as an integral part of the course. Prerequisite: Admission to Social Work Program and completion of SOWK-250.

SOWK-330 Social Work Practice Macro Systems (3) SI
Social work practice with emphasis on large-systems perspectives. Emphasis is on theories, methods, and techniques of practice within organizational, neighborhood, and community contexts. Change strategies such as mobilization, social action, citizen participation, advocacy, popular education, and services development are explored. Approaches for integrating practice with smaller systems are included. Laboratory work includes structured events, simulations, and electronic conferencing as an integral part of the course. Prerequisites: Admission to Social Work Program and completion of SOWK-260.

SOWK-331 Social Work Practice Macro Systems Service Learning Lab (1) D
The lab allows students to learn practice of large-systems perspective through 28 hours at a social service agency during the semester. Students perform assigned agency duties and keep a reflective journal of experiences as well as other assignments.
SOWK-340 Social Work Research (4) A
Course designed to develop the student’s use and appreciation of scientific knowledge for practice. Includes study and integrating knowledge, skills, and values in the areas of social work values and ethics, diversity, social and economic justice, populations-at-risk, human behavior and the social environment, social welfare policy and services, social work practice, and field practice. Course focuses on both practice evaluation and program evaluation issues. Designed to strengthen the student’s understanding and appreciation of a scientific, analytic approach to building knowledge for the delivery and evaluation of practice. **Prerequisite: Acceptance into the major or permission of the instructor.**

SOWK-341 Social Work Research Service Learning Lab (1) D
The lab allows students to learn practice evaluation and program evaluation through 28 hours at a social service agency during the semester. Students perform assigned agency duties and keep a reflective journal of experiences as well as other assignments.

SOWK-350 Junior Practicum in Social Work (6) A
Junior practicum in social work at a prearranged and approved social service agency. Obligations include 168 clock hours of direct experience at an agency, plus additional classroom integration seminars, readings, and assignments. **Prerequisite: Completion of SOWK 310 Practice course and admission to Social Work Program.**

SOWK-370 Social Welfare Policy and Services (3) A
Course examines the characteristics of contemporary social welfare policies and services. Models for understanding intent, adequacy, effectiveness, costs, and equity are emphasized. Policy implications for practice within culturally diverse contexts are studied. Implications for practice with different sizes and types of systems and populations at risk are explored.

SOWK-390 Understanding Addictions (3) D
This course studies the dynamics of the addictions process, including causation, symptoms, consequences, prevention, and treatment options. Emphasis is placed on chemical dependency and the abuse of illicit chemicals. Other addictive behaviors also are explored. **Open to all students. (Cross-listed as CRIM-390.)**

SOWK-430 Topical Seminar: Social Work (3) D
Study of a particular area of social work not covered in another advanced course. The topic for the semester is announced prior to registration for the semester, having been selected in response to student needs and interests. A student may receive credit more than once for SOWK-430 if a different topic is covered each time.

SOWK-450 Senior Practicum in Social Work (6–12) A
Senior practicum in social work at a prearranged and approved social services agency. Obligations include 336 clock hours of direct experience at an agency plus additional classroom integration seminars, readings, and assignments. Course may be taken
during one semester for a total of 12 semester hours or over a two-semester period
for six semester hours per semester. Students may not accrue more than 12 hours for
the senior practicum requirement. **Prerequisite:** Completion of all Practice courses
(or three with concurrent enrollment in one), and admission to the Social Work
Program.

**SOWK-460 Capstone Seminar in Social Work (3) SI**
Course examines historical contexts and philosophical perspectives on the
development of social welfare institutions and the profession as a response to social
conditions and human needs. Concerns for social and economic justice for diverse
populations at risk are examined. **Prerequisite:** Admission to the Social Work
Program, completion of 90 hours, and completion of SOWK-350.

**Social Science Courses**
*The following social science courses are interdisciplinary courses offered in the
Department of Sociology. Information about the department and its majors can be
found in the section entitled Academic Units.*

**SOCS-200 Honors: Exploring Human Complexity (3) Y**
An in-depth interdisciplinary study of the many components that influence the
development of individuals within both their specific groups and the context of
Western culture. Various elements in this multifactorial and reciprocal model of
human functioning will be explored, with focus on the interaction between them.
Each element influences both the individual and the impact of the other elements.
Components of the model include topics in biology, anthropology, sociology,
psychology, and family theory.

**SOCS-204 Psychology of Development, Learning, and Instruction Service-
Learning Lab (1) A**
This service-learning experience provides students with an opportunity to develop
observational and reflective thinking skills, apply concepts from EDUC-203, and
analyze learning environments in child- and youth-related organizational settings.
*Register concurrently with EDUC-203.*

**SOCS-225 Community: Learning and Serving (3) SI**
An introductory course in the study of community, this course is also a beginning
course in the community-based service-learning curriculum. Course material includes
community theory, community research, community diversity, community
organizing and organizations, community planning, service learning, and working
effectively in community settings. The first half of the semester prepares students for
meaningful community work, while in the second half of the semester, students
engage in that work with one of the University’s community partners. Participation
in the UIndy Service-Learning Expo (December or April) is a requirement of the
course. *(Cross-listed as CSL-150.)*

**SOCS-290 Honors Social Science (3) O**
This course uses a humanistic approach to the study of persons as social beings.
Students may discuss general concepts of anthropology, criminal justice, social work,
or sociology, depending on the background of the instructor.
SOCS-300 Service Learning in the Social Sciences (3) SI
Course designed to involve students in the community through service learning activities. Students will work in a local community agency/organization on issues of current importance. Students will be expected to design and coordinate the implementation of a project of benefit to the agency/organization and/or the community at large. This will require working with the agency/organization to identify the problem, workable approaches, and the means for carrying out the preferred solution(s). Such projects will involve background research, community dialogue, and leadership development. A minimum of 84 hours of work is required at the agency/organization, as well as additional meetings with the course instructor.

SOCS-401 Undergraduate Community Project (3) SII
This is the capstone course for students completing the minor in Civic Engagement and Community Leadership or completing the Social Sciences concentration in Community Organizing. The first third of the semester involves classroom lecture and discussion on central features in community organizing and community leadership. Weeks 6–12 are focused on completion of each student’s undergraduate community project. The final two weeks of the semester are devoted to discussing each project and participating in the UIndy Service-Learning Expo. (Cross-listed as CSL-450.) Prerequisite: SOC-225 or CSL-150.

Sociology Courses
Sociology courses are offered by the Department of Sociology. Information about the department and its majors and minors can be found in the section entitled Academic Units.

SOC-101 Principles of Sociology (3) A
Introduction to the major concepts and theories of the field of sociology. The course seeks to acquaint the student with recognized group processes and resulting institutions and to show the effects of these on social behavior. The course discusses social forces for social stability and social change.

SOC-103 Social Problems (3) A
Introduction to the study of the major social problems characteristic of society. An attempt is made to show the interrelation of problems and to emphasize sociological causes.

SOC-104 Social Problems Service Learning Lab (1) A
Course is designed to add a real-world dimension to study of social problems by allowing students direct experience of addressing social problems in the community. Students will spend 28 hours working at an Indianapolis agency/organization over the course of the semester. Students will keep a journal and summary of site experiences in relation to material covered in the Social Problems course. Corequisite: SOC-103.

SOC-175 Applying Sociology (3) SII
Introduces students to the broad range of applications of sociological expertise. As such, it will emphasize sociological theory and research methods in addressing social issues and problems. The course will combine experiential learning with classroom discussion and lecture. There will be regular field trips to different agencies,
organizations, and communities that will form the core of the course. The relationship of sociological theory to sociological practice will be emphasized in the classroom component. Prerequisite: SOC-101 or 103.

SOC-200 The Family: A Global Perspective (3) A
Study of the family as a social institution. In addition to studying American family life, the course also explores cultural variations in family structure, life cycle, functions, and controls in selected contemporary societies.

SOC-220 Race and Ethnic Relations (3) A
Examination of the concept of race and of the relations between ethnic and racial groups in the United States. Emphasis is given to African Americans in America through readings in African American culture and history. Prerequisite: SOC-101 or 103.

SOC-230 Sociology and Religion (3) O
Study of religion as a social institution and of the Christian church as a social organization. Attention is given to the interrelations of religion, the other major institutions, and the effect of religion on the individual. (Cross-listed as REL-230.) Prerequisite: SOC-101.

SOC-235 Environmental Sociology (3) SI
Investigates the interplay between human communities and the physical environments including the ways that societies shape their physical space and how that physical environment shapes them. Includes an overview of ecology, environmental policy, environmental movements and organizations, conservation, pollution, brownfield remediation, environmental justice, the local food movement, ecotourism, and sustainability. The course incorporates classroom discussion, guest lectures by local environmental activists, field trips, and an optional service-learning opportunity (see SOC-236).

SOC-236 Service Learning in Sustainability (3) D
An option service-learning class connected with SOC-235: Environmental Sociology. Student can gain direct understanding of environmental issues in community settings. The course focuses on assisting the students in selecting and researching a problem, finding a suitable community setting for their work, coordinating their work with the local community, and integrating these experiences with what they learned in the classroom. Prerequisite/Corequisite: SOC-235.

SOC-240 Conflict Resolution (3) D
Examines conflict that occurs in interaction between individuals, small groups, and organizations. A framework for the systematic analysis of conflict and communication is provided. Case studies, role play, and other exercises are used to identify communication problems and learn strategies for addressing those problems.

SOC-250 Gender Issues in Law and Society (3) A
Examination of the evolution of gender issues from traditional roles to nontraditional roles from an historical context to modern-day contemporary life. Gender is examined critically and reviewed at the macro and micro levels of various components of
society with a focus on gender status, relationships, and treatment in different institutional, organizational, and group settings. Comparing the role of gender and its evolution in the United States to that of other countries, the focus will be on emerging and continuing issues of gender. (Cross-listed as CRIM-250.)

**SOC-260 Chinese Culture and Society (3) D**
Course about Chinese people, history, culture, and society. The contents of the course include a review of the history of China, an in-depth discussion of social institutions in Chinese society, an appreciation of various Chinese art forms from a sociocultural-historical perspective, and an investigation of Chinese in America with ethnic groups in comparative frames of reference.

**SOC-315 Cities and Communities (3) SI**
Course designed to familiarize students with the basic structure of cities and communities. It will focus on the historical development of cities and communities, their contemporary characteristics, and future prospects as well as the social/psychological experience of living in cities and communities. Specific topics will include urban and community planning, community organizing, urban power, community policing, and intentional communities. Prerequisite: SOC-101 or 103.

**SOC-320 Sociological Theory (3) SI**
This course examines central issues in sociological theory using selected works of major theorists. Students will be introduced to different conceptualizations of social order, action, change, and inequality. Theoretical and methodological issues related to conducting social scientific work also will be explored. Prerequisite: SOC-101 or SOC-103.

**SOC-321 Social Psychology (3) O**
Study of the social processes of identity formation and self-presentation, the negotiation of meaning and roles, the construction of emotion, and small-group dynamics as reflected in the work of Mead, Simmel, Goffman, Blumer, Garfinkel, Hochschild, and others.

**SOC-330 Introduction to Social Research (3) SI**
Introduction to the basic problems and nature of research. Emphasis is placed on the areas of design and the construction of instruments of measurement of social data. The student is encouraged to design a research project in an area of interest. Prerequisite: SOC-101.

**SOC-331 Quantitative Data Analysis (3) D**
This course provides a hands-on introduction to commonly used methods of analyzing and interpreting quantitative social science data using secondary data sets. Students will learn how to prepare and enter data into SPSS and EXCEL, use and interpret a variety of descriptive statistics and other data summary techniques, calculate and understand simple relationships between variables, and analyze differences among various groups. In addition, students will formulate and investigate
research questions that may be answered using publicly available secondary data sets. Students will be expected to apply the concepts and skills learned in the course by developing and examining a research question (or questions) analyzing data from a secondary data set and writing a report of their methods, findings, and conclusions. **Prerequisites:** MATH-220 Elementary Statistics; SOC-330 Introduction to Social Research or SOWK-340 Social Work Research.

**SOC-332 Qualitative Methods of Research and Evaluation (3) D**
This course examines different approaches to collecting, analyzing, and interpreting qualitative data. Methodological and ethical issues of doing qualitative research also will be explored. Students will have opportunities to engage in small class-designed research projects or larger ongoing projects when available. Each student also will develop a proposal for a study that uses qualitative or mixed (qualitative and quantitative) methods to collect data. **Prerequisite:** SOC-330: Introduction to Social Research or SOWK-340: Social Work Research.

**SOC-350 Practicum in Sociology (1–8) A**
Practical application of classroom knowledge to an actual work situation in the field, thus offering the student experiential learning in his/her chosen major. Field practica are arranged at community agencies and other sites meeting the needs of society. The student is supervised by an on-site professional as well as a faculty member. **Prerequisites:** Junior or senior standing; major or minor in sociology; GPA of 2.3 or above; or consent of instructor.

**SOC-360 Advanced Practicum in Sociology (4–8) D**
Allows the student to take on greater responsibility within an agency while still being supervised by professional staff and faculty. **Prerequisites:** Junior or senior standing; major or minor in sociology; GPA of 2.3 or above; or consent of instructor.

**SOC-425 Law and Society (3) SI**
Examines the functions of law, the impact of law on human relationships within society, intended and unintended consequences of laws, and the role and impact of legal processes, institutions, and practitioners, with a focus on both national and international contexts. **(Cross-listed as CRIM-425.)**

**SOC-430 Topical Seminar: Sociology (3) D**
Study of a particular area of sociology not covered comprehensively in one of the other advanced courses. The topic for a given semester is announced prior to registration for the semester, having been selected in response to student needs and wishes. A student may receive credit more than once for SOC-430 if a different topic is covered each time. **Prerequisite:** SOC-101 or 103, or consent of instructor.

**SOC-440 Senior Seminar in Sociology I (3) SI**
This seminar provides students with the opportunity to demonstrate and further develop their sociological knowledge and skills in preparation for a career or graduate studies. They will research, select, propose, and design a team project that will benefit
the program, University, and/or community, in consultation with the instructor, other
department faculty members, relevant community experts, and potential
beneficiaries. Students also will individually develop and produce a research-based
paper. Some meetings outside of class time may be necessary. Senior standing or
approval of faculty advisor or chair required.

**SOC-441 Senior Seminar in Sociology II (1) SII**
This seminar provides Sociology students with an opportunity to present the results
of their individual work from the first semester through formal presentations,
continue their explorations of career opportunities, and complete their group project
or individual papers (if needed). Some meeting outside of class time may be
necessary. Prerequisite: SOC-440.

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**Software Engineering Courses**

*Software Engineering courses are offered through the R.B. Annis School of
Engineering. Information about the school and its programs can be found in the
section entitled Academic Units.*

**SWEN-200 Intro to Software Engineering (3) SI**
A ten-week intensive introduction to software life cycle models. Software
requirements engineering, formal specification and validation. Techniques for
software design and testing. Cost estimation models. Issues in software quality
assurance and software maintenance. For most students, this is the first intensive
software engineering course. A secondary goal is to prepare students for their first
five-week intensive interdisciplinary design experience, ENGR-296 (Engineering
Design Lab III). Prerequisites: CSCI-156, ENGR-196 (Intro to Engineering) both
with a grade of C- or better or permission of instructor.

**SWEN 230 Advanced C Programming (2) SII**
Extension of “C” programming topics to include advanced use of pointers, string
functions, binary operations, advanced file I/O, arrays, structures and user defined
types. Students apply structured “C” techniques to the implementation of complex
data structures, memory management, random number generation and simulation.
CSCI-240 is recommended but not required. Prerequisites: CSCI-156 with a grade
of C- or better or permission of instructor.

**SWEN 310 Operating Systems (3) SI**
Students learn fundamental concepts of modern operating systems by studying how
and why operating systems have evolved. Topics include CPU scheduling, process
synchronization, memory management, threads, file systems, I/O systems, privacy
and security, and performance evaluation. Students implement parts of an operating
system as a means of exploring the details of some of these topics. Prerequisites:
CSCI-240 (Data Structures), SWEN-230 (Advanced C Programming) both with a
grade of C- or better or permission of instructor.
SWEN-320 Software Validation, and Testing (3) SII
In depth study of verification, validation, and testing of software systems. Topics include requirements engineering process, requirements elicitation, specification, and validation. Evaluation topics include code inspection, program proofs, unit testing, system testing, statistical testing and reliability modeling. Prerequisites: SWEN-230, SWEN-200 and MATH-350 all with a grade of C- or better or permission of instructor.

SWEN-330 Software Architecture (3) SII
Introduction to frequently-used software infrastructures in software development by experienced engineers. The formal UML notations are utilized to design software architecture and help communicate the design visually. Issues of architectural styles, design patterns and design reuse will be addressed. Cases studies of complex systems will be evaluated, alternative architectures will be proposed and their design trade-offs will be assessed. Student will conduct high level quality analyses based on design artifacts. Students will construct a large scale project by integrating code from multiple teams using modular design and component based cross application architectures. Prerequisites SWEN-200 (Intro to Software Engineering), SWEN-230 (Advanced C Programming) both with a grade of C- or better or permission of instructor.

SWEN 400 Software Project Management (3) SI
Introduce the students to tools and techniques for project definition, work breakdown, estimating, resource planning, critical path development, scheduling, project monitoring and control and scope management. Convey the concept of technical baselines and associated risks. Students will use project management software to accomplish these tasks. In addition, the student will become familiar with the responsibilities, skills and effective leadership styles of a good project manager. The role organization design plays in project management will also be addressed. Prerequisites SWEN-320 (SW Validation and Testing), SWEN-330 (Software Architecture) both with a grade of C- or better or permission of instructor.

Spanish Courses
Spanish courses are offered by the Global Languages Department. Information about the department and its majors and minors can be found in the section entitled Academic Units.

SPAN-101 Spanish Language and Culture I (4) SI and SII
SPAN-101 is the first of three sequential courses designed to study the Spanish language. Emphasis is given to developing rudimentary oral proficiency in Spanish. Other skills, such as listening, reading, and writing also will receive serious attention. Another component of the course is the study of Hispanic culture and civilization. The course consists of lectures, videos, language drills, and conversational exercises.
SPAN-102 Spanish Language and Culture II (4) A
SPAN-102 is the second of three sequential courses designed to study the Spanish language. Emphasis is given to developing rudimentary oral proficiency in Spanish. Other skills, such as listening, reading, and writing also will receive serious attention. Another component of the course is the study of Hispanic culture and civilization. The course consists of lectures, videos, language drills, and conversational exercises.

SPAN-201 Spanish Language and Culture III (4) A
SPAN-201 is the third of three sequential courses designed to study the Spanish language. Emphasis is given to developing rudimentary oral proficiency in Spanish. Other skills, such as listening, reading, and writing also will receive serious attention. Another component of the course is the study of Hispanic culture and civilization. The course consists of lectures, videos, language drills, and conversational exercises.

SPAN-300 Spanish Writing and Correspondence I (4) O/SI
Spanish 300 is an advanced course in Spanish grammar designed as a systematic study of Spanish vocabulary, morphology, sentence structure, and expository usage applied to various kinds of composition such as description, narration, and different types of argumentation. Prerequisite: SPAN-201 or equivalent.

SPAN-310 Spanish Conversation (4) O/SI
The objective of this course is to increase and improve conversational techniques, expand vocabulary and improve fluency. The main emphasis will be oral practice, but we also will pay special attention to grammar, written production, and presentation as well as discussion of various topics of general interest in Spanish. Prerequisite: SPAN-201 or equivalent.

SPAN-317 Spanish Culture and Civilization (4) O/SII
This course is a study of the culture, society, economy, politics and history of contemporary Hispanic nations. The class will consist of lectures, videos, readings, and discussions about current events and contemporary issues. Prerequisite: SPAN-201 or equivalent.

SPAN-422 Spanish Translation (4) SII
This course aims to help students acquire the basic skills in the area of written translation. The emphasis of this course is on the translation of a variety of texts from the fields of business, law, literature, tourism and science. The students will also learn some basic theory principles and translation procedures considered a vital component in the formal training of a professional translator.

SPAN-423 Spanish for the Professions (4)
This course is designed to study the language and culture of Spanish speakers, specifically oriented towards medical professions, social workers, and law enforcement. Learning to use the language is the most important component of this study. Emphasis is given to developing awareness of cultural differences and non-biased attitudes toward cultures different from one's own. Prerequisite: SPAN-201.
SPAN-435 Hispanic Literature (4) N/SII
This class is designed to offer an overview of the most important literary figures of the Spanish-speaking nations from the colonial period through the most contemporary authors. It emphasizes the historical circumstances and events that influenced and shaped the works of these authors. Through the study of these periods and genres, the student will gain a broad understanding of the most important literary movements in Latin America and an understanding of the historical and social contexts in which these works were created. Special attention will be given to the analysis of the most representative authors and their works. Students will put into practice critical thinking skills through the comentario de texto. Prerequisite: SPAN-201 or equivalent.

SPAN-440 Directed Readings in Spanish (1-8) Y/D
Readings in topics selected by the student with approval of the instructor. Speaking is emphasized. Prerequisite: SPAN-201 or equivalent, junior or senior standing and consent of the instructor or department chair.

Sports Marketing Courses
Sports Marketing courses are offered through the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

MKTS-300 Introduction to Sports Marketing (3) SI
An overview of sports marketing as a component of a fully integrated marketing communication strategy. Students will study the history and contemporary application of sports marketing as a method to achieve specific business objectives. The course will provide an introduction to research, segmentation, product development, pricing, licensing, and communication channels such as advertising, sales promotion, and publicity. Prerequisite: MKTG-290.

MKTS-350 Economic Aspects of Sports Marketing (3) SII
The study of finance and economics in sports, including budget development and management, funding, capital improvement and investments, supply and demand trends, and economic impact of sport and leisure events. The course will provide comprehensive coverage of traditional and innovative revenue acquisition methods available to sports organizations from public and private sources, as well as detailed consideration of venue-based income sources. Prerequisite: MKTS-300.

MKTS-410 Strategic Issues in Sports Marketing (3) SI
A strategic overview of sports marketing topics and issues concerned with customer analysis, market segmentation, positioning, promotion, sponsorship, distribution, and pricing. Prerequisite: MKTS-300.
Supply Chain Management Courses
Supply chain management courses are offered by the School of Business. Information about the school and its majors and minors can be found in the section entitled Academic Units.

SCM-210 Principles of Operations and Supply Chain Management (3) A
Operations and supply chain management is concerned with the activities associated with the planning, production, and distribution of goods and services. This course surveys operating decisions and practices in both manufacturing and service-oriented firms. The goal of this course is to provide students with a basic understanding and working knowledge of the terms and concepts associated with the field of operations and supply chain management. Emphasis is placed on the systems approach to the efficient allocation of resources within the firm as well as the challenge of managing people, equipment, and materials to achieve organizational objectives.

SCM-381 Purchasing and Supplier Relationship Management (3) SI
This course investigates the purchasing process and the supply environment. Topics include identifying the requirements for purchased products and services in accordance with organizational objectives and sourcing strategies; preparation of solicitations; cost and price analysis; supplier analysis and sourcing decisions; supplier relationship management; contract development, execution, implementation and administration; negotiations; quality issues; the sourcing process and social responsibility. Prerequisites: ACCT-212 and SCM-210.

SCM-386 Quantitative Methods (3) A
Quantitative methods address the development of modeling techniques and decision analysis tools aimed at assisting managers in problem solving and the decision-making process. This course introduces a number of tools and techniques commonly used in the operations and supply chain management function. Topics covered include: linear programming, sensitivity analysis, transportation problems, project management, queuing systems, forecasting, and simulation. This course provides a hands-on approach to developing quantitative models and utilizes spreadsheets as the primary tool for analyzing and evaluating many common problems and issues facing supply chain managers. Prerequisite: MATH-220 or MATH-280, and SCM-210.

SCM-404 Project Management (3) SI
This course is designed to introduce students to the concepts and process of project management. The course will include the project manager’s role, defining goals and objectives, ownership, scheduling and planning, executing, and monitoring the project. Prerequisite: MATH-220 or MATH-280, and SCM-210.

SCM-405 Quality Management (3) SII
This course is designed to introduce students to the background of quality management in the business setting. Students will become fluent in the key terms and concepts of total quality management and will be introduced to the work of recognized leaders in the field. Topics include international quality standards,
quality, strategy and the supply chain; benchmarking; designing for quality; supplier
development, sampling and inspection; quality audits; the tools of quality
improvement; process control and capability; six sigma, and the theory of
constraints. Prerequisite: MATH-220 or MATH-280, ACCT-212 and SCM-210 or
with approval of the instructor.

SCM-473 Cost Price Analysis (3) D
Course will provide an understanding of the role of cost price analysis and contract
pricing. It also includes an overview of the theories, techniques, and analytical skills
and tools and the application of the knowledge of cost-price practices.

SCM-485 Business Logistics and Materials Management (3) SII
Concepts, strategies, and practices related to demand management, procurement and
manufacturing, inventory, transportation infrastructure and operations, warehousing,
packaging, material handling, and distribution.

SCM-488 Production and Operations Management (3) A
Application of management tools and techniques to the functions of manufacturing,
distribution of goods, and management of service industries. Topics include product
and service design; location planning, process selection and capacity planning;
facilities layout; design of work systems; supply-chain management; aggregate
planning; inventory management; materials requirements planning; and just-in-time
systems. Prerequisite: MATH-220 or MATH-280.

Theatre Courses
Theatre courses are offered by the Theatre Department. Information about the
department and its majors and minors can be found in the section entitled Academic
Units.

THE-110 Introduction to the Theatre (2) A
Study of the entire theatre experience, designed to increase the non-major student’s
appreciation of theatre as an art form from both aesthetic and practical views.

THE-120 Stagecraft (3) SI
Designed to teach the theory and practice of the scenic artist’s craft. Elements of
construction, lighting, engineering, painting, and safety are emphasized both in the
classroom and by practical application during productions. Different sections are
offered for majors and non-majors in a given semester.

THE-122 Computer Applications in Theatre (3) SI
Introduces the capabilities, applications, and use of computers in the field of theatre
and entertainment, including current software packages, explanation of hardware
terminology and function, and discussion of the role of computers in theatre and the
entertainment industry.

THE-124 Theatrical Makeup (3) SII
Detailed study of characterization with makeup. Instruction is given in the basic
principles of makeup application with a detailed study of the facial structure and
special problems.
THE-130 Introduction to Acting (3) A
This course is the general study of acting as it pertains to the tools and process an actor goes through to develop character via research, observation, and analysis of text. Course introduces basic acting principles in the creation and development of character and scene work within given texts. Students develop individual tools of sensory awareness/connection, observation, use of body, voice, and mind for character development and text analysis. Course intended for non-theatre majors. *Prerequisite: non-theater/theatre teaching majors.*

THE-131 Acting I (3) SI
Study of the fundamentals of the actor’s craft and basic acting techniques. Investigation of creating character through the use of vocal interpretation, physical movement, improvisation, and theatre games. *Prerequisite: Consent of instructor for non-theatre majors.*

THE-132 Speech for the Stage (2) SII
Instruction and exercises in vocal development for the stage, including diction, delivery, and interpretation. *Prerequisite: THE-131 or permission of instructor.*

THE-133 Movement for the Stage (2) SI
Instruction and exercises in developing the performer’s physical instrument. Course will include stage movement, period/stylized movement, and some period dance. *Prerequisite: THE-131 or permission of instructor.*

THE-134 Theatrical Makeup (3) SII
Detailed study of characterization with makeup. Instruction is given in the basic principles of makeup application with a detailed study of the facial structure and special problems.

THE-150 Theatre Production (1) A
Laboratory for theatre production experience intended for non-majors as fulfillment of the Fine Arts Appreciation - Applied requirement of the general education core curriculum. Organizational meetings are held early in each semester, during which students sign up for theatre work over the course of the semester. This work may include building scenery, painting, hanging/focusing lights, stage management, running crew, box office, or house management.

THE-221 Scene Design (3) SII
Examination of the history, theory, and practice of stage design. The student’s skills as a designer are developed through a series of practical design problems. *Prerequisites: THE-120, 121, and sophomore standing or above.*

THE-222 Lighting Design (3) SI
Examination of the history, theory, and practice of lighting design. The student’s skills as a designer are developed through a series of practical design problems. *Prerequisites: THE-120, 121, and sophomore standing or above.*
THE-223 Costume Design (3) SI
Examination of the history, theory and practice of costume design. The student’s skills as a designer are developed through a series of practical design problems. Prerequisites: THE-121 and sophomore standing or above.

THE-225 Drawing for the Theatre (3) SI
A comprehensive course designed to familiarize the student with a range of media and focus on methods of seeing and representing the human form. Line, form, mass, texture, and proportion are explored through a series of exercises using live models wearing clothing from different periods (drawing and painting the figure in various stages of dress).

THE-231 Directing I (3) SI
An introduction to the principles of directing, including play selection, composition, casting, blocking, and rehearsing. Students are required to direct scenes for class and public performance. Prerequisite: THE-241 and Sophomore standing or above; permission of instructor for non-majors.

THE-232 Creative Drama (3) O/SII
Course designed to stimulate and expand the student’s interest, knowledge, and experience with creative drama in education and community settings. Learning will result from active observation and participation in class, and completion of reading, projects, and teaching assignments.

THE-241 Play Analysis (3) SII
Basic course in analyzing plays for performance to develop acting, directing, and design processes. Play Analysis includes a study and utilization of critical techniques in interpreting plays and the application of such techniques to the evaluation of plays for stage presentation. Prerequisite: Sophomore standing or above.

THE-250 Sophomore Seminar (1) SII
Weekly seminar constituting the first step in the portfolio development and Senior Capstone sequence required for all (non-teaching) Theatre majors. Course focuses on academic portfolio development, graduate school, career development, etc. For Performance/Directing/Music Theatre track students, course includes instruction in auditioning, obtaining pictures and resumes, business issues, including agents and unions, and developing the Performance Portfolio. For Design/Production track students, the course will include instruction in business issues including resumes and cover letters, interviewing and developing the Design Portfolio. Prerequisite: Sophomore standing or above.

THE-321 Scene Design II (3) SII
Further development of theatrical design and techniques with emphasis on more complex and challenging projects, rendering, and model-making. Prerequisite: THE-221. Consent of instructor for non-theatre majors.

THE-322 Lighting Design II (3) SI
Further development of theatrical lighting design techniques with emphasis on more complex and challenging projects and light labs. Prerequisite: THE-222. Consent of instructor for non-theatre majors.
THE-323 Costume Design II (3) SI
Further development of theatrical costume design techniques with emphasis on more complex and challenging projects and realized designs. Prerequisite: THE-223. Consent of instructor for non-theatre majors.

THE-330 Acting II (3) O/SII
Continuation of THE-131, introducing more advanced acting problems and techniques. Includes investigation of characterization through scene work and other methodologies to broaden the acting process. Prerequisite: THE-131 and theatre or theatre teaching major. Consent of instructor for non-theatre majors.

THE-331 Directing II (3) O/SII
Continuation of THE-231, introducing more advanced directing problems and techniques. Includes investigation of period, style, and directing in the non-proscenium space. Students are required to direct scenes for class and public performance. Prerequisite: THE-231.

THE-332 Children’s Theatre (3) O/SI
Instruction via hands-on experience and exploration of theories and practices involved in creating theatre programming for youth. Focus is in the areas of performance and instruction. Students will navigate the various areas of children’s theatre programming within the structure of child development as it pertains to production, creative dramatics, and general approach to working with children ages 5-18 in theatre arts. Prerequisite: Sophomore standing or above, and THE 241 Play Analysis.

THE-340 Theatre History I (3) O/SI
Course designed to trace the development of theatre from ancient times through the Elizabethan age, encompassing playwriting, directing, acting, costume, makeup, scenery, lighting, properties, theatre architecture, machinery, special effects, management, audiences, and criticism. Non-Western traditions also are considered. The object is to provide context for the theatre’s development as an institution. Prerequisite: Sophomore standing or above.

THE-341 Theatre History II (3) O/SII
Continuation of THE-340, tracing the development of the theatre from the Elizabethan age to the present. Prerequisite: Sophomore standing or above.

THE-350 Junior Seminar (1) SII
Weekly seminar constituting the second step in the portfolio development and Senior Capstone sequence. This course is a track-specific class required of all theatre majors, in which assessment evaluations for the end of semester reviews are house. The focus of the course is the development of specific content for both academic and performance or design portfolios. Performance/Directing/Music Theatre track students meet with faculty members for instruction in audition material selection, self-presentation strategies, creating resumes, obtaining headshots, etc. Design/Production track students meet with faculty members for instruction in specific design portfolio content, creating digital portfolios (website, DVD, etc.), creating resumes, interviewing strategies, etc. Prerequisite: THE-250 and junior standing or higher.
THE-351 Theatre Methods for Elementary Classroom Teachers (1) N
Study of classroom organization and curriculum development in theatre education. Students learn to design and implement a variety of instructional and assessment strategies. Activities relate research and theory of teaching methodology to practical problems faced in the field. Must be taken concurrently with student teaching.

THE-431 Acting III (3) O/SI
Further development of acting skills through more advanced scene study and an increased emphasis on period styles (Shakespeare, Molière, Brecht, Absurdist, et al.). Prerequisite: THE-330. Consent of instructor for non-theatre majors.

THE-450 Senior Capstone (1) SI
Weekly seminar constituting the final step in the portfolio development and Senior Capstone Experience sequence. Course is a track-specific class required of all Theatre majors in which the assessment evaluations for Capstone Portfolio Reviews are housed. The focus of the course is preparation of all materials for the Capstone Portfolio Review. Students are assigned a faculty mentor from their track and each faculty member meets with her/his mentees in a small-group seminar setting to further develop the specific Academic and Design or Performance Portfolios. The course will provide the opportunity for more in-depth and intensive one-on-one faculty and peer mentoring and feedback. A major focus of the course will be on “mock” reviews to prepare students for their Capstone Portfolio Review. Prerequisite: THE-350 and senior standing.

THE-451 Theatre Internship (3–8) D
Internships are designed to offer students the opportunity to integrate their academic understanding of theatre concepts and production processes. Students may identify a potential internship on their own or through a theatre faculty member or the Office of Career Services and Employer Relations. In order for the student to enroll in and earn academic credit for THE-452, the site and description of the internship must be approved by the Department of Theatre. Supervision of the student is the responsibility of the immediate supervisor. A grade of S or U is assigned. Prerequisite: Junior or Senior standing, minimum of 2.5 GPA in major, and approval of department chair.

THE-460 Special Topics in Theatre (1–3) D
Comprehensive examination of a topic not covered thoroughly in other theatre courses. Topics vary, and students may repeat the course for credit if the topic is different.
Youth Ministry Training Program Courses

Youth Ministry Training Program courses are offered by the Philosophy and Religion Department in collaboration with Christian Theological Seminary. Information about the department and its majors and minors can be found in the section entitled Academic Units.

YMTP-100 Introduction to Youth Ministry (2) SI
An introduction to youth ministry that enables students to gain a holistic perspective of the practice of youth ministry while becoming oriented to central practices of the Christian faith. Youth are defined as individuals of middle school and high school age. Prerequisite: CVOC-110.

YMTP-300 Education and Formation in the Church (3) Y
In this course, students begin to examine and assess appropriate methods of Christian education as they apply to youth, including issues of faith and human development. Offered only at Christian Theological Seminary campus.

YMTP-400 Contemporary Ministry with Youth (3) D
This course is designed to help students engaged in ministry with youth to reflect critically on their ministry practices. Students develop and implement strategies for qualitative assessment of their youth program and research a particular issue related to youth ministry. Participating students must be involved in a youth ministry program (as a staff person or volunteer) or as a member of the Disciples House for Youth summer staff (DHY is a program of Christian Theological Seminary). Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-405 Nurturing Faith Across the Lifespan (3) N
Students explore the relationship between various age groups and faith formation with emphasis on nurturing the faith of children and youth through observation and critical reflection. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-410 Issues in Youth Ministry (3) N
A comprehensive examination of a topic not covered thoroughly in other Youth Ministry courses. Topics vary. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-420 Baptism and Confirmation (3) N
This course provides a thorough exploration of the Christian practices of baptism and confirmation, including their history, theology, and application in the contemporary church. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-430 Worship and Spirituality (3) N
This seminar course explores the relationship between diverse worship practices and a variety of traditions of Christian spirituality. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.
YMTP-440 Teaching and Spirituality (3) N  
Students explore teaching youth as theory and practice within the context of Christian practices. Particular attention is given to those practices that enhance the spiritual formation of themselves and others. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-450 Christian Education for the Public Realm (3) N  
This course explores the impact and integration of one’s faith in relation to the wider American culture and the challenges that can arise in the practice of Christian education in congregational settings. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.

YMTP-460 Human Growth & Development (3) N  
Theories of human development in family, community, and societal context. Implications of lifespan transitions for faith and vocation. Prerequisite: YMTP-300. Offered only at Christian Theological Seminary campus.