

Undergraduate and Graduate
Catalog 2016–2017
Course Descriptions

Lebanon Valley College

UNDERGRADUATE COURSES

ACT 131. Financial Statement Analysis. This course will provide students with an introduction to the basic financial statements and other SEC filings. They will become familiar with the concept of footnote disclosures. They will evaluate and analyze how financial statements are used by stakeholders and how information contained therein is collected. 3 credits.

ACT 151. Financial Accounting. Basic concepts of accounting including: accounting for business transactions, preparation and use of financial statements, and measurement of owners' equity. Course restricted to Accounting, Actuarial Science, and Analytical Finance majors. 3 credits.

ACT 162. Managerial Accounting. Cost-volume-profit relationships, cost analysis, business segment contribution, profit planning and budgeting as a basis for managerial decision making. Prerequisite: ACT 161 with a minimum grade of C- or better. 3 credits.

ACT 231. Managerial Accounting. Cost-volume-profit relationships, cost analysis, business segment contribution, profit planning and budgeting as a basis for managerial decision making. Prerequisite: ACT 151 or ACT 161, with a minimum grade of C- or better. 3 credits.

ACT 251. Intermediate Accounting I. Study of the theory and development of generally accepted accounting principles as they relate to financial reporting; the application of these principles to the preparation of financial statements; special emphasis on revenue recognition as well as valuation, classification and disclosure of current and long-term assets. Prerequisite: ACT 231. 3 credits.

ACT 252. Intermediate Accounting II. Study of the application of accounting principles for current liabilities, long-term liabilities, stockholder's equity, earnings per share, dilution, pensions, leases, cash flows, deferred taxes, investments including the analysis of financial statements. Prerequisite: ACT 251 with a minimum grade of C- or better. 3 credits.

ACT 263. Cost Accounting I. This is the first of a two course sequence examining the role of financial information inside the business. These courses will emphasize the role accounting plays as a business partner in the managerial decisions of the company. This course will focus on the creation and analysis of financial reports. Topics will include cost objects, cost behaviors, costing methods, and cost/volume/profit analysis. Prerequisite: ACT 151 with a C- or better. 3 credits.

ACT 342. Government and Non-Profit Accounting. Basic concepts of fund and budgetary accounting used for financial activities of governmental units and not-for-profit organizations. Prerequisite: ACT 251. 3 credits.

ACT 353. Cost Accounting. Analysis and use of techniques for cost management and control; the accumulation and recording of the costs including job-order, process and standard cost systems, joint and by-product costing; contemporary topics such as activity based costing and just-in-time manufacturing. Prerequisite: ACT 162. 3 credits.

ACT 359. Advanced Accounting. The emphasis of this course is on business combinations and consolidated financial statements. The course also addresses accounting principles applicable to partnerships, SEC reporting, insolvency, and fiduciaries. Prerequisite: ACT 252. 3 credits.

ACT 363. Cost Accounting II. This is the second of a two course sequence examining the role of financial information inside the business. These courses will emphasize the role accounting plays as a business partner in the managerial decisions of the company. This course will focus on the creation and analysis of financial reports. Topics will include budgeting, variance analysis, joint and product costing, activity-based costing and just-in-time. Prerequisite: ACT 263 with a C- or better. 3 credits.

ACT 371. Individual Income Tax. Analysis of the federal income tax laws as applied to individuals; case problems, preparation of returns. Prerequisite: ACT 231. 3 credits.

ACT 375. Managerial Concepts of Taxation. This course will explore the tax implications on companies. It will not approach taxation from the perspective of a tax practitioner, but from the perspective of an industry accountant responsible for managing the tax filings of a company. The connection between taxation and financial reporting will be central to the discussion. Topics will include sales tax, payroll tax, income tax, and international taxes. Prerequisite: ACT 252 and ACT 263 with a C- or better. 3 credits.

ACT 400. Internship. Practical and professional work experience related to the student's career interests, involving both on-site and faculty supervision. Internship credit does not fulfill required electives in the major. Graded pass/fail. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: 2.75 GPA, permission of the chairperson, completion of department's application form. Generally limited to juniors and seniors. 1-12 credits.

ACT 454. Internal Auditing. This course will synthesize accounting concepts from prior course work. It is designed to explore the accountant's role in corporate governance, internal auditing, and internal controls. Students will analyze the interface of all departments within companies. Students will learn general auditing concepts, including professional responsibility. Prerequisite: ACT 252, ACT 363, ACT 375, and BUS 383 with a C- or better. 3 credits.

ACT 455. Auditing. A study of the process of evaluation of internal controls and interpretation of financial information to permit an auditor to express a professional opinion on financial reports. Prerequisite: ACT 252. 3 credits.

ACT 463. Advanced Cost Accounting. This course leverages to knowledge gained in ACT 263, 363, and other accounting courses to allow accounting majors to integrate the various aspects of the accounting profession. The course is aimed at students seeking a career in industry. This course is based primarily in case studies and analysis. Prerequisite: ACT 363 with a C- or better. 3 credits.

ACT 472. Entity Taxation. Analysis of the federal income tax laws as applied to corporations, partnerships and fiduciaries; case preparation of returns. Prerequisite: ACT 371. 3 credits.

ACT 480. Accounting Information Systems. This course provides an introduction to information systems for accounting students to provide them with an understanding of key concepts that they will need to be successful in their careers in using and helping to purchase or build accounting information systems. Prerequisite: BUS 130, BUS 160, and ACT 251; junior or senior standing or by permission of the instructor. 3 credits.

ACT 501. CPA Review: Financial Accounting and Reporting. This P/F course provides CPA Exam preparation for the Financial Accounting & Reporting section of the CPA Exam. Graded pass/fail. Prerequisite: Successful completion of B. S. Accounting - Accelerated Track. 1 credit.

ACT 502. CPA Review: Auditing and Attestation. This P/F course provides CPA Exam preparation for the Auditing & Attestation section of the CPA Exam. Graded pass/fail. Prerequisite: Successful completion of B. S. Accounting - Accelerated Track. 1 credit.

ACT 503. CPA Review: Regulation. This P/F course provides CPA Exam preparation for the Regulation section of the CPA Exam. Graded pass/fail. Prerequisite: Successful completion of B. S. Accounting - Accelerated Track. 1 credit.

ACT 504. CPA Review: Business Environment and Concepts. This P/F course provides CPA Exam preparation for the Business Environment and Concepts section of the CPA Exam. Graded pass/fail. Prerequisite: Successful completion of B. S. Accounting - Accelerated Track. 1 credit.

AMP 151. Audio Engineering I. The only way to learn engineering and studio production is to dive in and see how it works. You'll engineer tracking and mixing projects as you learn the fundamentals of recording systems - concepts and techniques of console operation, signal flow, session procedures, and signal processors. 3 credits.

AMP 152. Audio Engineering II. This semester we dig deeper and work on more complex console operations and studio production techniques. You'll learn more about microphone design and technique, signal processing, and audio theory. Got ears? You'll continue developing critical listening skills that are crucial for audio engineers. Prerequisite: AMP 151. 3 credits.

AMP 251. Tonmeister Recording. How do you record an orchestra, or choral ensemble, or string quartet? The Tonmeister approach emphasizes engineering and musical skills by considering room acoustics, musical genres, microphone technique, and methods for on-location recording in order to effectively capture an acoustic performance in a concert hall. Prerequisite: AMP 152. 1 credit.

AMP 252. Audio for Digital Media. There are many applications for audio production beyond making records. We'll produce podcasts, post audio for video, experiment with surround, and explore how sound is used for themed entertainment (theme parks, shows, etc.) Along the way you'll learn the nuts and bolts of how digital audio systems work. Prerequisite: AMP 251. 3 credits.

AMP 254. Systems Design & Integration. Somebody has to design, install, and maintain the complex audio systems used in the industry. You'll learn about system design for sound reinforcement, cabling and interfacing for recording studios, basic troubleshooting and electronics, tests and measurements, and other behind-the-gear issues. Prerequisite: AMP 152. 3 credits.

AMP 351. Audio Mastering. A mastering engineer takes a completed mix project and tweaks it to perfection using very sophisticated signal processing and a highly developed critical ear. Learn the techniques from a professional mastering engineer who will guide you through the process of learning how to apply the tools while developing your listening skills. Prerequisite: AMP 152; restricted to AMP majors only. 3 credits.

AMP 352. Electronic Music. This course is an exploration of electronic music. Subjects covered include: the appreciation and knowledge of electronic music pioneers, MIDI composition, MIDI theory, sound design, synthesis, sampling, sound for video, and studio production integration. Primary software taught is Avid Pro Tools Prerequisite: AMP-152. 3 credits.

AMP 400. Internship. All AMP majors complete an internship with a company focused in the audio/recording industry. Internships can be taken after completing all junior level class requirements. Internships are offered the senior spring semester or the summer before the senior year. If all coursework is completed, a 12-credit, full-time internship can be pursued, allowing students to relocate for the term. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: All junior level AMP degree classes, and approval of the internship director and advisor; restricted to AMP majors only. 3-12 credits.

AMP 451. Game Audio. Engineering audio for video games involves a different approach than making a record or film. Artistic and technical sound design and work flow processes are highly complex and detailed. We'll be learning how to use game development software to build audio content for actual game environments. Prerequisite: AMP 352. 3 credits.

AMP 452. Concert Systems and Commercial Audio. The field of sound reinforcement and distribution has undergone extensive development in recent years. Research into sound propagation and advances in digital signal processing are employed in highly refined system designs for live concerts and permanent installations. This course will examine various system technologies and applications in use today. Practical issues and challenges related to integrating audio into complex situations will be discussed. Prerequisite: AMP 254. 3 credits.

AMP 453. Music Production & Engineering. In this capstone course you will apply everything you've learned to produce a quality recording for an off-campus "client". You'll wear the hats of producer and chief engineer as you learn new techniques, refine the ones you already know, and deal with issues such as musicality, client relations, engineering, organization, and time constraints. Guided by a professional engineer with extensive experience, this course allows you to pull out all the stops to see what you can do. Prerequisite: AMP 352, or permission of the instructor; restricted to AMP majors only. 3 credits.

AMS 111. Introduction to American Studies. An interdisciplinary approach to the study of America's heritage and the distinguishing features of the American mind and character. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

AMS 112. The Rise and Decline of the American Middle Class. Since 1945, the vast majority of the United States have described themselves as middle class. Until the 1970's, to be middle class was to be economically secure; a steady job, home ownerships, and money for modest vacations and retirement. In recent years, many who consider themselves middle class feel stressed rather than secure. Their pay is declining or stagnant, and they struggle to pay for college, and they have little saved for retirement. This class analyzes the public policies and economic trends that have undermined the lives of tens of millions of Americans. Students are encouraged to understand the issue and consider what could be done about it. Fulfills requirement: Liberal Studies Area 1 (History), Quantitative Reasoning. 4 credits.

AMS 220. American Popular Culture: Production and Consumption. This course will offer a critical investigation of the role of popular culture in American life. From Tin Pan Alley to hip-hop, from fast food to pro wrestling, popular culture shows an increasing influence on American economic, social, and political life, and has become central in helping to define American identity and even reality itself. We all participate in popular culture in some way, and this course will give students the chance to explore its meanings and importance in their lives and in American culture. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

AMS 223. American Thought and Culture. A survey of American intellectual history and cultural criticism ranging from Puritanism and Enlightenment Rationalism to multiculturalism, feminism, and post-modernism. Fulfills requirement: Writing Process, Liberal Studies Area 1 (History). 3 credits.

AMS 225. Democracy in America. This course will explore both the historical origins and development of the cultural ideal of democracy in the United States. By focusing on the cultural ideal of democracy, it will seek to understand the impact and meaning of democracy in America beyond that of political institutions alone. It will include readings and discussions in history, literature, politics, and cultural anthropology. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

AMS 280. Gender and Sexual Minorities in America Culture. This course explores the lives of those individuals living with a lesbian, gay, bisexual, transgender, or queer identity (LGBTQ) and the relationship these individuals have with those around them. Exploration of the historical and contemporary implications of living with an LGBTQ identity, how these identities develop, the struggle for civil rights and legal protections, and how various factors such as the AIDS crisis, the media, religion, and others impact LGBTQ persons will also be explored. Fulfills requirement: American Social Diversity. 3 credits.

AMS 328. Film and the American Identity. This interdisciplinary course will critically examine how films reflect, construct, and question the dominant image and understanding of the American identity. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 4 credits.

AMS 362. Multiculturalism and the American Identity. This class offers you a chance to familiarize yourself with the variety of ethnic, racial, gender, and sexual groups and identities in the U. S. You will gain or enhance your intellectual framework for understanding and appreciating diversity. It also will prepare you to survive and thrive in our complex and challenging world. The course relies on history, literature, and cultural studies and will be challenging but also fun. Fulfills requirement: American Social Diversity. 3 credits.

ART 110. Creative Practice. This course immerses students in the process of making contemporary art, from concept to presentation. Students learn, through the practice of visual thinking, how to develop ideas and experiments with materials to create effective works of art. Creative Practice also incorporates the analysis and interpretation of art, and exposure to the global art world, through readings, gallery visits, documentary films, and writing assignments. Note: Cannot take course if taken or in-progress of ART-103. 4 credits.

ART 200. Ceramics Studio. This course provides an intensive exploration of the ceramics medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$100.00 studio fee. 4 credits.

ART 205. Drawing Studio. This course provides an intensive exploration of the drawing medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$50.00 studio fee. 4 credits.

ART 210. Painting Studio. This course provides an intensive exploration of the painting medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$100.00 studio fee. 4 credits.

ART 215. Photo Studio. This course provides an intensive exploration of the photography medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$50.00 studio fee. 4 credits.

ART 220. Print Studio. This course provides an intensive exploration of the printmaking medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$100.00 studio fee. 4 credits.

ART 225. Sculpture Studio. This course provides an intensive exploration of the sculpture medium through specific topics that vary from year to year. Topics may be thematic or focus on a particular technical aspect of the medium, providing students with unique opportunities to engage in a variety of methods and concepts. Each offering will bear a specific subtitle indicating the content to be presented. This course may be repeated for credit as topic changes. This course has a \$100.00 studio fee. 4 credits.

ART 230. Art Media Production. This course introduces media and design skills for students seeking career paths in the art and culture industries. Emphasizing computer applications needed for portfolio building and professional work in galleries and museums, the course provides students with training and development guidance for employment and graduate opportunities. Students will also acquire a more pronounced understanding of the global art world and its impact on culture and the economy. 4 credits.

ART 250. World Architecture. From the great monuments of the world to the most humble domestic dwellings, architecture shapes cultural values and national identities. Beyond the pragmatic needs for shelter and defense, architectural structures communicate a variety of human needs ranging from a desire to memorialize to a will to propagandize. By studying architectural form across time, we gain an insight into cultural differences and universalities that underline all built environments. Students will investigate the stylistic evolution, the structural solutions, and the spatial strategies that architects have employed to shape our experience of the world. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 4 credits.

ART 260. The Photograph. This course explores the role of photography as an art form, as a tool for communication and storytelling, and as a medium of realism that is increasingly called upon for verification within the society. In providing a history of the photograph from its origins in the early nineteenth century to the digital age, the course grapples with the compelling nature of the photograph as a carrier of potent meaning. Students will examine the use of photography for portraiture, landscape and architecture, social documentary, and scientific research while gaining an understanding of the stylistic shifts in the medium in relation to cultural aesthetics. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Critical Thinking through Writing. 3 credits.

ART 350. Topics in Art History and Visual Culture. The course focuses on the issues surrounding one central theme or topic in the study of art history or visual culture. The course will examine art and material culture in a historical, intellectual, and cultural context and develop the competencies of inquiry, analysis, and critical thinking through written and oral communication. Based on previous courses taught, topics will include Renaissance Art, Baroque Art, Art and Revolution, Art and Technology, Art and the Environment, and Art and Aesthetics. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

ART 355. Abstraction. One of the great achievements of the modern age is the development of abstract forms of art. Artists began to move beyond merely representing the natural world to seek new non-objective realities. Relinquishing all traces of the discernible subject had a seismic effect on art. For the first time, visual art now had an aesthetic and language all its own. This course examines the evolution of abstract art as various modernist artists, liberated from the world of objects sought to dismantle the preceding pictorial regimes and ways of knowing. Through historical, philosophical, and practical study, students will explore the experimental and theoretical nature that underpins all abstract art. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art), Immersive Experience. 4 credits.

ART 360. Contemporary Art. This course explores the cultural and theoretical underpinnings of the contemporary art world. Students will examine those key elements that define art today, such as the art market, the media and art critics, the cultural controversies, and the rising context of the global. By tracing the diverse narratives that inform the art world the student will understand how contemporary art generates meaning, and what methods and theories are employed to critique and interpret these emerging forms. Students will also explore, through an architectural design project, the latest exhibition trends in contemporary art. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art), Immersive Experience. 4 credits.

ART 365. The Cinematic. The course examines film - as a technological medium and an art form - in relation to existing forms of visual art including drawing, painting, and photography. By investigating the kinesthetic origins of cinema, students explore how the history of representation has fixated on concepts of motion, spectatorship, and storytelling. These characteristics converge in the art and film of the early 1900's, culminating in the classic art cinema of Hollywood and other national film industries. In recent decades artists and filmmakers have sought to deconstruct the attributes of art and film through experimental works that transcend media and influence mainstream cinema. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Critical Thinking through Writing. Note: Cannot take course if taken or in-progress of ART 332. 4 credits.

ART 370. Museology. Do you have a deep and enduring interest in museums? Are you curious about how a museum operates? This course is intended for students interested in all types of museums including art, history, science, and social issues. By introducing students to the origins of museums and exploring the role museums have played in shaping history and knowledge, students will gain exposure to museology from a global perspective. Topics include the evolution of museum collections, methods of display, and the changing role of museums in reaching a broad spectrum of society. Museology also provides essential professional skills for students pursuing career or graduate opportunities in the museums or related fields including education, design, marketing, outreach, archiving, and conservation. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

ART 375. Curatorial Projects. Exhibition-making is an important practice because it allows us to display, examine, and theorize cultural objects within a gallery or museum environment. This course aims to familiarize students with the multifaceted tasks of curation. Students will experience both in the curatorial duties of working with acquisitions, collection management, and conservation, as well as the creative aspects of exhibition ideation. Students will articulate a rationale for an exhibition, identify objects appropriate to the exhibit's mission, secure loans, and plan spatial layouts for installation. The students will also become practiced in writing catalogs and wall text, and managing publications and marketing. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 4 credits.

ART 380. Color & Culture. How does color shape our understanding of the world? This is the center question of Color & Culture, a course in which we will investigate the powerful role that color has played throughout human history. With the history of art as a starting point, students will analyze the origins, uses, and interpretations of color from the earliest human cultures to the present, emphasizing the criteria by which color has been valued. These criteria incorporate a wide range of factors - aesthetic, biological, economic, religious and social - that have impacted culture in myriad ways and continue to influence our attitudes toward color. Fulfills requirement: Disciplinary Perspectives, Intercultural Competence. 4 credits.

ART 400. Internship. Internship in Art and Visual Culture. Graded pass/fail. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 1-12 credits.

ART 440. Directed Practice. This course provides the opportunity for students to develop and present a focused studio art project that builds upon established skills and concepts. Students work independently while receiving faculty guidance and evaluation on all aspects of the creative process, including the integration of research and the articulation of themes in written form. Majors and minors are required to take at least one semester of Directed Practice, but students whose Professional Focus is in the Studio Arts are encouraged to undertake two or more semesters of independent work. This course has a \$100.00 studio fee. Fulfills requirement: Immersive Experience. Prerequisite: Limited to art and art history, or art and visual culture majors and minors only. Complete at least two previous studio art courses, or by permission of the instructor. 4 credits.

ART 460. Directed Research. This course allows students to develop a self-designed, semester-long intensive written research project. Through close faculty mentoring, students will learn current research practices and apply the various analytical tools available to art historians, art critics, and art theorists. The research project will result in a fully edited essay, a poster presentation, and an oral presentation, and each student is expected to showcase their project at appropriate undergraduate research symposia or conferences. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Prerequisites: At least one previous course in Art History or Visual Culture. 4 credits.

ASC 281. Probability for Risk Management. This class provides an introduction to probability with a focus on applications to risk management in property/casualty and life insurance. We study fundamental concepts in general probability, counting problems, and probability distributions, both discrete and continuous, single-variable and multivariate. ASC 281 covers the material on SOA exam P - Probability. Prerequisite: MAS 112. 3 credits.

ASC 385. Mathematics of Finance I. This course is an introduction to interest theory (including applications) and fundamental financial instruments. Interest theory topics covered include time value of money, annuities, loans, bonds, project appraisal, portfolios, duration, immunization, and the term structure of interest rates. The financial instruments section of the class focuses on the properties and uses of derivative products including calls, puts, forwards, futures, and swaps. ASC 385 covers the material on SOA exam FM - Financial Mathematics. Prerequisite: MAS 112 or MAS 162. 3 credits.

ASC 386. Mathematics of Finance II. In this class we study financial models and the applications of these models to risk management. Topics we address include parity, binomial pricing, the Black-Scholes model, hedging, exotic options, simulation, and interest rate models. ASC 386 combined with MAS 371 covers the material on SOA exam MFE - Models of Financial Economics. Prerequisite: ASC 385. Corequisite: MAS 371. 3 credits.

ASC 472. Loss Distributions and Credibility Theory. In this course we study various loss models as well as the process of selecting, constructing, and evaluating a model when solving an actuarial problem. We cover frequency, severity, aggregate, empirical, and parametric models as well as credibility and simulation. ASC 472 combined with MAS 371 and MAS 372 covers the material on SOA exam C - Construction and Evaluation of Actuarial Models. Prerequisite: MAS 371. 3 credits.

ASC 481. Actuarial Mathematics I. This is the first part of a two semester study of contingent payment models from both theoretical and applied perspectives. We look at survival distributions, present value random variables, benefits, premiums, reserves, and profit testing. ASC 481 and 482 combined cover the material on SOA exam MLC - Models for Life Contingencies. Prerequisite: ASC 385; Corequisite: MAS 371. 3 credits.

ASC 482. Actuarial Mathematics II. This is the second part of a two semester study of contingent payment models from both theoretical and applied perspectives. We revisit many of the ideas from ASC 481 in a more general context, including multiple-state models, emerging costs, pensions, and universal life. ASC 481 and 482 combined cover the material on SOA exam MLC - Models for Life Contingencies. Prerequisites: ASC 385 and ASC 481. 3 credits.

ATR 502. Overview of Professional Practice. This course is designed to provide the student with an appreciation of the field of athletic training and sport medicine in today's society. Historical perspectives and evolution of athletic training, as a profession, will be covered. The role of the athletic trainer, relationships with other health care professionals, and various practice settings will be discussed. Students will also be introduced to the professional standards of the National Athletic Training Association (NATA), Pennsylvania state organization (PATS), Board of Certification (BOC), and licensure and continuing education requirements. 1 credit.

ATR 516. Fundamental Skills of Athletic Training. This course will provide an overview of the basic skills associated with the practice of athletic training. Emphasis will be placed on observational skills, introduction to tests and measures, and instrumentation utilized in the practice and research environments. 2 credits.

ATR 518. Prevention and Care of Emergency Medical Conditions. This course is designed to provide students with the knowledge and skills necessary to recognize and respond appropriately to cardiac, breathing and first aid emergencies. The course content and activities will prepare students to provide care to a suddenly injured or ill person, pending arrival of EMS personnel. Students will learn and become certified in CPR for the Professional Rescuer and Health Care Provider, as well as first aid techniques of the American Red Cross. Students will also be introduced to policies and procedures associated with blood borne pathogens, asthma inhalers, and epinephrine administration. A laboratory component will address the implementation, procedures, and testing of procedures studied. 4 credits.

ATR 520. Introduction to Medical and Orthopedic Management of Athletic Populations. This course will provide an overview of the mechanisms by which orthopedic and medical specialists diagnose, and manage common injuries and pathologies commonly associated with all levels of athletic participants. Topics will include fracture evaluation and management, diagnostic imaging, spinal and peripheral trauma, concussion and traumatic brain injury, medical evaluation of splenic, liver, and other internal injuries. 2 credits.

ATR 524. Clinical Skills Laboratory I. This course is designed to provide students with the basic foundational clinical skills necessary for the examination and assessment of musculoskeletal injury and pathology. Topics to be covered include goniometry, muscle strength testing, and flexibility. Laboratory components will allow for application and practice of these clinical skills. 2 credits.

ATR 526. Clinical Skills Laboratory II. This course is designed to provide students with the more advanced clinical skills and manual techniques used in the evaluation, assessment, and management of musculoskeletal injury and pathology. Topics to be covered include manual joint and soft tissue techniques, and advanced functional rehabilitation, including agility exercises, neuromuscular techniques, and progressive return to sport training techniques. Laboratory components will allow for application and practice of these clinical skills. 2 credits.

ATR 528. Musculoskeletal I. First of a two course sequence providing an in depth study of the evaluation, assessment, and treatment methods used in the management of musculoskeletal pathology and/or injury. This first component of the two course sequence will emphasize the upper and lower limbs, with an introductory component to the spine. 4 credits. [This course is cross-listed with PHT 728]

ATR 532. Musculoskeletal II. Second of a two course sequence providing an in-depth study of the evaluation, assessment, and treatment methods used in the management of musculoskeletal pathology and injury. This course will build upon material studied in ATR 528 and emphasize anatomical, biomechanical, and physiological factors relevant to musculoskeletal dysfunction. 3 credits. [This course is cross-listed with PHT 732]

ATR 534. Therapeutic Interventions I. This course, being the first of a two-part sequence, is designed to prepare the student to implement various therapeutic interventions to effectively treat disorders of the musculoskeletal system. Emphasis in this course will be placed on thermal and electrical modalities, postural asymmetries, establishing and maintaining a sterile field, identification of gait abnormalities, and prescription/training in the use of assistive devices. Laboratory sessions will allow students to practice the application of skills learned in the lecture setting. 4 credits.

ATR 536. Therapeutic Interventions II. This is the second of a two-part sequence designed to prepare the student to implement various therapeutic interventions to effectively treat disorders of the musculoskeletal system. Emphasis in this course will be placed on various types of therapeutic exercises and their progressions, including plyometric, sports-specific training, functional training, and injury prevention via proper biomechanical strategies. Pre-participation athletic screening procedures and techniques will also be included. Laboratory sessions will allow students to practice the application of skills learned in the lecture setting. 4 credits.

ATR 551. Evidence Based Practice I. This course is the first in a sequence of evidence-based coursework related to the understanding of clinical research and its application to the development and justification of treatment interventions that are implemented in various injuries and pathologies that occur in the athletic population. Emphasis will be placed on the different types of research, levels of research quality, and the significance of clinical research in the understanding of injury and pathology and the ongoing development of state of the art assessment and treatment interventions. 1 credit.

ATR 552. Evidence Based Practice II. This course is the second in a sequence of evidence-based coursework related to the role of clinical research in the athletic training profession. This course includes conceptual and computational applications associated with the common statistical techniques relevant to sports medicine clinicians. The intent is to provide students with an introduction to frequently used descriptive and inferential statistical methods for clinical or research purposes in sports medicine. 1 credit.

ATR 560. Athletic Training Clinical Experience I. This is the first of a five series progression of athletic training experiences with respect to various clinical settings and experiences. Each experience will reflect the integration and clinical application of didactic and laboratory experiences in line with concurrent academic course progression. Clinical education experiences will familiarize students with athletic training policies and procedures, sports and safety equipment and evaluation/intervention strategies. There will also be opportunities to apply clinical skills related to examination, therapeutic interventions, first aid, and emergency assessment and management. 3 credits.

ATR 562. Athletic Training Clinical Experience II. This is the second of a five series progression of athletic training experiences with respect to various clinical settings and experiences. Each experience will reflect the integration and clinical application of didactic and laboratory experiences in line with concurrent academic course progression. Clinical education experiences will familiarize students with athletic training policies and procedures, sports and safety equipment and evaluation/intervention strategies. There will also be opportunities to apply clinical skills related to examination, therapeutic interventions, first aid, and emergency assessment and management. Prerequisite: ATR 560 (with a grade of "B" or higher) 3 credits.

BCMB 401. Molecular Biology. Gene structure, function and regulation at the molecular level in prokaryotic and eukaryotic organisms. Recombinant DNA techniques (genetic engineering) and gene sequencing are covered in detail. Prerequisite: Three semesters of chemistry and BIO 201 or permission of the instructor. Corequisite: BCMB 401L. 3 credits.

BCMB 401L. Molecular Biology Laboratory. Gene structure, function and regulation at the molecular level in prokaryotic and eukaryotic organisms. Recombinant DNA techniques (genetic engineering) and gene sequencing are covered in detail. Prerequisite: Three semesters of chemistry and BIO 201 or permission of the instructor. Corequisite: BCMB 401. 1 credit.

BCMB 421. Biochemistry I. The study of the chemistry of the molecules of life. Topics covered include: the applications of pH & buffers, amino acid chemistry, protein structure & function, the thermodynamics of protein folding, protein purification & analysis, ligand binding, enzyme mechanisms and enzyme kinetics. Prerequisites: CHM 214 and 216. 3 credits.

BCMB 422. Biochemistry II. The continued study of biomolecules, with an emphasis on the metabolism of carbohydrates and lipids. Topics covered included carbohydrate chemistry, coenzyme mechanisms, electron transport and oxidative phosphorylation, lipid chemistry, membranes and an introduction to amino acid metabolism. Overall, intermediary metabolism and its metabolic control is viewed from an integrated perspective. Prerequisites: CHM 214 and 216. 3 credits.

BCMB 430. Biochemistry Laboratory. Investigations of the properties and functions of proteins, nucleic acids, carbohydrates and lipids. Prerequisites: CHM 214 and 216. 1 credit.

BCMB 499. Biochemistry Seminar. Readings, discussions, and reports on special topics in biochemistry. 1 credit.

BIO 103. Environmental Science. Designed for non-science majors, the course serves as an introduction to ecological principles and their applications to understanding the causes and current status of environmental problems. Options for dealing with these problems are evaluated. Possible topics for discussion are overpopulation, food and water resources, ozone depletion, global warming, deforestation, acid rain, biodiversity, erosion, loss of wetlands, energy sources, pollution, eutrophication and waste disposal. Laboratory exercises are designed to illustrate ecological concepts presented in lecture. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: BIO 103L. 3 credits.

BIO 103L. Environmental Science Laboratory. Corresponding laboratory for BIO 103. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: BIO 103. 1 credit.

BIO 111. General Biology I. A rigorous study of basic biological principles, designed for science majors. Topics emphasized include basic biochemistry, cell biology, genetics, embryology, histology, and evolution. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: BIO 111L. 3 credits.

BIO 111L. General Biology I Laboratory. Corresponding laboratory for BIO 111. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: BIO 111. 1 credit.

BIO 112. General Biology II. This course, also rigorous and designed for science majors, covers concepts in animal and plant physiology, botany, and ecology. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: BIO 111/L. Corequisite: BIO 112L. 3 credits.

BIO 112L. General Biology II Laboratory. Corresponding laboratory for BIO 112. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: BIO 112. 1 credit.

BIO 201. Genetics. A study of the principles, mechanisms and concepts of classical, molecular, and population genetics. The laboratory stresses key concepts of genetics utilizing both classical and molecular approaches. Laboratory exercises include analysis of nucleic acids, genetic crosses, and studies of bacteria and plasmids. Prerequisites: a C- (1.67) average in BIO 111/L and BIO 112/L; one year of chemistry or permission of the instructor. Corequisite: BIO 201L. 3 credits.

BIO 201L. Genetics Laboratory. Corresponding laboratory for BIO 201. Prerequisites: a C- (1.67) average in BIO 111/L and BIO 112/L; one year of chemistry or permission of the instructor. Corequisite: BIO 201. 1 credit.

BIO 203. Conservation Biology. An introduction of the threats to genetic, organismal, and ecosystem diversity. The course begins with a discussion of biodiversity, population size, and ecosystem functioning. It then investigates the threats to biodiversity including habitat loss, pollution, invasive species, and climate change. Finally, the course will examine management and policy options that seek to preserve biodiversity. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 203L. 3 credits.

BIO 203L. Conservation Biology Laboratory. Corresponding laboratory for BIO 203. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 203. 1 credit.

BIO 212. Animal Behavior. A study of the basic concepts of invertebrate and vertebrate behavior with emphasis on the development, genetics, physiology and evolution of behavior. Laboratory exercises include ethogram construction, avian foraging, aggressive display analysis and estrous cycle regulation. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 212L. 3 credits.

BIO 212L. Animal Behavior Laboratory. Corresponding laboratory for BIO 212. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 212. 1 credit.

BIO 221. Mammalian Anatomy. Comparative anatomy with special attention to the structure and function of mammalian systems and special references to humans. Intensive laboratory work involves dissections and demonstrations using the cat as a model. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 221L. 3 credits.

BIO 221L. Mammalian Anatomy Laboratory. Corresponding laboratory for BIO 221. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 221. 1 credit.

BIO 222. Human Physiology. The design of this course is intended to impart an understanding of the basic concepts of human physiology with emphasis on neuromuscular, cardiovascular, and endocrine physiology. Laboratory exercises place emphasis on effective experimental designs and data analysis in the study of physiological mechanisms. Lab exercises cover such topics as muscle contraction measurements, spirometry, and ECG analysis. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 222L. 3 credits.

BIO 222L. Human Physiology Laboratory. Corresponding laboratory for BIO 222. Prerequisite: a C- (1.67) average in BIO 111/111L and BIO 112/112L. Corequisite: BIO 222. 1 credit.

BIO 223. Human Nutrition. An integrated overview of the principles of nutritional science, with emphasis placed on the role of nutrition in improving health. Topics will include: guidelines for food intake, physiological roles of nutrients, nutritional concerns throughout the life cycle, global nutritional issues, and the role of diet in the prevention of disease. Laboratory exercises will be drawn from diet assessments. Prerequisites: a C- (1.67) average in BIO 111/L and BIO 112/L; CHM 111/113; or permission of the instructor. Corequisite: BIO 223L. 3 credits.

BIO 223L. Human Nutrition Laboratory. Corresponding laboratory for BIO 223. Prerequisites: a C- (1.67) average in BIO 111/L and BIO 112/L; CHM 111/113; or permission of the instructor. Corequisite: BIO 223. 1 credit.

BIO 231. Neurobiology. This course takes an in-depth look at the biological and physiological processes that give rise to complexity of the nervous system and ultimately allow for complex function. It examines the biology of vertebrate nervous systems, with particular emphasis on the human nervous system. Topics include cellular and molecular biology of the neuron, neuroanatomy, neurophysiology, nervous system development and plasticity, mechanisms of learning and memory, and sensory and motor systems. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 231L. 3 credits. [This course is cross-listed with NEU 231]

BIO 231L. Neurobiology Laboratory. Corresponding laboratory for BIO 231. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 231. 1 credit. [This course is cross-listed with NEU 231L]

BIO 232. Neuroanatomy of Disease. This course will examine, in depth, the neuroanatomical bases for selected disorders of the human central nervous system. The topics covered will include Parkinson's disease, Alzheimer's disease, Huntington's disease and stroke. Current trends in prevention and treatment of the disorders will also be studied. Prerequisite: BIO 111/L, BIO 112/L, and PSY 111/L. 3 credits. [This course is cross-listed with NEU 232]

BIO 290. Special Topics. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 1-3 credits.

BIO 290L. Special Topics Laboratory. Corresponding laboratory for BIO 290. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290. 1 credit.

BIO 291. Special Topics in Cellular/Molecular Biology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 3 credits.

BIO 291L. Special Topics in Cellular/Molecular Biology Laboratory. Topic announced at the time of registration. Corresponding laboratory for BIO 291. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 1 credit.

BIO 292. Special Topics in Organismal Biology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 3 credits.

BIO 292L. Special Topics in Organismal Biology Laboratory. Topic announced at the time of registration. Corresponding laboratory for BIO 292. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 1 credit.

BIO 293. Special Topics in Physiological Biology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 3 credits.

BIO 293L. Special Topics in Physiological Biology Laboratory. Topic announced at the time of registration. Corresponding laboratory for BIO 293. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 1 credit.

BIO 294. Special Topics in Population Biology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 3 credits.

BIO 294L. Special Topics in Population Biology Laboratory. Topic announced at the time of registration. Corresponding laboratory for BIO 294. This course may be repeated for credit as topic changes. Prerequisite: BIO 201. Corequisite: BIO 290L. 1 credit.

BIO 302. Plant Diversity. The development and diversity of fungi, algae and land plants and the relationships between them. Field and laboratory work familiarizes the student with the structure and reproduction of algae and plants and with the identification and pollination of flowering plants in the local flora. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 302L. 3 credits.

BIO 302L. Plant Diversity Laboratory. Corresponding laboratory for BIO 302. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 302. 1 credit.

BIO 304. Developmental Biology. An organismal and molecular approach to the study of animal development using typical invertebrate and vertebrate organisms. The laboratory includes the study of slides as well as experiments on fertilization, regeneration and metamorphosis. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L and BIO 201/L, or permission of the instructor. Corequisite: BIO 304L. 3 credits.

BIO 304L. Developmental Biology Laboratory. Corresponding laboratory for BIO 304. Fulfills requirement: Critical Thinking through Writing. Prerequisite: C- (1.67) average in BIO 111/L and BIO 112/L, and BIO 201/L, or permission of the instructor. Corequisite: BIO 304. 1 credit.

BIO 305. Cell and Tissue Biology. A study of cell ultrastructure and the microscopic anatomy of vertebrate tissues, including the structure and function of membranes and organelles, cell motility and excitability, and vertebrate tissue similarities and specialization in relation to function. Laboratory includes the preparation and staining of sections using selected histochemical and histological procedures as well as a variety of microscopic techniques. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 305L. 3 credits.

BIO 305L. Cell and Tissue Biology Laboratory. Corresponding laboratory for BIO 305. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 305. 1 credit.

BIO 306. Microbiology. A study of the morphology, physiology and biochemistry of representative microorganisms. The laboratory emphasizes basic bacteriological techniques and procedures. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; three semesters of chemistry or permission. Corequisite: BIO 306L. 3 credits.

BIO 306L. Microbiology Laboratory. Corresponding laboratory for BIO 306. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; three semesters of chemistry or permission. Corequisite: BIO 306. 1 credit.

BIO 307. Plant Physiology. A study of the functioning of plants, with emphasis on vascular plants. Fulfills requirement: Writing Process. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; three semesters of chemistry or permission. Corequisite: BIO 307L. 3 credits.

BIO 307L. Plant Physiology Laboratory. Corresponding laboratory for BIO 307. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; three semesters of chemistry or permission. Corequisite: BIO 307. 1 credit.

BIO 312. Ecology I. An examination of the basic concepts of ecology with extensive laboratory work and field experiences in freshwater and terrestrial ecosystems. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 312L. 3 credits.

BIO 312L. Ecology I Laboratory. Corresponding laboratory for BIO 312. Fulfills requirement: Critical Thinking through Writing. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 312. 1 credit.

BIO 322. Vertebrate Physiology. A study of the principles of vertebrate body function, with emphasis on the mechanisms by which cells and organs perform their functions and the interactions of the various organs in maintaining total body function. Fulfills requirement: Writing Process. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; one semester of chemistry or permission. Corequisite: BIO 322L. 3 credits.

BIO 322L. Vertebrate Physiology Laboratory. Corresponding laboratory for BIO 322. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L; one semester of chemistry or permission. Corequisite: BIO 322. 1 credit.

BIO 323. Introduction to Immunology. An introduction to the anatomical, physiological and biochemical factors underlying the immune response. The course begins with a discussion of non-specific immunity, cellular immunity and antibody-mediated immune responses. The course then moves into a study of contemporary immunological topics which are discussed with respect to major research papers in each area. Topics include autoimmunity, histocompatibility, immunogenetics and acquired immune deficiencies. Prerequisites: a C- (1.67) average in BIO 111/L and BIO 112/L; BIO 201/L; CHM 111/113 or equivalent; or permission of the instructor. Corequisite: BIO 323L. 3 credits.

BIO 323L. Introduction to Immunology Laboratory. Corresponding laboratory for BIO 323. Corequisite: BIO-323. 1 credit.

BIO 324. Invertebrate Physiology. A study of many of the invertebrate phyla, concentrating on the physiological mechanisms controlling movement, metabolism, information, and control and reproduction. Fulfills requirement: Writing Process. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 324L. 3 credits.

BIO 324L. Invertebrate Physiology Laboratory. Corresponding laboratory for BIO 324. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 324. 1 credit.

BIO 400. Internship. Internship Graded pass/fail. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 1-12 credits.

BIO 402. Evolution. This course is an introduction to organic evolution and evolutionary mechanisms/processes including a study of the origins, history, and evidence supporting evolution and evolutionary concepts. Examples of topics to be covered include history of evolution, classification and phylogeny, biological diversity, variation and genetic drift, natural selection, phenotypic traits, speciation, reproductive success, evolution and development, and macroevolution. Evolution will be examined from several perspectives, from molecular to ecological levels, and over different time scales. The course will cover both plant and animal evolution. Laboratory exercises will be drawn from the online publication, Spreadsheet Exercises in Ecology and Evolution. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. BIO 201/L. Corequisite: BIO 402L. 3 credits.

BIO 402L. Evolution Laboratory. Corresponding laboratory for BIO 402. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L, and BIO 201/L. Corequisite: BIO 402. 1 credit.

BIO 409. Ecology II. An intensive study of ecosystem ecology, examining the interactions of biotic and abiotic factors within freshwater and terrestrial ecosystems. This course will examine recent research to demonstrate how ecosystems respond to anthropogenic influences. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 409L. 3 credits.

BIO 409L. Ecology II Laboratory. Corresponding laboratory for BIO 409. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: BIO 409. 1 credit.

BIO 499. Seminar. Each senior student is required to do independent library research on an assigned topic and to make an oral presentation to the biology faculty and students. May be taken twice for credit. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. 1-2 credits.

BIO 500. Independent Study. Independent Study in Biology This course may be repeated for credit as topic changes. 1-3 credits.

BIO 550. Advanced Research. Advanced Research in Biology This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 1-3 credits.

BUS 130. Modern Business Organizations. This course is designed as a survey course to introduce the many aspects of the business community through the use of discussion, case study, group projects, and "real world" contacts, typically via the web. We will use the text as the foundation for our study but you will incorporate current data from web sources and you will be exposed to "typical" business decisions as you complete your in-class case studies and your group project. Interactive class discussion is a cornerstone of the class. Prerequisites: Freshman or sophomore standing only, or by permission of the instructor. 3 credits.

BUS 160. Computer Applications. An extensive introduction to spreadsheet, database, and Internet applications software as used in business. Through hands-on classroom instruction, computer-aided learning, and course project assignments, students learn the use of the major analytical software packages that are commonly used in business. The class teaches the basic principles of using this software to solve problems and to enhance critical thinking skills. 3 credits.

BUS 170. Business Statistics. Through this course, students will gain knowledge in the major ideas of elementary statistics from the perspective of business applications. Concepts such as graphical and numerical descriptive techniques, probability, data collection and sampling, analysis of variation, simple linear regression, trend analysis, and hypothesis testing are included in the curriculum. The course will emphasize the comprehension and application of basic concepts rather than statistical techniques. The design and the assignments in this course will prepare students for higher level quantitative course including but not limited to BUS 383 Management Science and BUS 485 Strategic Management. Using real-world data and a business perspective, students will apply these techniques to analyze common problems encountered by business persons and accountants. Fulfills requirement: Quantitative Reasoning. 3 credits.

BUS 180. Business Applications in Excel and Access. An extensive intermediate to advanced presentation of applications of Excel spreadsheets, graphing, and programming, as well as applications of Access database tools. This course will focus on hands-on learning and will prepare students for future courses within the Department of Business and Economics. 3 credits.

BUS 215. Health Care Finance. An examination of the financial issues of health and medical care to determine how to provide the best health care to the most people in a cost-effective manner. Examination of the principal elements of health care, including the physician, the hospital, and the pharmaceutical industry, as well as the influence of government and the insurance industry. Prerequisites: ECN 101, or permission of the instructor. 3 credits.

BUS 230. Principles of Management. This course is designed to enhance student understanding of the foundational principles of management. The classroom learning process will consist of discussion, case studies, group projects, and analysis of current management writing. We will use the text, journal articles, and internet materials throughout the semester. Interactive class discussion is a cornerstone of the class and students are expected to be prepared to discuss the assigned material. Prerequisite: BUS 130 or MBS 371 (or concurrent registration in MBS 371), or, for returning adult, degree completion students, and health care management students, significant work experience. Accounting, business administration, and health care management majors need a cumulative GPA of 2.00 or greater in all foundation courses completed to date. 3 credits.

BUS 250. Professional Ethics. This course provides students with an understanding of the foundational concepts in professional ethics. The course focus is to develop comprehension of ethical concepts and theories and apply them to practices in the numerous professional environments through the use of case studies and group interaction. Prerequisite: BUS 130. 3 credits.

BUS 275. Business in the European Union. This course is part of a short-term summer study abroad program in Maastricht, Netherlands. It introduces students to the major issues of doing business in the European Union, including foreign investment, management across cultures, marketing and financing issues. Course will also cover the origins, structure, and operations of the European Union and how businesses function within this unique political and economic system. Prerequisite: Completion of 28 credits or more by May of the academic year in which the student is intending to participate in the Maastricht Summer Study Abroad Program. 3 credits.

BUS 285. Organizational Communications. The development of writing, speaking, and listening skills for business management. Fulfills requirement: Writing Process. Prerequisite: ENG 111/112 or FYE 111/112. Majors in accounting, business administration, and health care management need a cumulative GPA of 2.00 or greater in all foundation courses completed to date. 3 credits.

BUS 340. Principles of Marketing. An overview of marketing from the management perspective. Topics include marketing strategies, marketing research, consumer behavior, selecting target markets, developing, pricing, distributing and promoting products and services and non-profit marketing. Prerequisite: BUS 230; junior or senior standing, or by permission of the instructor. 3 credits.

BUS 341. Consumer & Organizational Buying Behavior. This course focuses on the analysis of the factors affecting the purchasing decision in the marketplace and the application of behavioral and social science concepts to the study of individual and group buying behavior. The course emphasizes the use of this understanding in making marketing mix decisions. Prerequisite: BUS 230 and BUS 340, or permission of the instructor. 3 credits.

BUS 350. Organizational Behavior. A detailed study of the theories and models of organizational behavior and development, with emphasis on the practical application of these models in the workplace to improve individual, group and organizational performance. Prerequisites: BUS 230; junior standing or by permission of the instructor. 3 credits.

BUS 361. Principles of Finance. A study of financial management covering analysis of asset, liability and capital relationships and operations; management of current assets and working capital; capital planning and budgeting; capital structure and dividend policy; short and intermediate term financing; internal and external long term financing; and other financial topics. Prerequisites: ACT 231 and ECN 101. 3 credits.

BUS 362. Investments. An analysis of investment and its relation to other economic, legal and social institutions. The course includes discussion of investment principles, machinery, policy, management investment types and the development of portfolios for individuals and institutions. Prerequisite: BUS 361, ECN 312, or ASC 385; or permission of the instructor. 3 credits.

BUS 371. Business Law I. Elementary principles of law relating to the field of business. The course covers contracts, government regulation of business, consumer protection, bankruptcy, personal property, real estate, bailments, insurance and estates. 3 credits.

BUS 372. Business Law II. Elementary principles of law relating to business. Includes agency, employment, commercial paper, security devices, insurance, partnerships, corporation, estates and bankruptcy. 3 credits.

BUS 374. Personal Selling and Sales Management. The study of personal selling as a communication process and the management of the personal selling force. Emphasis is placed upon the development, implementation and evaluation of the sales presentation and upon the role of the sales manager in staffing, compensating, motivating, controlling and evaluating the sales force. Effective oral and written communication is stressed. Prerequisite: BUS 340. 3 credits.

BUS 376. International Business Management. This course provides an overview of how the global business environment impacts decision-making and planning within the multinational firm. Key concepts include an overview of the means of conducting international business, with an emphasis on what makes international strategy different from a domestically-focused one; the effects of the social systems within countries on the conduct of international business; the major theories explaining international business transactions and the institutions influencing those activities; the financial exchange systems and institutions that measure and facilitate international transactions; and the dynamic interface between countries and companies attempting to conduct foreign business activities. Prerequisite: BUS 230 and BUS 340. 3 credits.

BUS 381. Entrepreneurship and Small Business Management. Upon completion of this course, students will understand how to recognize an entrepreneurial opportunity (either a start-up idea or an existing business), write a business plan, develop pro forma financial statements, and develop a marketing plan to include market research and social media. Students will also develop an understanding of the leadership and management issues associated with this type of venture. Prerequisites: ACT 231 and either BUS 130, MBS 371, or BUS 230, or permission of the instructor. 3 credits.

BUS 383. Management Science. An introduction to the techniques and models used in management science. Topics include forecasting, inventory control models, linear programming, product scheduling, and simulation. Prerequisites: MAS 150, and MAS 170 or BUS 170, with a minimum grade of C- or better; BUS 130; ACT 231. 3 credits.

BUS 390. Special Topics in Business Administration. This course may be repeated for credit as topic changes. 3 credits.

BUS 391. Special Topics in International Business. This course may be repeated for credit as topic changes. 3 credits.

BUS 399. Internship Seminar. This course is designed to enhance a student's internship experience and provide practical guidance to maximize the opportunity provided by field placement. Topics include: identifying the academic and interpersonal abilities necessary to be a successful intern at the undergraduate level; reviewing the broad skills and values related to different careers in business, economics, and accounting; preparing students for the different elements of job search; exploring employment options in business, accounting, and economics; and reflecting on one's emerging skills/interests to develop a general career path for post-collegiate life. Graded pass/fail. This course may be repeated for credit as topic changes. Prerequisites: A cumulative GPA of 2.75 or greater, or permission of the chairperson. Must be junior or senior standing. Corequisite: BUS 400, ACT 400 or ECN 400. 1 credit.

BUS 400. Internship. Practical and professional work experience related to the student's career interests, involving both on-site and faculty supervision. Graded pass/fail. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: 2.75 GPA, permission of the chairperson, completion of department's application form. Generally limited to juniors and seniors. 1-12 credits.

BUS 420. Human Resource Management. This course provides students with a comprehensive and real-world exposure into human resource management. Students will use text, articles, handouts, and projects to gain a solid understanding of this discipline. The primary foci for this course are strategic human resource planning, recruitment (job design, skill assessment, selection), training and development, performance evaluation, and compensation. Included in these topics will be discussions on relevant laws, current workplace trends, and future concerns. Prerequisite: BUS 130; junior or senior standing or by permission of the instructor. 3 credits.

BUS 450. Business Ethics and Social Responsibility. This course examines the major ethical issues, social responsibilities, and ethical dilemmas facing business and business managers in today's global environment. Students develop an understanding of the difference between what is legal and what is ethical and clarify their approach to ethical issues. Prerequisites: BUS 230; junior or senior standing or by permission of the instructor. 3 credits.

BUS 460. Management Information Systems. Examines data sources and the role of information in management planning, operations and control in various types of business environments. Treats information as a key organization resource parallel to people, money, materials and technology. Prerequisite: BUS 130, BUS 180, and ACT 231; Junior or senior standing or by permission of the instructor. 3 credits.

BUS 485. Strategic Management. A capstone course to study administrative processes under conditions of uncertainty, integrating prior studies in management, accounting and economics. Uses case method and computer simulation. Fulfills requirement: Writing Process. Prerequisite: BUS 230, BUS 340, BUS 361 and senior standing. Designed for last semester seniors. Course requires business casual or business professional dress at all class sessions. Underclassmen admitted with permission of instructor and chairperson. 3 credits.

BUS 487. Health Care Management. A capstone course to study the administrative processes of America's health care industry including institutional infrastructure, governance systems, financial systems, personnel systems, quality controls, nursing and clinical services, and marketing. The course integrates prior study in health care, management, accounting, and economics. Students will develop problem solving skills and an appropriate management style. Prerequisite: Senior standing or permission. 3 credits.

CDS 121. Data. An introduction to the principles, techniques, and tools used in the creation, organization, and manipulation of data in a modern computing environment. Topics will include: computer memory organization and binary data formats; files and filesystems; relational databases; modern "noSQL" datastores. Students will be introduced to some elementary programming in a language like Python. 3 credits.

CDS 142. Programming I. This course introduces the fundamentals of computer programming using the Java programming language. Control structures, types and the type system, and the design of methods and classes will be considered. 3 credits.

CDS 180. Language Lab. A self-paced, project-based approach to learning a computer programming language. Several different languages are available in order to develop familiarity with different languages. Graded pass/fail. This course may be repeated for credit as topic changes. Prerequisite: CDS 121, or other computer programming background and permission of the instructor. 1 credit.

CDS 241. Programming II. A continuation of CDS 142, students will extend and deepen their understanding of programming using Java. The course will cover three main topics: Object-oriented software organization; design and implementation of elementary data structures and algorithms; the mathematical tools and techniques required for complexity analysis. Prerequisite: CDS 142, or by permission of the instructor. 3 credits.

CDS 242. Algorithms and Data Structures. A study of the design, analysis, and application of data structures and algorithms. Trees, graphs, heaps, hash tables, and other structures will be considered. Several mathematical techniques (e. g. , complexity analysis, recurrence relations, induction) will be studied and applied to understanding these algorithms and structures. The impact of modern computer hardware, especially caches and parallelism on the design and performance of data structures and algorithms will be considered. Prerequisite: CDS 241; MAS 111 or MAS 161. 3 credits.

CDS 280. Introductory Data Analysis Lab. Projects in access to data and its analysis and manipulation, using the Java programming language. Prerequisite: CDS 121 and CDS 142. 1 credit.

CDS 281. Software Processes. A primer in managing the software development process, from the initial creation of a project proposal to the organization of the development team and its workflow. Will include an overview of an agile process such as Scrum. Graded pass/fail. Prerequisite: CDS 142, or by permission of the instructor. 1 credit.

CDS 285. Computational Problem Solving I. Students will sharpen their skill at applying computational problem-solving techniques (particularly the design of data structures and algorithms) in the context of competitive programming. Graded pass/fail. Prerequisite: CDS 142, or by permission of the instructor. 1 credit.

CDS 341. Machine Learning and Data Analytics I. Concepts and practice in extracting knowledge from data. We use data to train a model to predict, to classify, and to discover associations. Performance metrics are used to assess a model, and to construct better models. Prerequisite: CDS 142, CDS 241; MAS 270. 3 credits.

CDS 342. Machine Learning and Data Analytics II. We build on the fundamental concepts and methods for machine learning and data analytics covered in CDS 341. Topics that might be included in CDS 342 are dimension reduction, unsupervised pattern finding, cluster analysis, logistic regression, and discriminant analysis. Prerequisite: CDS 341 and MAS 222. 3 credits.

CDS 361. Concurrent and Parallel Programming. A survey of concurrency and parallelism in modern software design. Threads and locks and other concurrency primitives. Thread pools, task-based parallelism, task scheduling algorithms; hardware parallelism, GPUs. Prerequisite: CDS 242 and MAS 222. 3 credits.

CDS 362. Distributed Systems. This course examines the design of modern, distributed software applications. Client/Server models (from RPC designs to modern REST-based architectures) will be the focus, though other distribution models will be considered. Scalability, security, and other fundamental issues will be addressed. Students will design and implement a service and a mobile front end to that service as a semester-long team project. Prerequisite: CDS 242 and MAS 222. 3 credits.

CDS 385. Computational Problem Solving II. Students will sharpen their skill at applying computational problem-solving techniques (particularly the design of data structures and algorithms) in the context of competitive programming. This course considers more advanced data structures and algorithmic techniques than CDS 285. Graded pass/fail. Prerequisite: CDS 242, or by permission of the instructor. 1 credit.

CDS 441. Operating Systems. Theory and practice of modern operating systems. Topics include memory management, file systems, scheduling, concurrency, distributed processes, and security. Prerequisites: CSC 232 and MAS 251. 3 credits.

CDS 442. Networks. Network design and implementation. Topics include layered network design, types of hardware, low-level protocols, packets, frames, routing, security, and so on. Prerequisites: CSC 232 and MAS 251. 3 credits.

CDS 448. Databases. The theory, structure and implementation, and application of modern database systems. Prerequisite: CSC 232. 3 credits.

CDS 452. Artificial Intelligence. An introduction to the field of AI. Topics include expert systems, goal-seeking algorithms, neural networks, genetic algorithms, computer vision, language recognition. Prerequisites: CSC 232 and MAS 251. 3 credits.

CDS 499. Professional Experience. This course tracks the completion of Professional Experiences by students in the Computer and Data Science major. Prerequisite: Must be junior or senior standing. 0 credits.

CHM 111. Principles of Chemistry I. An introduction to chemistry for the science major. First semester topics include atomic and molecular structure, chemical reactions, calculations involving chemical concentrations, gas laws and bonding. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: one year of high school chemistry or permission of the instructor. Corequisite: CHM 113 or CHM 115. 3 credits.

CHM 112. Principles of Chemistry II. A continuation of first semester. Topics include kinetics, acids and bases, equilibrium, oxidation- reduction chemistry, thermodynamics, electro- chemistry and nuclear chemistry. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: CHM 111. Corequisite: CHM 114 or CHM 116. 3 credits.

CHM 113. Introductory Laboratory I. Laboratory course to accompany 111. Experiments cover stoichiometry, gas laws, quantitative analysis, equilibrium, electrochemistry, chemical synthesis and the use of computers for collecting data. Students are introduced to instrumentation including infrared, UV-visible, and atomic absorption spectrometers. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Co-requisite: CHM 111. 1 credit.

CHM 114. Introductory Laboratory II. Second semester laboratory course to accompany 112. Experiments cover stoichiometry, gas laws, quantitative analysis, equilibrium, electrochemistry, chemical synthesis and the use of computers for collecting data. Students are introduced to instrumentation including infrared, UV-visible, and atomic absorption spectrometers. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: CHM 112. 1 credit.

CHM 115. Techniques of Chemistry I. Extended projects involving the synthesis of inorganic and organic compounds that require the development of procedure from published literature methods. The prepared compounds are then analyzed using quantitative analytical techniques, as well as introductory spectroscopic techniques. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: major in chemistry or biochemistry and molecular biology. Co-requisite: CHM 111. 1 credit.

CHM 116. Techniques of Chemistry II. Second semester of extended projects involving the synthesis of inorganic and organic compounds that require the development of procedure from published literature methods. The prepared compounds are then analyzed using quantitative analytical techniques, as well as introductory spectroscopic techniques. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: major in chemistry or biochemistry and molecular biology. Corequisite: CHM 112. 1 credit.

CHM 213. Organic Chemistry I. An introduction to the principles of organic chemistry. The focus of the course is on the structure of organic molecules and how the structure of various functional groups affects their reactivity. The concepts of reactivity, structure and mechanism are applied to organic synthesis. Prerequisite: CHM 112. 3 credits.

CHM 214. Organic Chemistry II. Second semester of an introduction to the principles of organic chemistry. The focus of the course is on the structure of organic molecules and how the structure of various functional groups affects their reactivity. The concepts of reactivity, structure and mechanism are applied to organic synthesis. Prerequisite: CHM 213. 3 credits.

CHM 215. Organic Laboratory I. An introduction to the practice of classical organic chemistry and modern instrumental organic chemistry. The techniques of organic synthesis are taught along with instrumental methods including infrared, nuclear magnetic resonance and mass spectrometry. Prerequisite: CHM 112/114 or 112/116. Corequisite: CHM-213. 1 credit.

CHM 216. Organic Laboratory II. Second semester of an introduction to the practice of classical organic chemistry and modern instrumental organic chemistry. The techniques of organic synthesis are taught along with instrumental methods including infrared, nuclear magnetic resonance and mass spectrometry. Prerequisite or corequisite: CHM 214. 1 credit.

CHM 222. Introductory Inorganic Chemistry. The application of elementary principles of chemistry to provide a basis for understanding the physical and chemical properties of the elements. Topics include periodicity, acidity or basicity of metal cations and oxoanions, precipitation reactions, oxidation-reduction chemistry, and the structures of solids. Prerequisite: CHM 112. 3 credits.

CHM 230. Inorganic Chemistry Laboratory. Students will be exposed to a number of advanced synthetic methods including inert atmosphere manipulations, high vacuum and temperature dehydrations, mixed solvent crystallizations, and photochemical transformations. Fulfills requirement: Writing Process. Corequisite: CHM 222. 1 credit.

CHM 305. Analytical Chemistry. Topics for this course include statistical methods; activity and activity coefficients; chemical equilibria involving complex systems; volumetric analyses including acid/base, precipitation, redox, and complexometric titrations; principles of electrochemistry, potentiometry, electrogravimetry, coulometry, and voltametry. Prerequisites: CHM 112 and MAS 161. 3 credits.

CHM 306. Instrumental Analysis. Basic types of chemical instrumentation and their applications in analytical chemistry are examined. These include gas and liquid chromatography; infrared, UV-VIS, fluorescence, atomic absorption, and plasma emission spectrophotometry; nuclear magnetic resonance and mass spectrometry. Prerequisites: CHM 112 and MAS 161. 3 credits.

CHM 307. Quantitative Analysis Lab. Volumetric, spectrophotometric, and electrochemical methods are applied to the analysis of unknowns. Prerequisite or corequisite: CHM 305. 1 credit.

CHM 308. Instrumental Analysis Lab. Chemical instrumentation is utilized in method development, unknown determinations, and chemical analysis. Prerequisite or corequisite: CHM 306. 1 credit.

CHM 311. Physical Chemistry I. The study of chemical systems from a molecular perspective. Basic concepts of quantum chemistry applied to atomic and molecular structure. Thermodynamic laws and functions applied to mechanical, thermal, and material equilibrium in gases, liquids, and solids. Also included are electrochemical systems, as well as kinetic and transport processes occurring in gases, in solutions, and at solid surfaces. Prerequisites: CHM 112, MAS 162, and PHY 104 or 112. 3 credits.

CHM 312. Physical Chemistry II. Second semester of a study of chemical systems from a molecular perspective. Basic concepts of quantum chemistry applied to atomic and molecular structure. Thermodynamic laws and functions applied to mechanical, thermal, and material equilibrium in gases, liquids, and solids. Also included are electrochemical systems, as well as kinetic and transport processes occurring in gases, in solutions, and at solid surfaces. Prerequisite: CHM 311. 3 credits.

CHM 321. Physical Laboratory I. Experimental study of the principles of physical chemistry. Work involves spectroscopy (IR, UV/VIS, fluorescence, Raman, and NMR), calorimetry, refractometry, conductivity, and viscometry applied to atomic and molecular structure, thermodynamics, phase and reaction equilibrium, and chemical kinetics. Fulfills requirement: Writing Process. Prerequisite or corequisite: CHM 311. 1 credit.

CHM 322. Physical Laboratory II. Second semester of an experimental study of the principles of physical chemistry. Work involves spectroscopy (IR, UV/VIS, fluorescence, Raman, and NMR), calorimetry, refractometry, conductivity, and viscometry applied to atomic and molecular structure, thermodynamics, phase and reaction equilibrium, and chemical kinetics. Fulfills requirement: Writing Process. Prerequisite or corequisite: CHM 312. 1 credit.

CHM 411. Advanced Inorganic Chemistry. A study of bonding theories, molecular structure, spectroscopy and reaction mechanisms with special emphasis on transition metal complexes. Prerequisite: CHM 312. 3 credits.

CHM 412. Advanced Physical Chemistry. In-depth treatment of the experimental and theoretical aspects of chemical kinetics and reaction dynamics. Reactions occurring in the gas phase, in the solution phase, and at solid surfaces will be discussed, with examples being drawn from catalysis, environmental/atmospheric chemistry, and astrochemistry. Prerequisite or corequisite: CHM 312 or permission of the instructor. 3 credits.

CHM 414. Advanced Organic Chemistry. A study of advanced topics in the field of organic chemistry. The course covers mechanistic and synthetic chemistry with an emphasis on current and classical organic chemical literature. Prerequisites: CHM 214. 3 credits.

CHM 490. Special Topics. This course may be repeated for credit as topic changes. Prerequisite: CHM 214, or permission of the instructor. 3 credits.

CHM 510. Chemical Research. Chemical research conducted under the supervision of a faculty member. This course introduces the students to the methods and analysis involved in research. A major written report and an oral presentation are required. May be repeated for credit. Prerequisites: CHM 308, CHM 321 and senior standing. 2-3 credits.

COL 101. Planning for Academic Success. This course will serve as a tool to develop and practice the skills necessary for academic success, including guided self-assessment, study skills, and time management. Graded pass/fail. 1 credit.

DCOM 130. Principles of Information Design. This class surveys the principles and practices of information design, information architecture, and interaction design. Students will learn and practice human-centered design methods (research/observation, design, prototyping, and usability testing) in designing meaningful and effective interfaces in which users interact with information. 3 credits.

DCOM 131. Usability Design and Testing. The course emphasizes planning, conducting, and analyzing usability tests. The course will teach the basic concepts of usability research and the practice of usability testing in a lab setting. Using the principles and techniques of usability testing, students will research the effectiveness of online and print documents, and physical objects, using video and digital equipment, with emphasis on rhetorical effectiveness and usability of information design and architecture, graphics, text, design, and format. 3 credits.

DCOM 150. Fundamentals of Design. An introduction to the fundamental elements of design. Students work with graphic symbols, theories of visual perception, principles of composition, and color interaction in a variety of studio projects. The emphasis of the course will be placed on the design process as students develop their ability to communicate their ideas through the use of traditional and electronic media. This course will introduce students to Adobe Photoshop. 3 credits.

DCOM 151. Digital Graphic Design. The course will focus on blending the creative and technical aspects of developing electronic images and layouts. Students will apply traditional design methods and techniques to the electronic canvas. Additionally, the course will serve to familiarize students with industry standard software and procedures for producing creative work for a variety of media. Work will be produced in the latest version of Adobe InDesign & Illustrator. Prerequisite: DCOM 150 or permission of the instructor. 3 credits.

DCOM 170. Web Markup and Layout. This course will cover the use of the Adobe Dreamweaver software, HTML5, CSS3, and basic JavaScript to create functioning web sites. The course will enable students to incorporate critical thinking skills and integrate web-based principles to develop hands-on projects. The course will be conducted through lectures, readings, tests, and assignments. 3 credits.

DCOM 260. E-Commerce. An exploration of the important technologies related to doing business on the Internet. Topics include e-commerce, advertising, customer support, and business-to-business applications. Emphasis on how businesses implement these technologies, resource requirements, and cost-to-benefit analysis. 3 credits.

DCOM 261. E-Business Strategy. An exploration of the way businesses use technology to operate effectively. The course will focus on how businesses generate, manage, store, and distribute information that is key to performance of business objectives. Topics will include Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Supply Chain Management (SCM), e-Marketing, and Business Intelligence. Prerequisites: DCOM 260 or permission of the instructor. 3 credits.

DCOM 270. Programming for Digital Media. This course is designed to teach the fundamentals for creating dynamic Web sites using JavaScript. With a basic understanding of the Web layout and design process, the student will learn the basic workflows of Web development and learn how to use JavaScript to create effective and interactive web pages. Prerequisite: DCOM 170. 3 credits.

DCOM 271. Databases in Design. This course is designed to teach the fundamentals of databases and how they might be used to create dynamic and data driven Web pages. With an understanding of Web layout and design process, the student will learn the basics of industry standard languages for accessing databases (such as PHP, Ajax or MySQL) and use these languages to design and develop data-driven sites and networked applications. Prerequisite: DCOM 270. 3 credits.

DCOM 280. Technical Communications for Digital Media. Technical communications requires students understand the basics of the human-centered design process, while focusing primarily on the use of writing and video to clearly and precisely communicate ideas. Students will develop copy and content appropriate to a given audience, client needs and goals, and context. The course will emphasize iterative design, prototyping and usability testing of acts of persuasive and informative writing. Fulfills requirement: Writing Process. Prerequisite: DCOM 130 and DCOM 131, or by permission of the instructor. 3 credits.

DCOM 281. Storytelling for Online Media. This class will give students "digital first" storytelling skills demanded by all online publishers. "Digital first" environments mean that students will engage in data gathering, creating stories, choosing the best digital platform for each story, tailoring the story to the chosen medium, and gauging the effectiveness of the communication and measuring reader engagement through the use of success metrics and analytics. Prerequisite: DCOM 130, DCOM 131, DCOM 151, and DCOM 270. 3 credits.

DCOM 290. Special Topics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 293. Special Topics in User Experience. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 294. Special Topics in Video. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 295. Special Topics in Design. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 296. Special Topics in Business Technology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 297. Special Topics in Programming. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 298. Special Topics in Communications. Topics announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 299. Portfolio. Portfolio: A formal collection of the student's completed work to be presented before the Digital Communications faculty and students as part of the student's formal request to take DCOM 400 (Internship). The portfolio must be both in print and in an appropriate digital form, include a resume, and contain examples of the student's work in both their chosen concentration and the core. Typically taken during the spring semester of sophomore year. Graded pass/fail. Prerequisites: DCOM 130, DCOM 131, DCOM 151, DCOM 260, DCOM 270, and DCOM 280, or permission of the instructor. Corequisites: DCOM 261, DCOM 271 and DCOM 281. 0 credits.

DCOM 311. Information Law and Ethics. Students will begin with a foundation in media law and ethical reasoning and examine both legal and ethical questions surrounding the use of digital media. They will then move on to examine the ways that the Web and digital media platforms have transformed traditional understandings of concepts like intellectual property rights, privacy, and free speech. Students will work with case studies, national and international legal documents, academic research, and company guidelines in order to understand whether legal strictures or ethical reasoning should guide personal, governmental, and corporate behavior. Fulfills requirement: Writing Process, Disciplinary Perspectives, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112, and junior or senior standing. 3 credits.

DCOM 333. Experience Design. The design of experiences can take many forms from riding a ride at an amusement park, to attending a concert, to buying milk or computers or underwear at a brick and mortar store, to finalizing the purchase of a book online. Though varied, all of these experiences share at least one trait—they were designed. The primary approach for the course will be case study analysis, including on-site visits to local parks, museums and other sites. Theories and concepts of experience design will be presented in context while analyzing site designs. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior standing. 3 credits.

DCOM 340. Videography. Videography will focus on developing facility with scripting/storyboarding and techniques of using a video camera to capture moving images. Students will learn scripting/storyboarding, videography (lighting, composition, shot selection) and basic non-linear editing. Satisfies the video and communications concentrations. 3 credits.

DCOM 341. Editing/Post-Production. Editing/Post-Production will teach students how to use the video editing and post-production process to tell stories using still and moving images and sounds. Students will learn non-linear editing for video and gain facility with the software and workflows of the video post-production process. Satisfies the video, design and communications concentrations. 3 credits.

DCOM 343. Sound Design. Sound Design will teach students how sound contributes to storytelling and atmosphere. Students will study best practices in how to create and record audio, Foley effects, sound effects, and score for use in video and other digital media (such as video games). Additionally, students will study audio editing and basic non-linear video editing workflows and software. Class will be composed of small hands-on projects and a large collaborative project. Satisfies the design, video, and communications concentrations. 3 credits.

DCOM 347. Motion Graphics. This course will provide an introduction to motion graphics and time-based media as a way to enhance concept driven projects. The focus of the class will be industry-based projects with an emphasis on the production workflow and process. Satisfies design and video concentrations. Prerequisite: DCOM 150 and DCOM 151, or permission of the instructor. 3 credits.

DCOM 350. Corporate Branding. The course will enable students to incorporate their knowledge and design skills in producing branding campaigns. The course will be conducted on a case study basis and focus on the practical application of branding guidelines across a variety of design elements. Satisfies design and Business Technology concentrations. Prerequisite: DCOM 150 and DCOM 151, or by permission of the instructor. 3 credits.

DCOM 351. Prototyping. This course provides students with an opportunity to explore, concept, and implement the production of prototypes. It will emphasize hands on learning that focuses on producing creative solutions for a variety of design problems. Students will develop functioning prototypes in a variety of media, both virtual and physical. The course will also explore concepts of usability, 3-D design, and functionality. Satisfies the design and UX concentrations. Prerequisite: DCOM 150 and DCOM 151. 3 credits.

DCOM 352. Package Design. This course will introduce various concepts for the development of packaging in a 3-D format using flat materials. It will focus on producing creative solutions for a variety of packaging needs. Students will develop functioning prototypes for a variety of different products and clients. The course will also explore concepts of mass production and constructing unique types of packaging. Satisfies the design concentration. Prerequisite: DCOM 150 and DCOM 151. 3 credits.

DCOM 353. Typography. This course will explore typography as a form of communication design. The focus of the class will be on using typography in creative layouts and design. The class will also explore the history and origins of type and how it influences modern design techniques. Students will experiment and manipulate typography to produce solutions that could include posters, promotional items, packaging, books, web or app based design, and motion graphics. Prerequisite: DCOM 150 and DCOM 151. 3 credits.

DCOM 375. Advanced Website Design. Students will learn programming and scripting for the web. This should teach the importance of clean, semantic markup coupled with advanced CSS techniques of today and tomorrow [CSS3]. Also cross browser compatibility, web accessibility, and web standards. Topics to be covered would be CSS and XHTML. Students begin by learning how web pages are structured and styled with scripting, then learn to use advanced applications to create sophisticated presentation and interactive effects, including typographical and layout control, and interactive elements. Students receive hands-on experience programming in web/multimedia projects and learn to create advanced Web sites and multimedia projects using current scripting languages and website authoring software. Prerequisite: DCOM 130. 3 credits.

DCOM 380. Advertising. Students will learn how advertising is used to create awareness in audiences, to persuade them, and move them to action, drawing from theories and practices established by academics and advertising professionals in design, psychology and rhetoric. Students will learn about the advertising industry, how advertisements are commonly structured-- particularly on digital platforms-- read case studies of both successful and disastrous brand audience interactions, and learn how to gauge the effectiveness of content and measure audience engagement through the use of success metrics and analytics. They will also examine the various moderation tools and philosophies used by news organizations, commercial comment spaces, and social media sites, and develop guidelines for best moderation practices. Fulfills requirement: Writing Process, Disciplinary Perspectives, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112, and junior or senior standing. 3 credits.

DCOM 382. Editing for Web and Mobile Communication. The role of digital editor for real-time content is like that of a live-TV producer-involving fact checking, rewriting copy, performing format and design maintenance, editing graphic elements, overseeing an organization's social media outlets, making informed and ethical decisions, managing online platforms, and analyzing success metrics and analytics to measure the effectiveness of their content. Editors manage a variety of web and networked content that should communicate information to audiences clearly, accurately, and effectively. Students will learn to manage web platforms such as Word Press and Moveable Type; be introduced to basic content management systems, learn how to work with writers, graphic designers, and programmers by understanding their restrictions and concerns; perform follow-up research to rate effectiveness of content; and adhere to current industry communication standards. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112. 3 credits.

DCOM 383. Public Relations. This course emphasizes skills in writing, digital media, and analytics used by public relations professionals as they seek to promote good communications between organizations and their publics, between members of organizations, and between organizations and the media. We will focus on public relations communications across social and proprietary media platforms. The class will also introduce students to the elements of a successful public relations campaign and challenge them to create their own promotions projects. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112. 3 credits.

DCOM 385. Storytelling with Data. Those who can "read" data sets can ferret out untold narratives buried in them and are of enormous value to the institutions that employ them. Some data is consulted for specific purposes by individuals maintaining governmental, educational, and commercial organizations, but the potential for making the data tell stories exists and has already been explored by those who practice data journalism and other kinds of data-driven investigations. Students who plan careers not just in media but in any business or academic pursuit can learn to contribute more to their areas of interest by learning how to arrange data sets to answer questions, to follow through with research and interviews, to write accurate narratives that explain the process and findings of examining data sets, and to create clear, attractive infographics and data visualizations to supplement traditional storytelling. Fulfills requirement: Writing Process, Disciplinary Perspectives, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112, and junior or senior standing. 3 credits.

DCOM 386. Video Games: History, Theory, and Social Impact. This class will critically examine video games as historical and cultural artifacts, as narratives, as works of art, as a technologically dependent medium, as part of human play and as a powerful social influence. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DCOM 387. Social Media: History, Theory and Practice. Social media connects organizations, companies, and individuals throughout the world, fostering interaction, collaboration, discussion, and community. And it's not surprising that social media networking is the number one online activity of people in the United States. Students in this course will study the history and theory of social media. They will also put into practice specific marketing, community-building, and institutional support activities that take place through social media channels. This course is for students who wish to obtain analytic and practice-based skills for careers in media, Web-based companies, and publicity in any form. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: ENG 112 or FYE 112. 3 credits.

DCOM 390. Special Topics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 393. Special Topics in User Experience. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 394. Special Topics in Video. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 395. Special Topics in Design. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 396. Special Topics in Business Technology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 397. Special Topics in Programming. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 398. Special Topics in Communications. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 400. Internship. Internship in Digital Communications Graded pass/fail. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 1-12 credits.

DCOM 410. Capstone - Project Management. This capstone course teaches the theory and application of planning projects in the field of digital communications. The course covers principles of project management, research, and project strategy. Additionally, topics of professionalism, client interface, modes of communication, and collaborative group theory and practice are explored. 3 credits.

DCOM 411. Capstone-Research and Development. This course is a practicum class where students work on a project for external clients. This course simulates the collaborative and interdisciplinary environment of the field of digital communications and emphasizes usability testing in the identification of a problem, in formative testing and prototyping of potential design ideas and summative testing of the final project. The course takes the integrative theory and skills from the areas of concentration and builds upon the theory and application explored in the first Capstone course to develop a multi-disciplinary team of students to deliver an appropriate project. 3 credits.

DCOM 431. Advanced Usability. Advanced Usability explores topics in the field that challenge students with methods, tests, and subjects beyond the introductory level. The course addresses advanced tools such as eye tracking and 3D prototyping; advanced methods, such as field-testing and ethnography; and unique applications, such as unique test populations and iterative software development. The course focuses on the flexibility of the test team in selecting the appropriate test method, applying appropriate pre and posttest activities, and collecting valid data. Expert and Heuristic methods for identifying the areas and activities for testing will also be examined. Satisfies UX concentration. Prerequisite: DCOM 131, or permission of the instructor. 3 credits.

DCOM 462. Customer Experience Management. Customer Experience Management (CEM) explores the theory and methods that businesses use to engage and retain customers. This course examines the theory and application of User Centered Design principles to customer interaction. Customer engagement is broadly expanded in the course to include all types of businesses, including non-profit businesses, government, and even internal processes and relationships. The course will also feature computer software platforms that support both analytical and transactional Customer Relationship Management objectives. Satisfies business technology concentration. Prerequisite: DCOM 260, or permission of the instructor. 3 credits.

DCOM 464. Enterprise 2. 0. This course explores the way companies use Web 2. 0 technologies to conduct business. Students will examine the relationship between technology and knowledge, social media for business, and collaboration through communities. Students will also develop basic proficiencies with common Web 2. 0 channels including blogs, wikis, video, collaboration and KM systems. Satisfies the business technology concentration. Prerequisite: DCOM 261 or by permission of the instructor. 3 credits.

DCOM 465. Internet Marketing. The course examines the principles and processes of Internet Marketing. Students will examine current topics including search engine advertising; social media, online advertising strategies and models; metrics, and ethics. The course will also integrate a comparison and contrast of online promotion to traditional channels and extensively employ case studies. Satisfies the business technology and communications concentrations. Prerequisite: DCOM 260, or permission of the instructor. 3 credits.

DCOM 466. Innovation. Why are some companies considered innovative and others stodgy? What cultural, organizational, and personal elements make innovation in technology possible? This course attempts to answer these questions by exploring how technology ideas are created, fostered, and shared. The course will study innovation from both theoretical and applied perspectives using case studies, creative exercises, research, and simulations as learning experiences. Satisfies business technology concentration. Prerequisite: DCOM 261. 3 credits.

DCOM 493. Special Topics in User Experience. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 494. Special Topics in Video. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: Portfolio (DCOM 099/299). 3 credits.

DCOM 495. Special Topics in Design. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 496. Special Topics in Business Technology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 497. Special Topics in Programming. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

DCOM 498. Special Topics in Communications. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: Portfolio (DCOM 099/299). 3 credits.

DSP 310. AIDS. An examination of the origins and history of HIV/AIDS, including its economic, political, social, psychological and legal repercussions as well as the basics of virology, serology, epidemiology and diagnostic testing. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 320. The College Colloquium. This team-taught course is offered in coordination with the College's annual colloquium series. Specific topics are announced at the time of registration. This course may be repeated for credit as topic changes. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 322. The 20th-Century World. An exploration of key moments that profoundly changed world history in the twentieth century including the Russian Revolution, Chinese Revolution, the impact of decolonization in India, the end to the Cold War in 1989, and 9/11. This course will be aligned with the colloquium theme of revolution by exploring the nature and process of change. The class sessions will center on discussion of readings, films, news events, and colloquium events. Students will write a paper and give a presentation on change using a current event related to their majors. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 324. The American Presidency: Power and Character. An exploration of the relationship between a president's character and leadership using several administrations as case studies. Provides exposure to the historiographic literature on historical biography, presidential memoirs, the use of primary sources and the interpretation of public opinion. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing required. 3 credits.

DSP 335. Religion and Literature. How do human beings experience the sacred? How is faith connected with doubt? What might "God" mean? What's the point of it all? Readings will include fiction, poetry, and essays drawn from a range of historical periods. This course examines what William James called "the varieties of religious experience" from the disciplinary perspectives of literature and religion. Fulfills requirement: Writing Process, Disciplinary Perspectives. Prerequisite: Junior or senior standing required. 3 credits.

DSP 340. Myths and Their Meaning. Looks at the significance Greek and Roman myths hold for us today from the perspectives of literature, psychology, religion, sociology, and anthropology. Fulfills requirement: Writing Process, Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 348. The Atomic Bomb: History, Science, and Culture. The development and use of the atomic bomb in many ways defined the 20th Century and the Modern World. For understanding and insight, a multidisciplinary approach to this subject is required. In this course, the disciplines of history, physics, politics/international relations, ethics, and literature/film will be brought to bear on the "Bomb" and its significance for the Modern World. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 350. Drugs and Behavior. This survey course is designed to familiarize students with the physiological, psychological, social and legal aspects of various drugs including alcohol, marijuana, caffeine, over-the-counter drugs, cocaine, heroin and the opiates, LSD hallucinogens, barbiturates, and amphetamines. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 352. Marx and Marxism. Karl Marx is among the most influential thinkers in the modern world, and the ideology of Marxism has helped shape the cultural, religious, economic, and political history of the nineteenth and twentieth centuries. This course will examine Marx and Marxism(s) from an interdisciplinary perspective, first by exploring the life and work of Marx, and Marxist parties and movements, and then by examining the effects Marx's thinking has had on global politics, economic theory, religion, and philosophy. By examining the historical and philosophical roots and continuing significance of Marx and Marxism, students will have an occasion to practice a multidisciplinary study of a historical figure and movement and become better informed about intellectual and political history and how those continue to shape the world around us. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing required. 3 credits.

DSP 354. Issues in Contemporary Europe. This course focuses on what it means to be European in today's world. As a continent connected to Asia, where does Europe end and Asia begin? How has the end of the Cold War reshaped Europe? To what extent has the European Union shaped Europe and the meaning of being European? What are the shared values that define Europe? How has immigration changed what it means to be European? This course addresses these questions through discussion of class readings, current events, and written exercises. At the end of the semester, students will complete a project related to their major based on examination of a current event. Fulfills the disciplinary perspectives general education requirement. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 355. Water Worlds: Cities, Their Environments and Influences. Why do great cities appear where they do? How do cities reshape their environments as they grow? By examining the way that three great cities-Venice, London, and St. Petersburg-have been shaped and defined by their watery environments, this course will explore how those cities have become centers for all kinds of exchange between diverse nations and peoples, crucibles for innovation in art, design, manufacture, politics, and literature, and have each given rise to a distinctive and legendary urban "identity. " Fulfills requirement: Disciplinary Perspectives. Prerequisite: junior or senior standing required. 3 credits.

DSP 356. Liberty and Justice. This multi-disciplinary seminar will consider the relationship in contemporary society between individual freedom and moral-political equality. To this end, students will study the main doctrines advanced in libertarian, classical liberal, modern liberal, and communitarian thought, and critically evaluate the various strengths and weaknesses of each approach. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 370. Junk Science and Paranormal Phenomena. By combining ideas from the social and natural sciences, as well as religion and philosophy, this course focuses on skeptical inquiry, critical thinking, logical inference, and scientific analysis when evaluating claims that utilize explanations beyond the boundaries of established science and/or rely on corrupted scientific methodology in attempts to manipulate the general public regarding issues with broad-reaching societal and/or personal implications. Fulfills requirement: Writing Process, Disciplinary Perspectives, Critical Thinking through Writing. Prerequisite: Junior or senior standing. 3 credits.

DSP 380. EU Simulation. This course will offer an enriching, hands-on, interdisciplinary exploration of the dynamic processes of policy formation in the core institutions of the European Union. Students will prepare for participation in the simulation held each November in Washington D. C. , organized by the Mid-Atlantic European Union Simulation Consortium (MEUSC). This experiential learning program endeavors to connect American students to EU policy makers and policy making in a unique way, utilizing the simulation experience to bridge the gap between the academic study of the EU and the actual political processes of the European Union. Students will be engaged in discussions and debates about the EU that are current and topical in EU decision-making circles. A distinct theme is chosen as the focus of the simulation each year . This course may be repeated for credit as topic changes. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits. [This course is cross-listed with POL 380]

DSP 385. Food Studies and Practice. The field of Food Studies is one of the fastest-growing and most timely areas of study in academia today. In American culture (and in fact much of the Western world) the past 15 years have seen an unprecedented growth in the popular and academic study of food and food related issues: this includes the rise of the celebrity chef and the ever-increasing availability of exotic and alternative food sources on one side of the spectrum; and on the other, the growing threat of food crises (shortages, pathogens, allergies) and the reality that, more than ever, our individual food choices are connected to the environmental, social and commercial well-being of everyone else on the planet. Food Studies and Practice serves as an introduction to the major issues related to food and food systems, covering the relevant issues, terminology, and disciplinary methodologies utilized in the field. Moreover, as an examination of its practice, particular attention will be dedicated to the formation of practical plans of action (as part of the E. A. T. Research Group) that are informed by the research of specific issues. Enrollment dependent upon application to the EAT Research Group and instructor permission. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

DSP 390. Special Topics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

ECE 110. Child Development I. This course will provide an overview of early childhood educators' beliefs that inquiry learning through curriculum integration is the most effective way to teach young children. The emergence of constructivism and the age-related patterns of intellectual growth will be examined. This knowledge will be essential for pre-service teachers learning to make competent decisions about curriculum and teaching methodology. The delivery approach will follow a theory-to-practice format so students can "see" how an understanding of theories of development and relationships enhances practice and planning. This course requires updated federal background clearances for field component. Course restricted to ECE majors only. Non-majors may register with permission of the Education department chair 3 credits.

ECE 115. Child Development II. This course will provide an understanding of the overall patterns of child development and learning. The student will gain insight into the relationships between child development, learning and teaching and the variation from these typical patterns. The emphasis will be placed on reviewing the characteristics of children at different ages and stages of development. Specific developmental appropriate practices for school-aged children will be examined. Delivery approach will include, but not be limited to, authentic classroom videos, analyzing and responding to real student and teacher artifacts, case studies and simulations. Prerequisite: ECE 110. 3 credits.

ECE 210. Family Partnerships. This course will focus on the developmental tasks and perspectives of the adults in children's lives. Students will spend time understanding the roles of parents, teachers, and other caregivers in the lives of young children as they work to form caring relationships with those around them. The delivery approach will follow a theory-to-practice format so students can "see" how an understanding of theories of development and relationships enhances practice. The professor will promote experiential learning, critical thinking, synthesis, planning, evaluation and action. Prerequisite: ECE 110 or 115, limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 220. Theory and Practices. This course will involve an in-depth examination of child development and learning, family and community relationships, effective assessment strategies developmentally-effective approaches to teaching and learning and ethical guidelines related to early childhood practice. Students will have opportunities to view and design challenging learning environments. They will practice using observation, documentation and other appropriate assessment tools and approaches in field experiences. Delivery approach will include, but not be limited to, analyzing and responding to authentic classroom artifacts, case study analysis, simulations, journal critiques and field experiences. Prerequisite: ECE 110 or 115, limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 230. Creative Arts. This course will begin with a definition of creativity as it applies to young children in the early childhood classroom. Specific attention will be given to clarifying the importance of art, music and drama in child development and learning. Delivery approach will include, but not be limited to, authentic classroom video viewing, field observations, group presentations, and research articles. Prerequisite: ECE 110 or 115, limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 240. Literacy and Literature I. A course that addresses the growth and development of the young reader in the emergent and early beginning stages of literacy development. The course foundation is supported by both a balanced approach to literacy and Pennsylvania Academic Standards for Foundational Skills, Reading Informational Text, Reading Literature, Writing, and Speaking and Listening. Recognizing the importance of early instruction and intervention, students will explore a variety of strategies, methods, and assessment tools to meet the needs of learners, including students with special needs, struggling readers, and English language learners. Special attention in the course is given to the following topics: oral language development, phonemic awareness, phonics, and the essential role of quality children's literature. PDE Stages 1&2 field competencies are assessed in this embedded course. Prerequisite: ECE 110 or 115, limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 310. Math Methods. This course will begin with a historical overview of mathematics teaching and learning for young children. Current ideas on teaching mathematics will be introduced, as well as the many ways to incorporate mathematics learning into everyday classroom life. Assessments that encompass both understanding and procedural skills will be introduced. Curricular expectations related to number and operations, geometry, measurement, algebra, and data analysis and probability will be explored. Delivery approach will include but not be limited to inquiry-based instruction, journal critiques and children's literature with mathematical themes, subplots and references. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 320. Program Design and Curriculum Development. This course provides a comprehensive, balanced overview of curriculum development in early childhood education. Standards, curriculum mapping, and the future of curriculum will be discussed as students understand what curriculum is and the role they play as teachers in curriculum development. The delivery approach will include, but not be limited to, guest speakers, text analysis, book study, technology experiences, and field experiences. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 330. Literacy and Literature II. A course that focuses on the growth and development of the beginning reader. The course foundation is supported by both a balanced approach to literacy and the PDE Academic Standards for Foundational Skills, Reading Informational Text, Reading Literature, Writing, and Speaking and Listening. Emphasizing a strong foundation in phonemic awareness, phonics, spelling, fluency, vocabulary, and comprehension, students will explore a variety of methods, strategies, and assessments for the teaching of reading as supported by the current research. Special emphasis will be placed on making appropriate accommodations and adaptations for students with disabilities as well as struggling readers and English language learners. PDE Stage 3 field experience competencies are assessed in this embedded course. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 335. Literacy and Literature III. A course that addresses the continued development and growth of the fluent reader and writer. The course foundation is supported by both a balanced approach to literacy and the PDE Academic Standards for Foundational Skills, Reading Informational Text, Reading Literature, Writing, and Speaking and Listening. Stressing the importance of comprehension, students will explore a variety of classroom approaches to teach reading and writing across the content areas as supported by research. Emphasis will be placed on making appropriate accommodations and adaptations for students with disabilities as well as struggling readers and English language learners. Special attention is placed on the development of thematic units and multi-genre writing. Fulfills general education requirement: Writing Process. PDE Stage 3 field experience competencies are assessed in this embedded course. Fulfills requirement: Writing Process. Prerequisite: ECE 110, 240, 330; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 340. Teacher Researcher. This course is designed to provide pre-service teachers an opportunity to learn about and practice the implementation of teacher research in a classroom-based setting. Students will learn how to identify an area of focus, formulate a research question, conduct a literature review, design a research study, determine methods of data collection, collect and analyze data, and report research findings. Students will be required to write a 3000-word paper detailing the teacher research project. Writing will be taught as a process. The instructor will offer instruction in writing and will provide substantive written and oral feedback on students' written performance during the writing process. Individual writing conferences are held with each student during the drafting and revision stages of the writing process. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 350. Child Wellness. Early childhood professionals are instrumental in developing the foundations for wellness for young children and their families. This course will address current societal pressures that provide new challenges to teachers of young children. These many issues present new opportunities for teachers to appreciate the interrelationships among nutrition, health, and safety. Delivery approach will include, but not be limited to, field observations, group presentations, field trips, and lecture. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 360. Social Studies Methods. This course is designed to introduce the complexity of social studies and draws on years of related research that demonstrates the importance of inquiry learning to deepen children's understanding of the integrated curriculum. The areas of child development related to the social studies, the current national standards and practical ideas for teaching will also be examined. Delivery approach will include, but not be limited to, inquiry-oriented instruction, class discussions, demonstrations of early concrete learning experiences and hands-on experience with various social studies programs. Prerequisite: ECE 110 or 115; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 370. Play and Projects. This course is about children's play and development beginning with a history of ideas, beliefs, and activities of play, the early and contemporary theories of play and how scholars' explain its meaning, functions, and developmental benefits. Students will gain an understanding of the developmental advantages of children's free play and the disadvantages of not playing. Delivery approach will include, but not be limited to, lecture, individual and group presentations, fieldwork observations and journaling. Prerequisite: ECE 110; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 380. Science Methods. This course is designed to introduce the major areas of science instruction and define the relative importance of science content, processes, skills and attitudes needed for young children to successfully understand science. National Science Education Standards will be examined to identify what children at different ages and stages should know and be able to do in the area of science. Delivery approach will include, but not be limited to: inquiry-oriented instruction, class discussions, integrated unit plans and hands-on experience with various science programs. Prerequisite: ECE 110; limited to early childhood education majors or permission of the instructor. 3 credits.

ECE 385. Advocacy, Leadership, and Collaboration. This course will begin with an examination of the professional and ethical standards expected of an early childhood educator. Collaboration with families, the community, and public agencies will be practiced and further developed through co-teaching opportunities. Delivery approach will include, but not be limited to, field experiences, class discussions, simulations and reflective writings. No prerequisite required, open to all majors. Open to all majors. 3 credits.

ECE 410. Senior Capstone. Special topics related to current concerns in education are researched and presented by the students in the course. Issues related to teaching and to further professional growth are explored. Students will receive extensive interview preparation, certification preparation (TIMMS) and prepare senior job portfolios. Prerequisite: Limited to spring semester senior early childhood education majors or permission of instructor. 3 credits.

ECE 440. ECE Student Teaching. Each student spends an entire semester in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors or students who are seeking certification only. Fulfills requirement: Immersive Experience. Prerequisites: Completion of all Early Childhood courses in the major, cumulative GPA at or above the minimum GPA specified by PDE for the PreK-4 Early Childhood certificate, completion of all Chapter 354 and Act 49-2 course requirements. 12 credits.

ECE 441. ECE Dual Major Student Teaching. Each ECE/SPE dual major will spend eight weeks in an early childhood education environment in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors or students who are seeking certification only. Fulfills requirement: Immersive Experience. Prerequisites: Completion of all courses in the ECE/Special Education Dual Major, cumulative GPA at or above the minimum GPA specified by PDE for the PreK-4 Early Childhood Education certificate, completion of all Chapter 354 and Act 49-2 course requirements. 6 credits.

ECN 099. Essentials of Microeconomics - Academic Leveling Course. This course offers an alternative to ECN 101 only for students pursuing a Secondary Teaching certification in Social Studies or Citizenship education. Students may take ECN 101 and 102, or ECN 099 and 102 to fulfill the PDE requirement for economics. The course examines how individuals and firms decide how much to produce and in some cases what price to charge for their goods. Together these choices determine what is produced, how it is produced, and for whom it is produced in our economic system. Graded pass/fail. 0 credits.

ECN 101. Principles of Microeconomics. The course examines how individuals and firms make choices within the institution of free-market capitalism. Individuals decide how much of their time to spend working and what to buy with the earnings of their labor. Firms decide how much to produce and in some cases what price to charge for their goods. Together these choices determine what is produced, how it is produced, and for whom it is produced in our economic system. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

ECN 102. Principles of Macroeconomics. This course extends the study of consumer and producer choices to discover how they affect the nation's economy. Macroeconomics deals with the economy as a whole as measured by the key variables of inflation, unemployment, and economic growth. Emphasis is on both Keynesian and classical theories and how they predict what monetary and fiscal policies can be used to affect these variables and reach national economic goals. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

ECN 201. Intermediate Microeconomic Analysis. This course covers the major theories of mainstream neoclassical economics. There is intensive study of the models of consumer and firm behavior that permit understanding of how the prices and quantities of goods and services are determined in a free market capitalistic system. The implications for social welfare, and equity and efficiency issues that are inherent in the free-market system are emphasized. Prerequisite: ECN 101, 102 and MAS 111 or 161, or by permission of the instructor. Economics majors need a cumulative GPA of 2.00 in all foundation courses completed to date. 3 credits.

ECN 202. Intermediate Macroeconomic Analysis. In this course, students develop a model of the macroeconomy which permits them to analyze the nature of the business cycle. The assumptions built into the model can be altered, rendering it capable of examining the macroeconomy from various theoretical viewpoints. In addition to unemployment, inflation and economic growth, the course covers real business cycles, the macroeconomic implications of free trade and emphasizes the microeconomic foundations of macroeconomics. Prerequisite: ECN 101 and 102. Economics majors need a cumulative GPA of 2.00 in all foundation courses completed to date. 3 credits.

ECN 230. Benefit Cost Analysis. Benefit-Cost analysis (BCA) is the study of competing public policy alternatives. The purpose of benefit-cost analysis is to inform social decision-making and facilitate the equitable and efficient allocation of society's resources. This course introduces the basic theory and principles of benefit-cost analysis and examines its implementation and effectiveness. Fulfills requirement: Writing Process. Prerequisite: ECN 101 and 102. 3 credits.

ECN 312. Money and Banking. The study of the nature and functions of money and credit, including the development and role of commercial and central banking, structures of the Federal Reserve System, and monetary and banking theory, policy and practice. The course considers the political nature of money and the tension between fiscal and monetary policy making. Prerequisites: ECN 101 and 102. 3 credits.

ECN 316. Environmental Economics. Environmental economics stresses the co-evolution of human preferences, understanding, technology and cultural organization. This approach differs from that of conventional economics and conventional ecology in the importance it attaches to environment-economy interactions. The role that our economic system plays in decisions affecting the sustainability of our ecosystems is emphasized. Prerequisites: ECN 101 and 102. 3 credits.

ECN 317. Energy and Natural Resource Economics. This course applies economic principles to the management of natural resources with a central focus on energy and climate change. It involves the study of resource use and conservation, utilization rates of renewable and non-renewable resources, the issue of economy size and the limits to growth, the natural resource economic issues of development versus preservation, and green accounting. Prerequisites: ECN 101 and 102. 3 credits.

ECN 321. Public Finance. This course extends the study of public economics to its application in the principles of taxation and public expenditures. Topics include the structure of the Federal Budget, the national debt and fiscal deficits, but also state and local financing and the division of responsibilities between the federal and local governments. Prerequisites: ECN 101 and 102. 3 credits.

ECN 331. International Finance. This course extends the Keynesian Macroeconomic model to incorporate international financial flows; the determinants of the balance of payments; foreign exchange markets; exchange rate regimes; history of international economic institutions; and macroeconomic policy options. The course contains lectures, student presentations, theoretical problem solving, economic analysis of real-world events, reading, analyzing, and writing on academic and current event articles. Prerequisites: ECN 101 and 102. 3 credits.

ECN 332. International Trade. This course introduces the theory and practice of international economic relations. It includes, not only the history and purpose of trade and the traditional theory of the gains from trade, but also the more modern theory of trade with imperfect competition. The history and nature of the institutional structures of trade (World Trade Organization) are covered. Fulfills requirement: Writing Process. Prerequisites: ECN 101 and 102. 3 credits.

ECN 333. Game Theory: Economic Applications. Game theory studies how "rational" players should act and interact in strategic situations. In economics, players include people, firms, or countries. Game theory also helps predict and explain players' actions. Cooperative and non-cooperative games are used to measure behavior and identify ideal strategies in situations as diverse as industrial negotiations, marriage bargaining, and international environmental agreements. Prerequisite: ECN 201 or permission of the instructor. 3 credits.

ECN 400. Internship. Practical and professional work experience related to the student's career interests, involving both on-site and faculty supervision. Internship credit does not fulfill required electives in the major. Graded pass/fail. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: 2.75 GPA, permission of the chairperson, and completion of department's application form. Generally limited to juniors and seniors. 1-12 credits.

ECN 405. Applied Econometrics. In this course students apply statistical techniques to study the quantitative measurement and analysis of actual economic phenomena, describing economic relationships, and test hypothesis about economic theory and forecasting future economic events. Applications include examining violations of the classical assumptions and testing for specification errors. Prerequisites: MAS 170, 270, or 372; ECN 201/202 or ASC 385; or permission of the instructor. 3 credits.

ECN 410. Senior Seminar. This small seminar course is a reading course in support of the research interests of the professor, the student, or both. The content and structure of the course will depend on the research interests of the professor, but will always require from each student a major paper related to this area. Reading and critiquing articles from refereed economic journals and the popular press are also included. Fulfills requirement: Writing Process. Prerequisites: ECN 201 and 202 and junior standing. 3 credits.

EDU 140. Educational Technology in the Modern Classroom. An introduction to the educational technologies used in the classroom that help facilitate learning and to help us and our students become digitally aware in the 21st century. This course focuses on emphasizing a conscientious approach to technology that goes beyond current technology fads. Among the topics covered are technology basics, history - future of educational technology, communicating with students and parents, developing a personal learning network and staying current on trends and applications related to educational technology. Prerequisites: Freshman or sophomore education majors, or other certification candidates with permission of instructor. 3 credits.

EDU 240. Language, Cultural Diversity and Academic Achievement: PreK - Grade 8. This course is designed for the pre-service music, art, language, early childhood education, or middle school educator to gain an understanding of the complex factors impacting the education and language acquisition of the diverse language and cultural minority groups of the United States. This course is required under Act 49-2 and may be taken while student teaching. Fulfills requirement: American Social Diversity. 3 credits.

EDU 245. Language, Cultural Diversity and Academic Achievement: Grade 7 - Grade 12. This course is designed to allow the pre-service music, art, language, or grade 7 - grade 12 secondary teacher certification candidate to gain an understanding of the complex factors impacting the education and language acquisition of the diverse language and cultural minority groups of the United States. This course is required under Act 49-2 and may be taken while student teaching. Fulfills requirement: American Social Diversity. 3 credits.

EDU 450. Curriculum and Instruction for the Young Adolescent. This course explores and examines the historic and philosophic contexts of middle level education of students aged 10-15, and current issues affecting middle schools including developmentally appropriate curriculum, instruction and assessment, the guidance role of middle school teachers, and communication with parents and the public. This course is required for Social Studies and Citizenship Certification. A must-take elective for those going into secondary education. Fulfills requirement: Writing Process. Prerequisite: Limited to teacher certification candidates or permission of instructor. 3 credits.

ENG 099. Internship Portfolio. This formal collection of the student's completed communications-oriented work is used to demonstrate basic competencies necessary for enrollment in ENG 400 (Internship). Offered every semester. Graded satisfactory/unsatisfactory. Graded pass/fail. 0 credits.

ENG 111. English Communications I. This course will help the student develop his or her own voice while meeting the demands of academic and public expression. It will emphasize the development of clear, organized, and rhetorically effective written prose. Offered fall semester. Fulfills requirement: English Communications. 3 credits.

ENG 112. English Communications II. This course continues to help the student develop his or her own voice while meeting the demands of academic and public expression. In addition to emphasizing the development of clear, organized, and rhetorically effective written prose, this course also focuses on speaking, reading, and research skills. Offered spring semester. Fulfills requirement: English Communications. Prerequisite: ENG 111, FYE 111, FYS 100, or permission of chairperson. 3 credits.

ENG 120. Introduction to Literature. Introduction to literary genres and the basic methodology, terminology and concepts of the study of literature. Offered every semester. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Critical Thinking through Writing. 3 credits.

ENG 130. Introduction to Media in the Digital Age. Introduction to theory and practice in the rapidly-evolving realm of digital media and its social, cultural, political, economic, and other implications. Offered every semester. 3 credits.

ENG 140. Introduction to Theater. Introduction to the study of theater arts that traces the evolution of the techniques of acting, stagecraft, and playwriting from ancient times to the present. Usually offered alternate fall semesters. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 150. Introduction to Creative Writing. Introduction to a variety of models and craft concepts useful in writing poetry, fiction, nonfiction, and other genres. This course provides the basis for the student's acquisition of a repertoire of techniques. Usually offered fall semester. Prerequisite: ENG 112 or FYE 112, or permission of the instructor. 3 credits.

ENG 220. Literary Theory and Its Applications. Investigation of fundamental questions such as the definition of literature, the value of literature, and the validity of the literary canon. This course provides an introduction to a variety of critical approaches to literary interpretation, on both a theoretical and practical level. Usually offered alternate spring semesters. Fulfills requirement: Critical Thinking through Writing. Prerequisite: ENG 120 or 200-level Literature Survey. 3 credits.

ENG 221. Survey of American Literature I. Survey of selected major American authors from the colonial period to about 1900. Usually offered every semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 222. Survey of American Literature II. A survey of selected major American authors from 1900 to the present. Usually offered every semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 225. Survey of English Literature I. A survey of selected major English authors from the Middle Ages to about 1800. Usually offered every semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 226. Survey of English Literature II. Survey of selected major English authors from about 1800 to the present. Usually offered every semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 227. Survey of World Literature I. Survey of selected major writers from earliest literate history to about A. D. 1000. This includes literature from Western Europe and non-Western cultures. Usually offered fall semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 228. Survey of World Literature II. Survey of selected major writers from about A. D. 1000 until about 1800. This course includes literature from Western Europe and non-Western cultures. Usually offered spring semester. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

ENG 230. Elements of Writing: Grammar, Usage, Style. An introduction to the fundamentals of English grammar, this course focuses on the fundamental parts of English sentences, how those parts are put together to create grammatical sentences, and how punctuation can signal the relationships between those parts. In addition to learning to identify and correct errors in grammar and punctuation, students will learn how elements of style can lead to writing that is clear, precise, and powerful. This course has no prerequisites, and no prior study of grammar is expected. 3 credits.

ENG 231. Journalism and News Reporting. Introduction to the basic skills of journalistic writing such as interviewing, gathering and reporting news and writing feature stories according to standard formats and styles. The course also covers ethical and legal considerations related to news reporting. Offered every fall semester. Fulfills requirement: Writing Process. Prerequisite: ENG 112 or FYE 112, or permission of the instructor. 3 credits.

ENG 233. Multimedia Narratives. Hands-on introduction to a genre of storytelling that weaves together audio, video, voiceover, music, photographs, and other elements. The course will focus on writing and creative expression, and help a student move from academic discourse toward discovery of a more natural voice. Offered fall semester. Prerequisite: ENG 112 or FYE 112, or permission of the instructor. 3 credits.

ENG 240. Theater Production and Performance. Instruction in all aspects of producing and performing a full-length play. Usually offered alternate fall semesters. 3 credits.

ENG 241. Acting I. Introduction to the development of skills in speech and movement through the use of theater games and improvisations. Usually offered fall semester. 3 credits.

ENG 250. Creative Writing Form and Theory. This "process" course emphasizes the conceptual frameworks of various literary genres and provides an introduction to rhetorical strategies, formal elements, and literary theories that illuminate the practice of writing. Usually offered alternate fall semesters. Prerequisite: ENG 150, or permission of instructor. 3 credits.

ENG 251. Creative Writing Workshop. Introduction to poetry or fiction, which will alternate each year. Intensive focus on the student's own writing as well as study of literary works designed to enhance familiarity with and understanding of craft concepts. Offered spring semester. May be repeated for credit. Prerequisite: ENG 150 or permission of the instructor. 3 credits.

ENG 301. Acting Lab. A workshop that meets once a week to explore specific issues in acting; course content changes every semester. Usually offered every semester. May be repeated for credit. 1 credit.

ENG 321. Poetry. Seminar on poetry drawing from English, American, and Commonwealth traditions from the Middle Ages to present. This seminar will introduce the student to a wide range of poems, critical vocabulary, and literary interpretations. Usually offered alternate fall semesters. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: ENG 120 or 200-level literature survey. 3 credits.

ENG 322. The Novel. Historical view of the novel, drawing both on novels written originally in English and on those translated from other languages. Usually offered alternate fall semesters. Fulfills requirement: Writing Process. Prerequisite: ENG 120 or 200-level literature survey. 3 credits.

ENG 323. Film. Introduction to analysis and critique of a broad range of foreign and American films and an overview of film's history as a form of political, social, and cultural expression. This course contributes to the student's acquisition of a critical vocabulary and development of critical thinking skills. Usually offered alternate spring semesters. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art), Intercultural Competence. Prerequisite: ENG 120 or 200-level Literature Survey. 3 credits.

ENG 324. Shakespeare I. Concentrated study of early Shakespearean drama, especially the comedies and the histories. Writing process. Usually offered alternate spring semesters. Fulfills requirement: Writing Process. Prerequisite: ENG 120 or 200-level Literature Survey. 3 credits.

ENG 325. Shakespeare II. Concentrated study of late Shakespearean drama, especially the tragedies and the romances. Usually offered alternate spring semesters. Fulfills requirement: Writing Process. Prerequisite: ENG 120 or 200-level literature survey. 3 credits.

ENG 330. Advanced Journalistic Writing. This course builds on the basic skills of journalistic writing, interviewing, and fact gathering of Eng. 213 Journalism: News Reporting. Advanced Journalistic Writing involves the writing of more complex and long form journalism that requires gathering and assimilating a greater range of information, asking more penetrating questions, comprehending and explaining more sophisticated and multi-faceted subjects, and/or first-person participation. The course will adhere to the standard deadline demands of print publications. Stories produced in the class will contribute to the content of the College's student-run newspaper, La Vie Collegienne. Prerequisite: ENG 231 (formerly 213) or DCOM 285, or permission of the instructor 3 credits.

ENG 331. Persuasive Writing. Investigation of the theory and practice of advanced composition and rhetoric in multiple communications contexts. This course introduces the student to classical and contemporary rhetoric, and contributes to the enhancement of persuasive writing skills. Usually offered alternate fall semesters. Prerequisite: ENG 112 or FYE 112; and ENG 140, or permission of the instructor. 3 credits.

ENG 335. Editing. Introduction to the theory and practice of editing, with an emphasis on reading closely, revising, creating headlines, and other aspects of refining and preparing copy for publication or online distribution. Usually offered alternate spring semesters. Fulfills requirement: Writing Process. Prerequisite: ENG 231 (formerly 213), or permission of the instructor. 3 credits.

ENG 341. Acting II. Exploration of the relationship between the actor and the text through script analysis and the performance of scenes and monologues. Usually offered spring semester. 3 credits.

ENG 390. Special Topics. Study of diverse topics that vary from year to year. Past topics have included Film Criticism, Environmental Literature, Sports Literature, and Small Town Life. This course may be repeated for credit as topic changes. Prerequisites vary. 3 credits.

ENG 391. Special Topics in Communications. This course may be repeated for credit as topic changes. 3 credits.

ENG 392. Special Topics in Literature. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: ENG 112 or FYE 112, or at least one English Literature Survey (ENG 221-229); or by permission of the instructor. 3 credits.

ENG 393. Special Topics in Writing. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisites vary. 3 credits.

ENG 400. Internship. Practical and professional work experience, on-or-off campus, related to the student's career interests, involving both on-site and faculty supervision, and generally limited to juniors and seniors. Usually offered every semester. Graded pass/fail. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: ENG 099 and permission of the chairperson; application form from Registrar's Office must be completed at the time of registration. Generally limited to juniors and seniors. 1-3 credits.

ENG 420. African-American Literature. Examination of African-American literature as a lens through which students may more clearly view the ways that African Americans have contributed to, been influenced by, appropriated and transformed notions of American identity, specifically conceptions of freedom, equality, gender, sexuality, religion, class, and literature. Usually offered alternate fall semesters. Fulfills requirement: American Social Diversity, Intercultural Competence. Prerequisite: ENG 120 or 200-level literature survey. 3 credits.

ENG 421. Literature by Women. Investigation of the ways in which women from a broad diversity of cultural backgrounds respond to and reshape a tradition that has typically been gendered as masculine. This course explores the effects of culture, ethnicity, class, sexuality, and religion on women's writing. Usually offered alternate fall semesters. Fulfills requirement: American Social Diversity, Intercultural Competence. Prerequisite: ENG 120 or 200-level literature survey. 3 credits.

ENG 422. Post-Colonial Literature. Investigation of the theory and practice of advanced composition and rhetoric in multiple communications contexts. This course introduces the student to classical and contemporary rhetoric, and contributes to the enhancement of persuasive writing skills. Usually offered alternate fall semesters. Fulfills requirement: Writing Process, Intercultural Competence. 3 credits.

ENG 430. Multimedia Feature Writing. Introduction to the fundamentals of feature writing, with an emphasis on specific kinds of research, interviewing, storytelling, and editing text for diverse media. The course is run as a writing workshop. Offered spring semester. Prerequisite: ENG 231 (formerly 213) or ENG 233 (formerly 217), or permission of instructor. 3 credits.

ENG 450. Creative Writing Portfolio. Formal collection of the student's completed creative work must be submitted to the department in partial fulfillment of the creative writing concentration. To be offered every semester beginning in fall 2012. Graded satisfactory/unsatisfactory. 0 credits.

ENG 451. Advanced Creative Writing. This course creates an advanced workshop experience for students focusing on creative writing equivalent to the higher-level literature and theory courses for students focusing on literature and criticism, and it applies particularly to those who may pursue graduate study or immediate professional application of their writing skills. Advanced Creative Writing also fills a particular need not currently addressed in the department catalog, which is advanced study of creative writing aesthetics and craft. Because the course will necessarily be populated with students nearing the end of their degrees, the workshop and creative collection components will more accurately prepare students for professional or graduate work. 3 credits.

ENG 499. Literature Capstone. Guides the literature concentrator through the creation of a long research paper suitable for use as a writing sample for graduate school application or other professional purposes. Usually offered every semester. Graded satisfactory/unsatisfactory. Prerequisite: Junior standing (preferably spring semester), and a declared literature concentration. 0 credits.

EXSC 101. Anatomy & Physiology I. A detailed study of the human organism according to levels of chemical and structural organization with special reference to cytology, histology, and organs of the integumentary, skeletal, muscular, and nervous systems and fluid and electrolyte balance. Corequisite: EXSC-101L. 4 credits.

EXSC 101L. Anatomy & Physiology I Laboratory. Corresponding laboratory for EXSC-101. Corequisite: EXSC-101. 0 credits.

EXSC 102. Anatomy & Physiology II. A detailed study of the human organism according to levels of chemical and structural organization with special reference to cytology, histology, and organs of the sense organs, endocrine, cardiovascular, respiratory, urinary, digestive and reproductive systems and genetics. Corequisite: EXSC 102L. 4 credits.

EXSC 102L. Anatomy & Physiology II Laboratory. Corresponding laboratory for EXSC-102. Corequisite: EXSC-102. 0 credits.

EXSC 120. Medical Terminology. Examines terminology used by health care providers in clinical health care delivery, exploring medical word structure; terminology applicable to all body systems and medical abbreviations. Graded pass/fail. 1 credit.

EXSC 211. Introduction to Human Movement. This Course is designed to introduce principles, terminology, and function of the human body. Specific topics will include joint movements, muscle action, and basic function associated with the neuromuscular system. Laboratory experiences will allow the student to visualize and demonstrate movement patterns associated with basic functional movement. Corequisite: EXSC-211L. 4 credits.

EXSC 211L. Introduction to Human Movement Laboratory. Corresponding laboratory for EXSC-211. Corequisite: EXSC-211. 0 credits.

EXSC 216. Clinical Human Physiology. The design of this course is intended to introduce the basic concepts of clinical human physiology under normal and pathological conditions with emphasis on the neuromuscular, cardiovascular, and endocrine systems. Laboratory exercises place emphasis on integrating lecture content as it relates to physiological mechanisms, experimental design and data analysis. Lab exercises cover such topics as muscle contraction measurements, EMG spirometry, and ECG analysis. Prerequisite: EXSC 101/L and 102/L, or BIO 111/L and 112/L, or by permission of the chairperson. Corequisite: EXSC 216L. 4 credits.

EXSC 216L. Clinical Human Physiology Laboratory. Corresponding laboratory for EXSC-216. Corequisite: EXSC-216. 0 credits.

EXSC 302. Healthcare Administration Law and Policy. This course will be taught from an evidence-based perspective and serve to advance students' knowledge and creative inquiry related to the musculoskeletal rehabilitation process of common sports-related dysfunctions. Students will be exposed to the current best evidence supporting commonly used interventions including therapeutic, corrective, and functional exercise progressions. Critical thinking will be emphasized allowing students to compare and contrast protocol-based vs. criteria-based rehabilitation approaches of the extremities while emphasizing the current best evidence related to the concept of regional interdependence. 4 credits.

EXSC 304. Corporate Fitness and Occupational Medicine. This course explores the exercise professional's role in the occupational health settings. Students will see how physical activity is integrated into a healthy lifestyle and how that benefits individuals, organizations and society. Strategies for changing employee health behaviors and worksite norms will be examined. Implementation, marketing, cost effectiveness and cost benefit analysis of corporate fitness programs will be explored. 3 credits.

EXSC 310. Exercise Physiology. Examines skeletal muscle structure and function and cardiovascular, respiratory, and neuro musculoskeletal physiology during exercise in general and special patient/client populations. Current methods of nutritional and physical assessment will be evaluated. Prerequisite: EXSC 216, or permission of the department chairperson. 4 credits.

EXSC 311. Fundamentals of Anatomy. This course is designed to introduce students to the basics of human anatomy. The course will cover human muscle origins, insertions, and actions as well as describing in depth systemic anatomy of the skeletal, circulatory, respiratory, renal, reproductive, and nervous systems. The course will use a traditional lecture format and both anatomical models and computer software to aid in learning course material. Prerequisite: BIO 112/L, or permission of the instructor. 4 credits.

EXSC 312. Psychosocial Aspects of Disease and Disability. A survey course of the psychosocial implications of illness and disability. Specific attention is given to cultural differences, adjustment models, family stress from caregiving, family violence, and normal grieving processes. Fulfills requirement: Disciplinary Perspectives. 3 credits.

EXSC 314. Environmental Physiology. Examination of physiological adaptations to acute and chronic exposure to extreme heat, cold, and high altitude. Prerequisite: EXSC 310, or permission of the department chairperson. 3 credits.

EXSC 316. Exercise Techniques and Physical Conditioning. This course will be taught from an evidence-based perspective and serve to advance students' knowledge and creative inquiry related to the Musculoskeletal rehabilitation process of common sports-related dysfunctions. Students will be exposed to the current best evidence supporting commonly used interventions including therapeutic, corrective, and functional exercise progressions. Critical thinking will be emphasized allowing students to compare and contrast protocol-based vs. criteria-based rehabilitation approaches of the extremities while emphasizing the current best evidence related to the concept of regional interdependence. Prerequisite: EXSC 211 and 310, or permission of the department chairperson. 4 credits.

EXSC 318. Psychology of Health. This course will provide an overview of the relationship between psychological factors and health status. Evidence-based theories and models related to psychology of health will provide the framework for this course. Topics will include adherence, behavior and personality, stress/coping, and psychological factors that impact engagement in the healthcare system. 3 credits.

EXSC 402. Training and Conditioning. This course will be taught from an evidence-based perspective and serve to advance students' knowledge and creative inquiry related to the musculoskeletal rehabilitation process of common sports-related dysfunctions. Students will be exposed to the current best evidence supporting commonly used interventions including therapeutic, corrective, and functional exercise progressions. Critical thinking will be emphasized allowing students to compare and contrast protocol-based vs. criteria-based rehabilitation approaches of the extremities while emphasizing the current best evidence related to the concept of regional interdependence. 4 credits.

EXSC 412. Psychosocial Aspects of Disease and Disability. A survey course of the psychosocial implications of illness and disability. Specific attention is given to cultural differences, adjustment models, and family stress from caregiving, family violence, and normal grieving processes. Fulfills requirement: Disciplinary Perspectives. 3 credits.

EXSC 430. Nutritional Aspects of Exercise and Eating Disorders. This course is designed to educate exercise science majors on the basics of exercise nutrition, as well as the impacts that body image can have on eating habits. Students will explore details of macronutrients, micronutrients and proper hydration. They will correctly identify nutritional needs of persons undertaking a variety of levels of physical exertion, and be proficient in educating their patients of those needs. Students will understand disordered eating patterns, their physiological and psychological impacts, and will be able to identify obvious and subtle signs of disordered eating patterns. Students will learn, via a review of current literature, the known effective and ineffective methods for treating patients with disordered eating, including when additional health care referral is indicated. 3 credits.

EXSC 432. Personal Training. This course provides knowledge of leadership skills necessary to design, implement and evaluate safe and effective personal training programs. Emphasis will be placed on individualized fitness instruction and the development of training programs for cardiovascular health and strength. Observations within the field will be available as well as opportunities to apply introductory concepts of exercise training through practical application. 3 credits.

EXSC 434. Introduction to Cardiac Rehabilitation. This course is designed to educate exercise science majors on the basics of inpatient and outpatient cardiac rehabilitation. Instruction will include lecture, laboratory assignments, simulated patient examination and treatment, and possible observation of a functioning cardiac rehabilitation practice. 4 credits.

EXSC 442. Pharmacology. This course is an introduction to the general concepts and principles of pharmacology as it relates to the discipline of exercise science. Pharmacokinetics and pharmacodynamics principles will be addressed. The practical knowledge of Pharmacology including indications, contraindications, precautions, dose information, allergies, drug interactions and adverse side effects of prescription and non-prescription drugs as they relate to injuries or illnesses commonly acquired by the physically active person will be presented. Performance-enhancing substances (ergogenic aids) and an introduction to the process of drug testing in sports will also be a significant portion of the course. 3 credits.

EXSC 451. Introduction to Research Methods. This course is an introduction to evidence-based/critical inquiry in physical therapy. Basic search techniques are introduced with practical application. The student will refine search strategies for both the health/medical literature and the evidence-based websites to emphasize the role of peer-reviewed literature in the application to the basic elements of exercise or performance. The ethical issues of medical research and the role of Institutional Review Boards for the protection of human subjects are emphasized through historical perspectives and current guidelines published by NIH. The scientific peer-review process and components required for publication are reviewed. 3 credits.

EXSC 460. Practicum I. Introduction to field experience in exercise science and health promotion and to apply knowledge and skill obtained in core course work in an exercise setting and to become familiar with the operational and procedural aspects of a clinically-based facility. 3-4 credits.

EXSC 462. Practicum II. Introduction to field experience in exercise science and health promotion and to apply knowledge and skill obtained in core course work in an exercise setting and to become familiar with the operational and procedural aspects of a clinically-based facility. 3-4 credits.

EXSC 511. Human Anatomy. Explores human neuromusculoskeletal, cardiovascular, pulmonary, and integumentary systems. Laboratory exercises include cadaveric dissection. Prerequisites: GPA greater than 3.0. 5 credits. [This course is cross-listed with PHT 511]

FIN 283. Financial Instruments. This course provides an introduction to many modern financial instruments such as bonds and other fixed income products, stocks, mutual funds, ETFs, derivatives, and securitization products. We will cover the structures of these instruments, their uses for individuals and companies, and basic computational modeling of their value. Prerequisite: MAS 112 or MAS 162. 3 credits.

FIN 381. Corporate Finance. The course is designed to meet the Society of Actuaries (SOA) standards for Validation through Educational Experience (VEE) in the area of corporate finance. The course covers topics including defining the core concepts of corporate finance including: financial instruments, sources of capital and their costs, dividend policy, capital structure, capital budgeting, financial performance assessment, exchange rate risk, hedging, and arbitrage. Prerequisite: ASC 385, or permission of the instructor. 3 credits.

FIN 382. Financial Modeling. Students will study a variety of financial models including underlying theory and computer implementation. Topics include stationary, autoregressive, moving average, mixed, and ARIMA models. Additional topics such as statistical model testing, volatility models, or portfolio optimization may be included based on time constraints and student interest. Prerequisite: ASC 385, MAS 371; and FIN 283 or ASC 386. 3 credits.

FRN 101. Elementary French I. Develop basic communicative proficiency in French and French-speaking cultures. Fulfills requirement: Language. This course does not meet the new "Language and Culture" requirement of the common learning experience. 3 credits.

FRN 102. Language and Culture in the French Speaking World - Elementary Level. This is an active and immersive language and culture course, taught almost entirely in French in which students will develop elementary-level skills in listening, speaking, reading and writing in French and cultural awareness of the cultures associated with French. Fulfills requirement: Language, Language and Culture. Prerequisite: FRN 101 or placement test. Corequisite: FRN 102L. 4 credits.

FRN 200. Language and Culture in the French- Speaking World - Intermediate Level. This is an active and immersive language and culture course, taught almost entirely in French in which students will develop intermediate-level skills in listening, speaking, reading and writing in French and cultural awareness of the cultures associated with French. Fulfills requirement: Language, Language and Culture. Prerequisite: FRN 102 or placement test. Corequisite: FRN 200L. 4 credits.

FRN 280. Language and Culture in the French- Speaking World - Advanced Level. Intensive practice and analysis of written and spoken French, including phonetics and phonology. Development of more complex grammatical structures and advanced writing skills through composition assignments. Reading and presentations will prepare students for academic study and successful acculturation in a French-speaking country. Fulfills requirement: Language, Language and Culture. Prerequisite: FRN 200 or placement test 4 credits.

FRN 350. French Culture and Civilization. An overview of French culture, history, and geography. Major cultural values and beliefs will be analyzed and compared to values and beliefs in American culture. Fulfills requirement: Language and Culture. Prerequisite: FRN 280 or placement test with the permission of the instructor. 4 credits.

FRN 360. Francophone Cultures and Civilizations Countries. This course explores the culture and civilization of Francophone countries outside of France, countries where French is one of the languages spoken and where it is the main vehicle of literature and culture. Cultural values and perspectives will be analyzed and compared to values in American culture. Fulfills requirement: Intercultural Diversity, Language and Culture. Prerequisite: FRN 280 or placement test with the permission of the instructor. 4 credits.

FRN 375. French and Francophone Film. Examines significant contributions to cinematic art in French and Francophone cultures. Films spanning the century between the silent era and the present day will illustrate how French-language forms of cinematic expression have contributed to a world-wide cultural heritage. Fulfills requirement: Disciplinary Perspectives, Language and Culture. Prerequisite: FRN 280 or equivalent, or permission of the instructor. In order to receive DSP credit, students must have junior or senior standing. 4 credits.

FRN 380. Global Issues in French and Francophone Societies. Explores current political, social, and economic topics such as immigration, the European Union, rights of minorities, the colonial legacy, and globalization. Fulfills requirement: Disciplinary Perspectives, Language and Culture. Prerequisite: FRN 280, or placement with permission of the instructor. 4 credits.

FRN 405. Readings in French and Francophone Literature. Varying topics which focus on particular authors, genres or literary themes in French or Francophone literature. Examples may include: 20th Century: Confronting/Constructing Modernity; Women Writers; Writers of Negritude; Drama and Revolution. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: FRN 280 or placement test with permission of the instructor. 4 credits.

FRN 480. Capstone Senior Seminar in French. Culminating experience for the French major. Focus on synthesizing knowledge from previous courses into a broad historical and cultural framework. Final project will take the form of an extensive research paper. Fulfills requirement: Writing Process. Prerequisite: At least 20 hours of French credit. 1 credit.

FYE 111. First Year Experience I. This is a seminar-style course that promotes intellectual inquiry and develops competencies essential to meet the rigorous curricular demands of our College. The primary focus is on writing with a secondary focus on critical reading. In addition, a companion component of the course supports students' successful emotional and intellectual transition to college by addressing strategies for time management, classroom preparation, and examination preparation. Students will also be introduced to relevant campus resources. Fulfills requirement: First Year Experience. 4 credits.

FYE 112. First Year Experience II. This course continues FYE I's focus on writing and critical reading with an added emphasis on information literacy. Students learn library research techniques, including how to evaluate the quality and relevance of sources, and use information legally and ethically, culminating in a research paper. In the companion component of the course, students explore their future careers at LVC by developing a personal curricular map. Students will identify their strengths and skills that need additional development, while reflecting on their first-year curricular and co-curricular experiences and establishing both short and long term goals. Fulfills requirement: First Year Experience. Prerequisite: ENG 111, FYE 111, FYS 100, or permission of the instructor. 4 credits.

FYE 113. Introduction to the LVC Experience. This course introduces transfer students to the LVC experience by providing them with the knowledge and resources essential to success on our campus. This course is restricted to New Transfer Students only. Fulfills requirement: First Year Experience. 1 credit.

GLB 101. Crossing Borders Globalization. This course introduces students to the multiple dimensions of international issues, events, and structures from an array of perspectives by examining cultural, social, geographic, economic and political borders. Fulfills requirement: Liberal Studies Area 2 (Social Science), Intercultural Competence. 3 credits.

GLB 400. Internship. Internships provide Global Studies students with opportunities to achieve academic credit internships with local and regional employers. As a high impact educational opportunity, the internship experience allows students to gain knowledge and experience, learn in a "real world" environment, explore a chosen profession and achieve academic credit for their experience. Employers often seek out talented, motivated, and skilled global studies interns as a way of supporting their organizations' project needs and finding future employees while providing undergraduates with an exceptional learning experience in their area of interest. Internship opportunities are currently available at the World Affairs Council-Harrisburg, Church World Service-Lancaster, or while studying abroad. Other internship opportunities are available. Successful completion of the internship is contingent upon the student completing a reflective paper detailing the experience. Majors are recommended to pursue an internship opportunity during their junior or senior year. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. 1-12 credits.

GLB 460. Collaborative Undergraduate Research. Students collaborate with faculty on actual research projects, learning about both a particular topic in the Global Studies discipline and the research process in general and making an original contribution toward the scholarly understanding of the subject. Collaborative undergraduate research requires that Global Studies majors work closely with a faculty member. Research projects provide an intensive experience for the student that complements, enhances, and even surpasses the traditional classroom since the experience normally involves presentation of research at an academic conference in the discipline. Students are considered the primary collaborator-learners with the faculty member as a collaborator-advisor. The main goal of collaborative inquiry is to build and enhance students' information literacy and higher-order critical thinking and communication skills. The professor and student(s) are/is expected to produce a research manuscript that could be presented at an academic conference/professional meeting in the discipline or submitted for consideration of publication to an academic journal. Course may be repeated up to a limit of 12 credits; but only up to 6 credits can be applied to the major. Prerequisites: sophomore standing, 2.5 GPA, and permission of the instructor/chair. 1-3 credits.

GLB 461. International Research Project. Global Studies majors studying abroad for at least one full semester will initiate an independent study with an LVC faculty member. Students are expected to develop and complete an independent research project that connects both to their curriculum abroad and to their major at home. Students who successfully complete GLB 461 will earn at least 3 credits that will be applied to the Global Studies major at the same time they are earning credits abroad. Global independent study often serves as the catalyst for a student's continued research after returning to LVC in the form of an honors thesis. Students may enroll in 3 credits of GLB 500 in order to prepare their thesis. Course may be repeated up to a limit of 12 credits; but only up to 6 credits can be applied to the major. Prerequisites: sophomore standing, 2.5 GPA, and permission of the instructor/chair. 1 credit.

GLB 499. Synthesizing the Global Experience. In this interdisciplinary capstone experience, Global Studies students will synthesize and integrate classroom-based material with study abroad and deeper learning experiences. This interdisciplinary capstone experience is required of all majors in Global Studies. It presumes the student has studied abroad and will draw on that experience throughout the semester. It will challenge students to integrate and synthesize coursework from the Global Studies major with study abroad, collaborative undergraduate research, internships, global independent study, honors thesis, and/or the European Union Simulation. In addition to discussing shared readings on key topics relevant to the various majors and tracks, a substantial part of the semester will be devoted to the preparation and oral presentation of an integrated major independent research paper. Fulfills requirement: Writing Process. Prerequisites: Study Abroad, major in Global Studies and junior or senior standing. 3 credits.

GLB 500. Independent Study. Students may enroll in up to 3 credits of independent study during the final semester that they are preparing an honors thesis in Global Studies. This course may be repeated for credit as topic changes. 1-3 credits.

GLB 501. Independent Research Abroad. Global Studies majors will initiate and complete an independent study project during their study abroad experience under the direction and supervision of an LVC faculty member. This course may be repeated for credit as topic changes. 3 credits.

GLB 599. Honors in Global Studies. Students with junior or senior standing are eligible to apply for Departmental Honors in Global Studies. Students must have a GPA of 3.5 in their major courses and a cumulative GPA of at least 3.0. These requirements must be met both at the time of application and at the time of graduation. The honors program includes a substantial piece of work requiring extensive independent research, resulting in a high-caliber thesis. A thesis of this quality requires sustained research effort throughout at least one semester. Normally, students will develop and write their thesis as part of a GLB 500 Independent Study. Students who successfully complete and defend their Honors project will receive recognition on their College transcript. 0 credits.

GMN 101. Elementary German I. Introductory course in German. Aimed at developing basic communicative proficiency in German. Also offers insights into German-speaking cultures. Fulfills requirement: Language. This course does not meet the new "Language and Culture" requirement of the common learning experience. 3 credits.

GMN 102. Language and Culture in the German-Speaking World - Elementary Level. This course is an active and immersive language and culture course, taught almost entirely in German in which students will develop elementary skills in listening, speaking, reading and writing in German, awareness of the cultures associated with German. Fulfills requirement: Language, Language and Culture. Prerequisite: GMN 101 or placement test. Corequisite: GMN 102L. 4 credits.

GMN 200. Language and Culture in the German-Speaking World - Intermediate Level. This is an active and immersive language and culture course, taught almost entirely in German in which students will develop intermediate-level skills in listening, speaking, reading and writing in German, awareness of the cultures associated with German. Fulfills requirement: Language, Language and Culture. Prerequisite: GMN 102 or placement test. Corequisite: GMN 200L. 4 credits.

GMN 280. Language and Culture in the German- Speaking World - Advanced Level. Intensive practice and analysis of written and spoken German, including phonetics and phonology. Development of more complex grammatical structures and advanced writing skills through composition assignments. Readings and presentations will prepare students for academic study and successful acculturation in a German-speaking country. Fulfills requirement: Language, Language and Culture. Prerequisite: GMN 200 or placement test. 4 credits.

GMN 305. Summer Study in Germany. This four-week German language and culture course provides students possessing intermediate to advanced proficiency with an intensive linguistic and cultural immersion in an authentic German university environment. It combines daily classroom instruction with organized cultural activities and excursions. Language of instruction is German. Offered each summer. Fulfills requirement: Intercultural Diversity. Prerequisite: GMN 200 or equivalent, permission of the instructor. 4 credits.

GMN 345. Introduction to German Linguistics. Introduces students to the study of the linguistic systems of German (syntax, phonology, lexicon and morphology), the diversity of German (regional and social variations inside and outside of Europe), and the interconnectedness of German with culture, society, and identity-formation. Develops intercultural competence (skills needed to successfully communicate in various cultural contexts) through comparison with language use in America. Fulfills requirement: Language and Culture. Prerequisite: GMN 280 or placement test with permission of the instructor. 4 credits.

GMN 350. German Culture and Civilization. An overview of German culture, history, and geography. Major cultural values and beliefs will be analyzed and compared to values and beliefs in American culture. Fulfills requirement: Language and Culture. Prerequisite: GMN 280 or placement test with permission of the instructor. 4 credits.

GMN 375. German-Language Film. This course will examine significant contributions to cinematic art in German-speaking cultures. Films spanning the century between the silent era and the present day will illustrate how German forms of cinematic expression have contributed to a world-wide cultural heritage. Fulfills requirement: Disciplinary Perspectives, Language and Culture. Prerequisite: GMN 280 or placement test or permission of the instructor. In order to receive DSP credit, students must have junior or senior standing. 4 credits.

GMN 380. Global Issues in German-Speaking Societies. Explores current political, social, and economic topics such as immigration, the European Union, rights of minorities, the totalitarian legacy, and globalization. Fulfills requirement: Disciplinary Perspectives, Language and Culture. Prerequisite: GMN 280, or placement test and permission of the instructor. 4 credits.

GMN 410. Readings in German. Works of fiction and nonfiction selected to explore a particular topic or theme, analyzing the beliefs and values expressed. Topics may include: Berlin in Literary Imagination; Zeitenwenden; The Image of America in German-speaking cultures. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: GMN 280 or placement test and permission of the instructor. 4 credits.

GMN 440. German in Pennsylvania. Students discover and study the wealth of German culture in the state of Pennsylvania. In addition to background readings to gain historical and cultural context, students research authentic historical documents, some of which have never been published or translated into English. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: GMN 280 or placement test with the permission of the instructor. 4 credits.

GMN 460. Genres in German Literature. Works of fiction and nonfiction selected to explore a particular genre (short stories, novella, etc.), analyzing the specific features of the genre and beliefs/values expressed. Examples may include: Comedies from Hroswitha to Jelinek; Lieder from the Minnesanger to Rammstein. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: GMN 280 or placement test with the permission of the instructor. 4 credits.

GMN 480. Capstone Senior Seminar in German. This course is designed to be a culminating experience for the German major. As such, the focus of the course is on synthesizing knowledge from previous courses into a broad historical and cultural framework. Final project will take the form of an extensive research paper. Fulfills requirement: Writing Process. Prerequisite: At least 20 hours of German credit. 1 credit.

GRK 101. Elementary Classical Greek I. Through a study of the formation of nouns, verbs, and other parts of speech, students will begin to learn how to read Classical Greek. At an early stage in the learning process, the class will read and discuss inscriptions and stories in the Greek language set within the context of the daily life of the ancient Greek. So students of GRK 101 will advance in their appreciation of ancient Greek history, politics, and thought as revealed in mythology, religion, philosophy, literature and art of ancient Greek culture. Fulfills requirement: Language. 3 credits.

GRK 102. Elementary Classical Greek II. Students in GRK 102 continue to learn Classical Greek through additional vocabulary and study of syntax as well as less common verb and noun forms. Students will continue to learn formal intermediate grammar, by reading Greek, and not through abstract grammatical presentations. Fulfills requirement: Language. Prerequisite: GRK 101. 3 credits.

HIS 103. The Ancient World: the Dawn of Civilization to the Fall of the Han and Roman Empires. A study of the development of civilizations from the development of human civilizations to the end of the first era of empire building in India, China, and the Mediterranean. Topics include the river valley civilizations of Mesopotamia, Egypt, India, and China; the formation of great philosophies and religious traditions in Asia and Greece; and the first empires in the Mediterranean world, India, and China. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

HIS 104. The Second Age of Empires: World History from the Fall of Rome to the Mongol Invasions. A study of the second phase of empire building in world history, spanning the period from the fall of Rome in 476 to the end of the Middle Ages in Europe and the end of Mongol domination in Asia and Russia by 1450. Topics will include the Byzantine Empire; the gradual recovery of Europe after the fall of Rome; the renewal of China under the T'ang and the Song Dynasties; the Islamic dynasties in the Middle East, Africa, India, and China; the pre-Columbian empires of Latin America; and the Mongol invasions. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

HIS 105. Formation of the Modern World. This survey of modern world history (ca. 1450 to the present) explores key developments in the formation of the modern world, from the knitting together of Afro-Eurasia and the Americas to the emergence of global capitalism, colonization, and the nation-state system to the world wars of the 20th century, the Cold War and its aftermath, the process of globalization, the rise of Islamic extremism, and the intensifying impacts of global climate change. Bringing past and present together into a coherent analytical framework, the course encourages students to analyze contemporary global and domestic issues from diverse cultural perspectives, and to engage in ongoing reflections about their own culture and other cultures. Fulfills requirement: Liberal Studies Area 1 (History), Intercultural Competence. 3 credits.

HIS 125. United States History to 1865. The major events and developments in America from Columbus to the Civil War, with emphasis on the creation of a distinctive American society from the interaction of different cultures, ethnic groups, and ideas. Major themes include the transformation of European cultural ideas in colonial America and the impact of republican ideology, democratization, and the spread of the market economy between the Revolution and the Civil War. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

HIS 126. United States History since 1865. American history from 1865 until the present. Students learn about important themes in recent history such as the tension between property rights and human rights, pluralism and white supremacy, and ideological and political struggles over the regulation of capitalism, and the proper role of the federal government. Fulfills requirement: Liberal Studies Area 1 (History). 3 credits.

HIS 150. The Business of History. This course is designed to orient History majors to the wide variety of occupations available to them. Some go into law, business, public policy or politics, while others work in museums, archives, national parks or the military. Students will be introduced to people applying their History degrees to the real world, and will survey ways to research professional opportunities. 1 credit.

HIS 202. Historical Geography. An introduction to historical geography and to the concept of historical-geographic change over time in various parts of the world, focusing on prominent scholars and scholarly communities that examine key aspects of contemporary and human physical landscapes, especially with regard to agriculture, land use, urbanization, transportation, settlement, industry, migration, and disease. Prerequisite: Sophomore standing or permission of instructor. 3 credits.

HIS 207. Europe in the 20th Century. An introduction to the main political, social, economic and intellectual developments in twentieth-century Europe. The major themes of the course include the experience of the two world wars; the development of fascist and communist regimes under Lenin and Stalin, Mussolini, and Hitler; the weakness of the western democracies after World War I; the Holocaust; the Cold War; the Communist Bloc; the end to colonialism; the European Union; the development of the welfare state, and the new nationalism. Fulfills requirement: Writing Process, Liberal Studies Area 1 (History). Prerequisite: Sophomore standing or permission of instructor. 3 credits. [This course is cross-listed with POL 207]

HIS 210. The History of Modern France, 1750 to the Present. A study of French history from 1750 to the 1980s. The course provides an overview of the political, social, economic, and cultural history of France from the late eighteenth to the late twentieth century. The course will address a variety of themes from the standpoint of France's place in European history as a whole but also in terms of the uniqueness of the French experience. Some of the themes covered by the course will include: France's revolutionary tradition; the development of a democratic society; the French pattern of gradual industrialization; the persistence of the French peasantry; the socialist movement and syndicalism; the evolution of the radical right; imperialism; French communism; intellectual movements in literature, philosophy and the arts; France and Europe in the post-war period; women in French society; and the role of minorities in France. The course will also examine the ways in which these themes relate to issues confronting contemporary France. Fulfills requirement: Liberal Studies Area 1 (History). Prerequisite: Sophomore standing or permission of instructor. 3 credits.

HIS 215. Law and Government. This course uses key cases to study important doctrines established by the Supreme Court with respect to the structure and functions of the constitutional system (judicial, legislative and executive power and federalism). There is a particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. Fulfills requirement: Writing Process, Liberal Studies Area 2 (Social Science). Prerequisites: Sophomore standing or permission of the instructor. 3 credits. [This course is cross-listed with LAW 215]

HIS 217. Women in Modern Europe, 1750 to the Present. An exploration of the position of women in Modern Europe from 1750 to the present. The course focuses around the tensions between women's difference and demands for equal treatment as this theme has played out through history. The course will begin with a discussion of gender in history and then proceed to examination of women in pre- industrial Europe, the French Revolution, the industrial revolution, nineteenth-century reform movements, feminism and the suffrage movement. Twentieth century themes include the "new" woman, women in communist Russia and under the fascist regimes, the impact of two world wars on women's roles, the welfare state, and finally, contemporary feminism. Fulfills requirement: Writing Process, Liberal Studies Area 1 (History). Prerequisite: Sophomore standing or permission of instructor. 3 credits.

HIS 220. Colonial America: a History in Red, White, and Black. A study of the interactions between three very different cultures--American Indians, Africans, and Europeans--on the North American continent. Emphasis will be on the ideology and methods by which Europeans came to dominate the area, and how both Indians and Africans struggled to preserve their identity in an increasingly white-dominated colonial world. Fulfills requirement: American Social Diversity. 3 credits.

HIS 230. Electing the President. This course uses the current presidential election as a case study from which students can analyze the history of American parties and elections. The course will use political science concepts such as realignment and dealignment to study the rise and fall of the various "party systems" in American history, and will attempt to place the current presidential election within its historical context. Prerequisite: Sophomore standing or permission of instructor. 3 credits. [This course is cross-listed with POL 230]

HIS 240. American Military History. An analysis of American military institutions from Old World tradition to the post-Persian Gulf era with emphasis on the U. S. Army. Fulfills requirement: Liberal Studies Area 1 (History). Prerequisite: Sophomore standing or permission of instructor. 3 credits.

HIS 241. Working-Class Studies. This course incorporates a variety of approaches to working class studies: historical, sociological, cultural, and political. They will learn about the history and current practice of the labor movement and the different ways workers have organized politically. The primary focus of the class will be on the US, but some comparisons to other countries will be made to help highlight what is specifically American about our class system. Fulfills requirement: American Social Diversity. 3 credits.

HIS 250. The Historian's Craft. An introduction to the basics of historical research and writing. The most important goal of the course is to help students produce a clearly written research paper, with footnotes and a bibliography. A primary source paper and other writing assignments will prepare the students for the achievement of this goal. Class discussion will revolve around analysis of various types of primary sources, secondary sources, journal articles, issues of interpretation, and research methods. The course will also include several research trips to libraries, archives, historical societies, or local history collections. Fulfills requirement: Writing Process. Prerequisites: at least one of the following: HIS 103, 104, 105, 125, 126 or 127; or permission of the instructor. 3 credits.

HIS 251. Topics in Political History. This course will examine specific topics in political history, with a focus on either US, European, African, or Latin American political history. Specific topical emphases might include 19th and 20th Century US Political History; the impact of Colonial and Post-Colonial African Political History; Populist Politics in 20th & 21st Century Latin America; and Transformation in European Political Systems in the 20th & 21st Centuries. Topics will be announced two years in advance. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process. Prerequisites: Sophomore standing, and at least two 100-level courses in History; or permission of the instructor. 3 credits.

HIS 252. Topics in Economic History. This seminar will focus on topics in economic history. The modern market economy has created unprecedented productivity growth that has lifted billions of people out of grinding poverty. For the first time in history, there are more people who are overweight than underfed. This course examines the origins and the current state of a world economy with profound contradictions and possibilities. We delve into the various ways the modern economy emerged and the different paths taken by different countries, or by the United States at different points in time. We also look at the various ways that historians and other scholars have understood the economy. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process. Prerequisites: Sophomore standing, and at least two 100-level courses in History; or permission of the instructor. 3 credits.

HIS 253. Topics in Comparative History. This seminar will focus on topics in comparative history with a focus on European, Asian, and African history. Topics might include World War I, imperialism, nineteenth-century Europe, revolutions, or religion and violence. The comparisons might be within the context of European history, or might compare topics across the continents of Europe, Africa, and Asia. Topics will be announced two-years in advance. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process. Prerequisites: Sophomore standing, and at least two 100-level courses in History; or permission of the instructor. 3 credits.

HIS 254. Topics in the History of the Americas. This seminar focuses on questions, issues, and themes in the history of the Americas (i. e. , the Western Hemisphere). Topical and thematic emphases might include: Race, Class & Gender in the Americas from the Age of Revolution to the Present; Comparative Slavery & Post-Emancipation Societies in the Americas; Social Movements & State Formation in the Americas; and the Americas during the Cold War. Topical focus will be announced two years in advance. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process. Prerequisites: Sophomore standing, and at least two 100-level courses in History; or permission of the instructor. 3 credits.

HIS 275. Modern Latin America. This course examines the histories and cultures of the nation-states and peoples of modern Latin America, focusing on the period from the Age of Revolution to the present day. Major topics include the principal legacies of the precolonial and colonial periods, the formation of nation-states from the early 19th century, social and cultural history, race relations, class formation, neocolonialism, US-Latin American relations, economic dependency, political transformations, dictatorship and democracy, social revolution and counterrevolution, and the enduring conflict between progressivism and neoliberalism. Fulfills requirement: Intercultural Diversity, Intercultural Competence. Prerequisite: Sophomore standing or permission of instructor. 3 credits.

HIS 301. Evolution for Everyone. This course offers students an introduction to evolutionary theory and empirical research, especially as it applies to history and society. Evolution is powerful, elegant and easily understood. The human frame and brain evolved over time, and understanding how that happened will help understand the past and present of society. Fulfills requirement: Disciplinary Perspectives. Prerequisite: junior or senior standing. 3 credits.

HIS 303. Seminar on the History of South Africa. A seminar on the history of South Africa especially from the 1920s to the present. Topics include colonization, conflicts between European settlers and natives, the development of capitalism, the dynamics of black South Africans under apartheid, and the bloody struggle for and against national liberation in the early 1990s. Fulfills requirement: Intercultural Diversity. Prerequisites: Junior standing or permission of the instructor. HIS 273 is recommended. 3 credits.

HIS 304. Seminar on the History of Brazil. A study of the history of Brazil from the colonial period through the present day. The primary focus will be on the period from the arrival of the Portuguese Court in 1808 until the "abertura," or re-democratization of the 1980s. Some of the topics that will be covered in the course include: 1) the historical development of the Brazilian nation-state and 2) the development of a Brazilian "national" culture. Thus recurrent themes will include political organization and participation, economic growth and development, nationalism, authoritarianism and re-democratization, social organization and stratification, cultural production, and race relations. Fulfills requirement: Intercultural Diversity. Prerequisites: Junior standing or permission of the instructor, HIS 274 or 275 is recommended. 3 credits.

HIS 305. History of Mexico. This course examines Mexican history from before the Spanish conquest to the present day. The approach is chronological, topical, and thematic. Critically engaging with a wide variety of course materials, students will gain specific factual knowledge about Mexican history, including major figures, events, and trends; explore how the histories of the United States and Mexico have grown increasingly entwined; and examine diverse aspects of Mexican history, society, and culture. Fulfills requirement: Intercultural Diversity. Prerequisite: Sophomore standing or permission of the instructor. 3 credits.

HIS 310. Seminar on World War I. This course provides an in-depth study of World War I. The topics covered include the causes of the war; the military history of the war; the social, economic, and cultural changes that resulted; the terms and consequences of the peace; and ways in which the memories of the war were constructed. Although the course will focus on Europe where most of the war was fought, students will also examine the impact of the war on Russia and Europe's overseas colonies. Fulfills requirement: Writing Process. Prerequisites: Junior or senior standing and one prior history class or permission of the instructor. 3 credits.

HIS 312. The American Revolution. An in-depth study of why Americans declared their independence and how they won the Revolution and worked to build a republic in a hostile world of monarchies. Particular attention is paid to major issues on which historians of the period disagree. Fulfills requirement: Writing Process. Prerequisite: Sophomore standing or permission of the instructor. 3 credits.

HIS 315. The Civil War. A study of how sectional divisions over slavery led to a bloody war and reshaped American society. Fulfills requirement: Writing Process. Prerequisite: Sophomore standing or permission of the instructor. 3 credits.

HIS 330. The Ruling Class. This course offers students a chance to explore the origins, histories, institutions, and current practices of the American aristocracy. Students will learn about how the very rich families that currently enjoy enormous hereditary wealth obtained and maintain their fortunes. Students will also investigate the histories and current policies of the institutions that protect and promote the wealthy such as corporations, the stock market, and government. Fulfills requirement: American Social Diversity. 3 credits.

HIS 350. Introduction to Public History. This course introduces students to the field and practice of public history, or "history beyond the walls of the traditional classroom." We explore the many ways that historians, curators, archivists, and others research, preserve, and present historical topics to public audiences in museums, archives, historical societies, and via electronic media. Exposing students to the theories and practices on the presentation of history to public audiences, the course combines in-class study, presentations by public history experts, service-learning at an area museum, archive, or historical society, and student presentations of their service-learning projects. Prerequisite: Two courses in History; at least one at the 200-level or above. 3 credits.

HIS 400. Internship. Field experience related to student's work, research interests, or graduate school plans. A journal and paper in addition to field work are required. Students may take up to 6 credits per semester and up to 12 credits during the summer. Fulfills requirement: Immersive Experience. Prerequisites: Junior or senior status; overall GPA of at least 2.5; completion of registration forms; approval of internship site by student's advisor prior to registration; approval of department chair. 1-12 credits.

HIS 460. Undergraduate Research. This course is designed to provide students in political science, history, and international studies opportunities to obtain credit for engaging in undergraduate research projects under the faculty supervision. Students engage in research projects with faculty on a range of topics, subject to approval of the individual faculty member. Course may be repeated up to a limit of 12 credits; but only up to 6 credits can be applied to the major. Prerequisites: Completion of one course in History; sophomore standing, 2.5 GPA, and permission of the instructor/chair. 1-6 credits.

HIS 499. Senior Seminar in History. Focus on a theme in history such as World War I, the industrial revolution, or the Enlightenment. These topics will be approached from a variety of perspectives (economic, political, or social for example) and from the viewpoint of many national histories. Class meetings will include discussion of course readings, research methods, and the historiography related to the theme of the course. Students will write a research paper on some aspect of the course topic utilizing a variety of primary and secondary sources and present their research to the class. Fulfills requirement: Writing Process. Prerequisites: Senior history majors or permission of instructor. 3 credits.

IDS 179. VALE Conference. A first-year through senior-level course for all music business majors. The class is a forum for speakers from the industry and returning summer MBS interns to discuss current events in the music industry. The class is the catalyst for the design and facilitation of the annual music industry conference (LVC-MIC) held each fall. May be repeated for credit. 1 credit.

IDS 199. Vale Records Label. This course is the nucleus of the recording label branch of the R/evolution Music Group. In it, students will apply various skills in the real-world environment of a record label, including marketing, e-commerce, music recording, artist development, copyright clearance, and more. 1 credit.

IDS 210. Intergroup Dialogue. This course offers an interdisciplinary, historical, critical examination of race in the United States and in a transnational context. Although race is no longer held by scientists to have any biological reality, it has obviously played a central role in the formation of legal codes (from segregation to affirmative action), definitions of citizenship, economics (from slavery to discriminatory loan arrangements), culture (music, dance, literature, fashion), and identities. Where did the concept of race come from? How has it changed over time and across space? What pressures does it continue to exert on our lives? By looking at a range of cultural texts, visual images, and historical events where racial distinctions and identities have been deployed, constructed and contested, we hope to give students an understanding of how and why race matters. This course may be repeated for credit as topic changes. Fulfills requirement: American Social Diversity, Intercultural Competence. Prerequisite: At least sophomore standing. By instructor permission only. 3 credits.

IME 130. Interfaith Honor Society. LVC's Interfaith Honor Society (Iota Eta Sigma) encourages student exploration of the faiths of others in light of the student's own religious identity both in and beyond the classroom. Students are inducted within the Society once program requirements are met. Completion may occur at any point during a student's enrollment at Lebanon Valley College. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Application through the Office of Spiritual Life, Service, and Volunteerism required. 0 credits.

IME 140. Alternative Break Trips. Through LVC's Alternative Break Trip program, students travel in a group to serve within a community outside of the central Pennsylvania area. Five full days of service are complemented by evenings of extended individual and group reflection with the goal of connecting and extending knowledge from their academic studies to issues facing the community. One afternoon and evening of celebration allows for exploration of the cultural assets of the area. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Application through the Office of Spiritual Life, Service, and Volunteerism required. 0 credits.

IME 172. Study Abroad in Quebec, Canada. A two-week program that offers opportunities for incoming LVC students to travel with College faculty and a select group of other incoming students during the summer before their first year. Participation is open to students in any major. Students earn three credits during this cultural immersion experience. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 210. Theory and Practice of Tutoring. This course explores peer tutoring from various perspectives that highlight the situated nature of the learning process. Students will learn about the theoretical foundations of and best practices for peer tutoring, focusing on effective group tutoring. Course requirements for all Pod Leaders (chosen by recommendation only). Graded pass/fail. Pod leaders are chosen based off of several criteria: (1) Students must be recommended by the professor, who identifies strong students based off of leadership capabilities, class performance, and reliability; (2) Students must have at least a 3.0 cumulative GPA; (3) Student must have completed the course with a B+ or higher; (4) Student must complete an interview with the Director of the Center for Writing & Tutoring Resources, during which the Director will explain the IME and ensure the student has adequate time to devote to the course; (5) Student must complete an online training program consisting of six modules before tutoring can begin. 1 credit.

IME 230. Putnam Competition. The Putnam Competition is arguably the most challenging and prestigious mathematical competition for undergraduates in the US and Canada. Students will engage in small group problem solving sessions with peers and faculty in order to develop skills and strategies for approaching challenging mathematical problems. In December students will apply these skills by taking part in the competition. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Prerequisite: Completion of MAS 112 (or MAS 162, with approval) and application through the Mathematical Sciences department. 0 credits.

IME 240. Semester in Buenos Aires, Argentina. This spring semester program offers students at any level of Spanish language proficiency the opportunity to learn and improve their language skills in one of South America's largest cities. Students can fulfill LVC's six credit foreign language general education requirement and take Latin American culture classes taught in English. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 242. Semester in Melbourne, Australia. This fall semester program offers students the opportunity to take courses abroad equivalent to LVC major, minor, and general education requirements. Students live and take four courses at Monash University, located 30 minutes outside of Melbourne's city center. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 243. Semester in Shanghai, China. This fall semester program offers students the opportunity to take an introductory Mandarin language course, combined with relevant contextual courses that will help the student's further understand Chinese culture. The courses examine the development and role of a global China over recent years, with a focus on their history, culture, business and politics. A challenging part-time internship in a variety of disciplines is available to students, at all levels of language ability, in businesses, non-profits and non-government agencies. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 246. Semester in Santo Domingo, Dominican Republic. This fall or spring semester program offers students in any major who have completed coursework in Spanish at the intermediate-level plus one advanced Spanish course, the opportunity to participate in a total immersion cultural experience. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 247. Semester in Santiago, Dominican Republic. This fall or spring semester program offers students in any major who have completed coursework in Spanish at the intermediate-level plus one advanced Spanish course, the opportunity to participate in a total immersion cultural experience. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 249. Semester in London, England. This fall semester program offers students in any major the chance to complete certain LVC major/minor, general education, and elective requirements in a suburb of the world's most livable large cities. Students will attend Kingston University with British natives and other multinational students enrolled in a wide range of stimulating and flexible courses. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 251. Semester in Montpellier, France. This fall semester program offers students in any major who want to improve their knowledge of the French language and culture the opportunity to take courses in almost all areas of concentration. Montpellier, as the regional capital of Languedoc-Roussillon, plays a predominant role in the development of southern Europe. It is a highly-desirable location for companies that recognize the shift of European economics to the south. It offers easy access to the large metropolitan areas of the world. The IML is ideally located right in the heart of the historic city center, offering a unique combination of high-level education and culture. Montpellier is primarily a university-city of 50,000 students, more than 2,000 coming from all over the world. The city enjoys good weather and has easy access by rail and air with the rest of France and Europe. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 253. Semester in Berlin, Germany. This fall or spring semester program is offered to students in any major who have completed at least one year of college-level German language. Courses are tailored to Americans at the beginner or intermediate German language level. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 254. Semester in Athens, Greece. This fall or spring semester program offers all majors an education at the Athens Centre, which is located in the same part of Athens where the first modern Olympics were held in 1896. This program is especially designed for students interested in learning about the origin of European culture, which strongly influences our American society today. The Athens Program offers an opportunity to explore those origins with the support and guidance of a strong academic focus. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 255. Semester in Perugia, Italy. The Umbra Institute provides LVC students fall and spring semester program options in the medieval city of Perugia, Italy. Students can choose from a variety of courses with integrated field trips to famous Italian cities and sites, community engagement opportunities outside of the classroom, and extra-curricular activities. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 258. Semester in Hamilton, New Zealand. This fall or spring semester program offers students the opportunity to take four courses abroad in almost any concentration. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 260. Semester in Belfast, Northern Ireland. This spring semester program offers Audio and Music Production majors the opportunity to take courses in their major at a large university. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 263. Semester in Valladolid, Spain. This fall or spring semester program offers students in any major who have completed coursework in Spanish at the intermediate-level plus one advanced Spanish course, the opportunity to participate in a total immersion cultural experience. Valladolid, the largest regional capital in Europe, is located about 100 miles northwest of Madrid. It is famous for the purity of its spoken "Castellano," or Castilian Spanish. The program is located at the Universitas Castellae, a private institution dedicated to teaching the Spanish language to university students from other countries. Fulfills requirement: Intercultural Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 267. Semester in Philadelphia, PA. This fall or spring semester program offers students in any major the chance to complete an internship in a city while earning academic credits. The Philadelphia Center provides opportunities for professional exploration, intellectual development, and personal growth in the heart of America's fifth largest city. Their accredited program features field placements, academic courses, and independent living. Fulfills requirement: American Social Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 269. Semester in Washington, DC. This fall or spring semester program offers students in any major the chance to complete an internship in the heart of our nation's capital while earning academic credits. The Washington Center provides opportunities for professional exploration, intellectual development, and personal growth. Their accredited program features a field placement, forum, and an elective class. Fulfills requirement: American Social Diversity, Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 274. Study Abroad in London, England. This three-week summer program will focus on comparing and contrasting the national education curriculum in the U. K. with our state curriculum in the U. S. , teaching training programs in the U. K. and the U. S. , and the structure and role of Parliament and Congress in regulating educational practices. Students will learn through in-class instruction, host school visits for teaching observations, and excursions to museums and popular tourist attractions. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 275. Study Abroad in Ormskirk, England. A 3-week program studying and traveling in the glorious countryside of England's Lake District. Students will participate in the EDU 450 course, Teaching the Young Adolescent, Aged 10-15, at Edge Hill University in Ormskirk. This will include an invaluable practicum experience in an English Middle School setting. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 279. Study Abroad in Wurzburg, Germany. This four-week summer program is offered to students in any major who have completed at least two years of college-level German language. The program combines daily intensive classroom instruction with organized cultural activities and excursions. Students will enroll in a four credit advanced German course that can be applied toward a major or minor in German. The course is taught by experienced German faculty from LVC. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 282. Study Abroad in Perugia, Italy. This summer program in Perugia, Italy is offered in conjunction with the three credit course: Gastro-Philosophy: Reflections on Place, Time, and Identity. Students will be led on excursions to sites such as an Italian butchery, a local vineyard, and an overnight trip to Venice. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 284. Study Abroad in Maastricht, Netherlands. This summer program offers students in any major the opportunity to learn about the different facets of Europe and the European Union. Students enroll in two courses which focus on the economic and socio-cultural aspects of Europe. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

IME 287. Study Abroad in Barcelona, Spain. This three-week study abroad program will immerse students in the art and culture of Barcelona, Spain. Topics will include the architectural evolution of the city from its ancient origins to the present, the development of the Modern art movement in the work of pioneering artists such as Picasso and Dalí, and the contemporary aesthetic of Barcelona as a global center of cultural tourism. The class will travel to numerous sites of interest in Barcelona and the surrounding region of Catalonia, providing students with ample opportunities for exploration and on-site learning. Fulfills requirement: Immersive Experience. Application through the Office of Global Education required. 0 credits.

ITA 101. Elementary Italian I. Introductory courses in Italian. Aimed at developing basic communicative proficiency in Italian. Also offers insights into Italian-speaking cultures. Fulfills requirement: Language. 3 credits.

ITA 102. Elementary Italian II. Second semester of introductory course in Italian. Fulfills requirement: Language. Prerequisite: ITA 101 or equivalent. 3 credits.

ITA 205. Italian Conversation I. Italian Conversation offered in the fall semester is an opportunity for those who have studied in Italy to share about their experience. For those who have not yet been, it is an opportunity to put into practice skills learned in Elementary Italian. Students choose the cultural topics to be covered from a list that includes travel, neighborhoods and food. Focus will be on presentations in each of these areas. Grammar is reviewed and put into practice. Prerequisite: ITA 102, or 1 semester of study abroad in Italy or permission of the instructor. 1 credit.

ITA 206. Italian Conversation II. Italian Conversation offered in the spring semester is an opportunity for those who have studied in Italy to share about their experience. For those who have not yet been, it is an opportunity to put into practice skills learned in Elementary Italian. Students choose the topics to be covered from a list that includes work, family, entertainment, sports and art. Focus will be on presentations in each of these areas as well as a larger project to be presented at the end of the semester. Students will learn new grammatical structures not covered in the elementary classes to enhance their conversational skills. Prerequisite: ITA 102 or completion of a Study Abroad in Italy, or permission of the instructor. 1 credit.

LAT 101. Elementary Latin I. Elementary Latin teaches the basics of Latin grammar, syntax and vocabulary, allowing students to read adapted literature and unadapted literature with appropriate annotations. It will benefit students interested in linguistic studies and those considering advanced work in law, medicine, literature, history, fine arts, archaeology, anthropology, philosophy, religion, and classics. Fulfills requirement: Language. This course does not meet the new "Language and Culture" requirement of the common learning experience. 3 credits.

LAT 102. Elementary Latin II. Elementary Latin teaches the basics of Latin grammar, syntax and vocabulary, allowing students to read adapted literature and unadapted literature with appropriate annotations. It also shows how Latin has influenced culture through inscriptions, ritual, and music. It will benefit students interested in linguistic studies and those considering advanced work in law, medicine, literature, history, fine arts, archaeology, anthropology, philosophy, religion, and classics. Fulfills requirement: Language, Language and Culture. Prerequisite: LAT 101 or equivalent. 4 credits.

LAW 215. Law and Government. This course uses key cases to study important doctrines established by the Supreme Court with respect to the structure and functions of the constitutional system (judicial, legislative and executive power and federalism). There is a particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. Fulfills requirement: Writing Process, Liberal Studies Area 2 (Social Science). Prerequisite: Sophomore standing or permission of the instructor. 3 credits. [This course is cross-listed with HIS 215]

LAW 316. Civil Liberties and Civil Rights. This course uses key cases to study important doctrines established by the Supreme Court with regard to civil rights and civil liberties. Students will examine the Court's rulings concerning the establishment and free exercise of religion, protection of freedom of speech and of the press, privacy rights (abortion and sexual freedom), the rights of the accused in the criminal justice system, and the law governing racial or sexual discrimination. The course places particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. Fulfills requirement: Writing Process, American Social Diversity. Prerequisites: Sophomore standing or permission of the instructor. LAW 215 recommended. 3 credits. [This course is cross-listed with POL 316]

LAW 400. Internship. Field experience in a law environment. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisite: GPA of 2.50 in major and permission of department chair. 1-12 credits.

LAW 499. Seminar in Law. This capstone seminar examines the historical and philosophical development of constitutional law in the United States; the seminar emphasizes the dynamic relationship between the law and moral and political philosophy. Fulfills requirement: Writing Process. Prerequisites: Junior or senior standing. POL/PHL 345, DSP 352, DSP 356, or BUS 450. 3 credits. [This course is cross-listed with PHL 417]

LAW 500. Independent Study. This course may be repeated for credit as topic changes. 1-3 credits.

MAS 099. Presentation Attendance. The aim of this course is exposure to mathematics beyond the classroom curriculum. The course requirement is attendance at a minimum of six formal presentations on mathematical topics given at conferences, colloquia or symposia at a minimum of two separate events (that is, a conference or event). Presentations should have a title and abstract and may be given by faculty or students; poster sessions do not count. Graded pass/fail. 0 credits.

MAS 100. Concepts of Mathematics. A study of a variety of topics in mathematics. Many introduce modern mathematics and most do not appear in the secondary school curriculum. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. 3 credits.

MAS 102. Pre-Calculus. A review of precalculus mathematics including algebra and trigonometry. A student may not receive credit for this course after completing MAS 111, MAS 161, or the equivalent. 3 credits.

MAS 111. Analysis I. A calculus sequence for department majors and other students desiring a rigorous introduction to elementary calculus. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. Corequisite: MAS 113. 4 credits.

MAS 112. Analysis II. Second semester of a calculus sequence for department majors and other students desiring a rigorous introduction to elementary calculus. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. Prerequisite: MAS 111; Corequisite: MAS 114. 4 credits.

MAS 113. Introduction to Mathematical Thinking I. An introduction to college mathematics for potential mathematical science majors. Corequisite: MAS 111. 1 credit.

MAS 114. Introduction to Mathematical Thinking II. Second semester. Introduction to college mathematics for potential mathematical science majors. Corequisite: MAS 112. 1 credit.

MAS 150. Finite Mathematics. Introduction to mathematical techniques used in quantitative analysis in business and economics. Topics include sets, linear relations, matrices, linear programming, probability and interest. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. 3 credits.

MAS 161. Calculus I. A calculus sequence covering functions, limits, differentiation, integration and applications. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. 3 credits.

MAS 162. Calculus II. Second semester of a calculus sequence covering functions, limits, differentiation, integration and infinite series. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. Prerequisite: MAS 161. 3 credits.

MAS 170. Elementary Statistics. An introduction to elementary descriptive and inferential statistics with emphasis on conceptual understanding. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. A student may not receive credit for MAS 170 after completing MAS 372. A student may not receive credit for both MAS 170 and MAS 270. 3 credits.

MAS 202. Foundations of Mathematics. Introduction to logic, set theory and proof techniques. Prerequisites: MAS 251 or ASC 281. 3 credits.

MAS 222. Linear Algebra. An introduction to linear algebra including systems of equations, vector spaces and linear transformations. Prerequisites: MAS 112 or MAS 261. 3 credits.

MAS 251. Discrete Mathematics. Introduction to mathematical ideas used in computing and information sciences: logic, sets and sequences, matrices, combinatorics, induction, relations and finite graphs. Prerequisites: MAS 112 or MAS 162. 3 credits.

MAS 261. Calculus III. Multivariate calculus including partial differentiation, multiple integration, vector fields and vector functions. Prerequisites: MAS 112 or MAS 162. 3 credits.

MAS 266. Differential Equations. An introduction to ordinary differential equations. Prerequisites: MAS 112 or MAS 162. 3 credits.

MAS 270. Intermediate Statistics. A more advanced version of MAS 170 intended for students with some calculus background. Fulfills requirement: Liberal Studies Area 4 (Mathematics), Quantitative Reasoning. A student may not receive credit for both MAS 170 and MAS 270. 3 credits.

MAS 311. Real Analysis. Convergent and divergent series, limits, continuity, differentiability and integrability; Fourier series. Prerequisites: MAS 202, MAS 222, and MAS 251. 3 credits.

MAS 322. Abstract Algebra. Introduction to algebraic structures including groups, rings and fields. Prerequisites: MAS 202, MAS 222, and MAS 251. 3 credits.

MAS 325. Geometry. Axiomatic development of absolute, Euclidean and non-Euclidean geometries. Prerequisites: MAS 202, MAS 222, and MAS 251. 3 credits.

MAS 335. Operations Research. Introduction to some operations research techniques including linear programming, queuing theory, project scheduling, simulation and decision analysis. Prerequisites: MAS 222 or MAS 251 or MAS 202. 3 credits.

MAS 371. Mathematical Probability. A mathematical introduction to probability, discrete and continuous random variables, and sampling. Prerequisites: at least two of MAS 202, MAS 251, and ASC 281. 3 credits.

MAS 372. Mathematical Statistics. An introduction to the mathematical foundations of statistics including sampling distributions, estimation, hypothesis testing, linear models and multivariate distributions. Prerequisite: MAS 371. 3 credits.

MAS 390. Special Topics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: MAS 251 or MAS 202. 3 credits.

MAS 500. Independent Study. Independent Study in Mathematical Science. This course may be repeated for credit as topic changes. 1-3 credits.

MBS 179. Music Business Colloquium. A first-year through senior-level course for all music business majors. The class is a forum for speakers from the industry and returning summer MBS interns to discuss current events in the music industry. The class is the catalyst for the design and facilitation of the annual music industry conference (LVC-MIC) held each fall. May be repeated for credit. Prerequisites: music business major or permission. 1 credit.

MBS 203. Milestones in Music Recording. An in depth analysis of the seminal recordings of the music industry. Milestone records representing the art of recorded music will be studied from conception to marketing. Examples of such recordings include Sgt. Pepper, Dark Side of the Moon, OK Computer, Band on the Run, and more. The goal is to discover why and how the records studied have become the high art of the music industry. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

MBS 371. Introduction to the Music Business. This course examines how the music business operates, delving into a wide range of issues and areas, such as publishing, record labels, retail, distribution, market research, agents and managers, and current issues in the industry. 3 credits.

MBS 372. Music Copyright, Contracts and Cash. An in-depth examination of publishing and recording contracts, music copyright law, and music licensing. Prerequisite: MBS 371 or permission of the instructor. 3 credits.

MBS 373. Music Industry Entrepreneurship. This course for music business majors explores entrepreneurship in the music industry. The class revolves around the creation of a practical music business and an accompanying detailed business plan that is submitted to a participating financial institution for review. Student teams also engage with actual music businesses to provide marketing, distribution, research, and other services. The class discusses techniques and practices of management, operations, marketing, and other skills needed to run a successful music business. Prerequisites: MBS 371 and 372 (taken in the sophomore year), or permission of the instructor. 3 credits.

MBS 400. Internship. Internship in Music Business May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisites: Completion of all program requirements and permission of the instructor. 3-12 credits.

MED 110. Foundations of Music Education. This course is a study of foundational matters that shore up an understanding of the music education process in schools, framing philosophical issues cross-culturally and comparatively, so that prospective teachers might grasp a broader and more varied view of music in education across time and place. It will include a balance of the strong traditions of school music programs with the program transitions that are unfolding as society expands into technology and mediates popular culture. One component of the course will be a weekly field experience (two hours per week, minimum, or a total of 30 hours in the semester) to orient students into practical matters of curriculum and instruction linked to philosophical and theoretical issues. 3 credits.

MED 223. Brass Techniques. A study of the brass family. Emphasis on pedagogical techniques. Mixed brass ensemble experience. 2 credits.

MED 227. Percussion Techniques. A study of the percussion family. 1 credit.

MED 280. Field Practicum in Music Education. Optional supervised field experiences in appropriate settings. May be repeated for credit. Prerequisite: MED 110 and permission of instructor. 1-3 credits.

MED 330. Woodwind Techniques. A study of the woodwind family. 2 credits.

MED 331. String Techniques. A study of the string family. 2 credits.

MED 333. Methods and Materials, General Music: Elementary. The study and application of general music practices and principals for teaching at the elementary school level. Emphasis is placed on the development of teaching for musical understanding through hands on constructivist approaches. Lesson design, assessment strategies and engagement with current trends in music teaching and learning will enable student to demonstrate a strong pedagogical approach as music educators. Weekly field experience totaling 30 semester hours and three practicum lessons are required. 3 credits.

MED 334. Choral Literature and Methods. A study of literature, materials and approaches appropriate for choral and general music classes in grades 5-12. Fulfills requirement: Writing Process. 3 credits.

MED 335. Instrumental Literature and Methods. A study of literature, materials, philosophy and methods applicable to the teaching of instrumental ensembles (including marching band) from elementary through high school levels. 3 credits.

MED 337. Music Teaching and Learning I. This course is designed to introduce theories of learning with application to music education. Topics include stage and phase theories, theories of musical play and socialization, constructivist theory of meaning making, social learning and reinforcement theories, learning style theories, and theories/strategies of instruction. One component of the course is a weekly field experience in the local schools (two hours per week, minimum, or a total of 30 hours in the semester) to orient students into practical matters of music instruction and curriculum linked to principles of learning. Current and emerging education technology will be infused in the course. 2 credits.

MED 437. Music Teaching and Learning II. This course is designed as the application of learning theories to the teaching of music, with particular focus on elementary/middle (gr. 4-8) and secondary (gr. 9-12) education. Topics include curriculum design, contemporary practices, and instructional materials, with an emphasis on current and emerging technology. One component of the course will be a weekly field experience (two hours per week, minimum, or a total of 30 hours in the semester) in the local schools. 2 credits.

MED 441. Student Teaching: Instrumental. Music education majors spend a semester in the music department of a school district under the supervision of cooperating teachers. Fulfills requirement: Immersive Experience. 6 credits.

MED 442. Student Teaching: Vocal. Same as MED 441. Fulfills requirement: Immersive Experience. 6 credits.

MSC 099. Recital Attendance. Designed for music majors and minors and graded on a satisfactory/unsatisfactory basis. Music core course. Graded pass/fail. May be repeated. 0 credits.

MSC 100. Introduction to Music. For the non-music major, a survey of Western music designed to increase the individual's musical perception. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

MSC 101. Fundamentals of Music. For music minors and non-music majors, an introduction to the rudiments of music: notation, key signatures, theory, aural theory and so forth. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). 3 credits.

MSC 111. Class Guitar for Beginners. Student provides his or her own instrument. May be repeated for credit. 1 credit.

MSC 115. Music Theory I. A study of the rudiments of music and their notation. Harmonization of melodies and basses with fundamental triads. Aspects of form and analysis. Music core course. Prerequisite: audition for admission or permission of the instructor. 2 credits.

MSC 116. Music Theory II. A study of diatonic tonal harmony, including all triads and seventh chords, nonharmonic material and elementary modulation. Aspects of form and analysis. Music core course. Prerequisite: MSC 115 or permission of the instructor. 2 credits.

MSC 117. Aural Theory I. The singing and aural recognition of intervals, scales, triads and simple harmonic progressions. Music core course. Prerequisite: audition for admission or permission of the instructor. 2 credits.

MSC 118. Aural Theory II. A continuation of MSC 117, emphasizing clef reading, modality, modulation and more complicated rhythmic devices and harmonic patterns. Music core course. Prerequisite: MSC 117 or permission of the instructor. 2 credits.

MSC 130. Music Composition Workshop. A study of basic composition techniques, including composing in standard forms (theme and variation, binary, ternary) for acoustic instruments, with emphasis on music notation and aspects of analysis. Students compose their own works and participate in the performance during class of other students' works. This course may be repeated for credit as topic changes. Prerequisite: MSC-116. 1 credit.

MSC 150. Class Piano Instruction I. First course in the sequence designed for music majors with minimal piano skills in preparing for piano proficiency. 1 credit.

MSC 151. Class Piano Instruction II. Second course in the sequence designed for music majors in preparing for piano proficiency. Prerequisite: MSC 150 with a minimum of C- or better, or permission of the instructor. 1 credit.

MSC 152. Class Piano Instruction III. Third course in the sequence designed for music majors in preparing for piano proficiency. Prerequisite: MSC 151 with a minimum of C- or better, or permission of the instructor. 1 credit.

MSC 153. Class Piano Instruction IV. Fourth course in the sequence designed for music majors in preparing for piano proficiency. Prerequisite: MSC 152 with a minimum of C- or better, or permission of the instructor. 1 credit.

MSC 160. Class Voice Instruction. Designed for music majors with minimal vocal skills. Preparation for department voice proficiency requirements. 1 credit.

MSC 201. Music of the United States. One of the central concerns of this course is the ability of music to represent American identity. Of particular interest are the historic contributions of minority peoples, particularly African Americans, to the rich diversity of musical styles in the United States. This course considers the importance of geographic and ethnic origins of a particular musical style as well as the consequences of a market-driven music industry which historically has privileged some people groups over others. Fulfills requirement: Writing Process, American Social Diversity, Critical Thinking through Writing. 3 credits.

MSC 202. World Musics. A general introduction to musical styles, compositional practices, and aesthetics of specific people groups within the Americas, Asia, and Africa. It discusses traditional, popular, and art music styles, and presents music intimately tied to value systems and social practice. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.

MSC 203. All That Jazz: Performance Survey of American Musical Theatre Literature. This course provides students the opportunity to research and experience American Musical Theatre through collaboration and performance of solo and ensemble songs from a variety of eras and styles. The course will culminate in a public student performance of select songs from the semester. Fulfills requirement: American Social Diversity. Prerequisite: MSC 101, MSC 115, or permission of the instructor. 3 credits.

MSC 215. Music Theory III. A study of chromatic tonal harmony, including secondary dominants, augmented sixth chords, tertian extensions, altered chords and advanced modulation. Aspects of form and analysis. Music core course. Prerequisite: MSC 116 or permission of the instructor. 2 credits.

MSC 216. Music Theory IV. A study of 20th-century compositional techniques, including modal and whole-tone materials, quartal harmony, polychords, atonality, serialism and various rhythmic and metric procedures. Aspects of form and analysis. Prerequisite: MSC 215 or permission of the instructor. 2 credits.

MSC 217. Aural Theory III. A continuation of MSC 118, emphasizing chromatic materials and more complex modulations, chord types, rhythms and meters. Music core course. Prerequisite: MSC 118 or permission of the instructor. 2 credits.

MSC 218. Jazz Theory. A study of jazz theory, including notation, extended chords, improvisation and practice. Prerequisites: MSC 115, MSC 116 and MSC 215. 2 credits.

MSC 233. Diction. An introduction to the pronunciation of singer's English, German, French, Italian and Latin, utilizing the International Phonetic Alphabet. Required of voice concentration majors, the course is open to other students with permission of the instructor. 2 credits.

MSC 241. History and Literature of Music I. A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from early music through the Baroque era. Music core course. 3 credits.

MSC 242. History and Literature of Music II. A survey course in the history of Western music (in the context of world musics of various cultures), with emphasis on stylistic developments and illustrative musical examples, from the classical period to the present. Music core course. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art). Prerequisite: MSC 101, MSC 115, or permission of the instructor. 3 credits.

MSC 246. Principles of Conducting. Principles of conducting and baton technique. Students conduct ensembles derived from class personnel. Music core course. 2 credits.

MSC 306. Piano Literature. A survey of the development of the piano and its literature with emphasis on piano methods books and related materials. 2 credits.

MSC 315. Counterpoint. Introductory work in strict counterpoint through three- and four-part work in all the species. 2 credits.

MSC 316. Keyboard Harmony. Score reading and the realization of figured bass at the keyboard, transposition and improvisation. Prerequisite: The successful completion of a piano proficiency jury is required for admission to the course. 2 credits.

MSC 326. Vocal Literature. A survey of solo vocal literature with emphasis on teaching repertoire. Extensive listening is required. Students may have opportunities to perform the works studied. 2 credits.

MSC 327. Vocal Pedagogy. This course prepares the advanced voice student to teach private lessons at the secondary school level. Students are expected to develop vocal exercise procedures, become familiar with suitable teaching repertoire and apply teaching procedures in a laboratory situation. Selected writings in vocal pedagogy and voice therapy will be studied. 2 credits.

MSC 329. Advanced Form and Analysis. An advanced course in analysis, focusing on the methodologies and concepts of music design originated by the Austrian theorist Heinrich Schenker. Emphasis is placed on the appropriate use of symbols and terminology in the reading and construction of graphs of complete tonal compositions. Prerequisite: MSC 216 or permission of instructor. 2 credits.

MSC 343. 20th Century Music. An advanced course in music history. Beginning with late-19th-century musical developments, the course continues chronologically through the 20th century. Designed for music majors and interested non-majors who read music well. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art). Prerequisite: MSC 242 or permission of the instructor. 3 credits.

MSC 345. Advanced Instrumental Conducting. Emphasis on practical work with instrumental groups. Rehearsal techniques are applied through individual experience. Prerequisite: MSC 246 or permission of the instructor. 2 credits.

MSC 347. Advanced Choral Conducting. Emphasis is on advanced technique with and without baton, score preparation, interpretation and pedagogy relating to choral organizations. Prerequisite: MSC 246 or permission of the instructor. 2 credits.

MSC 351. Organ Literature. A historical survey of representative organ literature from earliest times to the present day. 2 credits.

MSC 352. Organ Pedagogy. Designed with a practical focus, this course surveys various methods of organ teaching. Laboratory teaching and selection of appropriate technical materials for all levels are included. 2 credits.

MSC 403. Instrumental Pedagogy. A survey of teaching materials that relate to the student's performance area. Students may be expected to apply teaching procedures in a laboratory situation. May be repeated for credit. 2 credits.

MSC 405. Instrumental Literature. A survey of literature (solo and chamber) that relate to the student's performance area. 2 credits.

MSC 406. Piano Pedagogy. A practical course that explores fundamental principles necessary to be an effective piano teacher. Subjects include practice techniques, memorization and the selection of appropriate technical materials for both beginners and advanced students. Laboratory teaching may be required of the student. 2 credits.

MSC 416. Orchestration. A study of instrumentation and the devices and techniques for scoring transcriptions, arrangements and solos for orchestra and band, with special emphasis on practical scoring for mixed ensembles as they occur in public schools. Laboratory analysis and performance. Scoring of original works. 2 credits.

MSC 422. Church Music Methods and Administration. A course that acquaints students with the church music program. Includes the development of a choir program, methods and techniques of rehearsal, budget preparation, and committee and pastoral relationships. 3 credits.

MSC 450. Accompanying. Under the guidance of piano instructor, the piano concentration student prepares accompaniments for recital performance. One credit per semester is given for one solo recital or two half recitals. A maximum of two credits, usually distributed over the last three years, may be earned. 1-2 credits.

MUE 101. Marching Band. The principal band experience during the fall semester open to all students based on prior experience. Performs for home football games and selected invitationals. Practical lab experience for music education majors. Satisfies large ensemble requirement. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1 credit.

MUE 102. Symphonic Band. The principal band experience during the spring semester, open to all students by audition. The Symphonic Band performs original literature and arrangements of standard repertoire. Satisfies large ensemble requirement. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1 credit.

MUE 103. Symphony Orchestra. Various symphonic literature is studied and performed. In the second semester the orchestra accompanies soloists in a concerto-aria concert and on occasion combines with choral organizations for the performance of a major work. Open to all students by audition. Satisfies large ensemble requirement. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1 credit.

MUE 104. Concert Choir. Open to all students by audition, the Concert Choir performs all types of choral literature. In addition to local concerts, the Choir tours annually. Satisfies large ensemble requirement. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1 credit.

MUE 106. College Choir. Open to all students. The College Choir performs all types of choral literature. Satisfies large ensemble requirement. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1 credit.

MUE 209. Chamber Choir. Open to all students by audition, the Chamber Choir performs chamber vocal literature from madrigals to vocal jazz. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1/2 credit.

MUE 210. Clarinet Choir. May be repeated for credit (up to 12 credits of music ensembles may be counted toward the degree). 1/2 credit.

MUE 211. Flute Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 212. Saxophone Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 213. Woodwind Quintet. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 214. Low Brass Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 215. Trumpet Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 216. Percussion Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 220. String Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 225. Jazz Band. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 226. Small Jazz Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 230. Guitar Ensemble. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 231. Brass Quintet. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 235. Handbell Choir. This course may be repeated for credit as topic changes. 1/2 credit.

MUE 236. New Music Ensemble. A chamber ensemble that performs works of 20th- and 21st-century composers with a focus on experimental music. This course may be repeated for credit as topic changes. 1/2 credit.

MUI 110. Individual Instruction: Piano. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 111. Individual Instruction: Organ. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 121. Individual Instruction: Voice. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 130. Individual Instruction: Trumpet. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 131. Individual Instruction: French Horn. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 132. Individual Instruction: Trombone. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 133. Individual Instruction: Euphonium. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 134. Individual Instruction: Tuba. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 140. Individual Instruction: Flute. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 141. Individual Instruction: Oboe. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 142. Individual Instruction: Bassoon. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 143. Individual Instruction: Clarinet. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 144. Individual Instruction: Saxophone. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 150. Individual Instruction: Violin. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 151. Individual Instruction: Viola. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 152. Individual Instruction: Cello. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 153. Individual Instruction: Bass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 154. Individual Instruction: Guitar. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 155. Individual Instruction: Percussion. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 160. Individual Instruction: Jazz Studies Guitar. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 161. Individual Instruction: Jazz Studies Percussion. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 162. Individual Instruction: Jazz Studies Piano. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 163. Individual Instruction: Jazz Studies Woodwind/Brass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 164. Individual Instruction: Jazz Studies Bass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 170. Individual Instruction: Theory. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 171. Individual Instruction: Composition. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 172. Individual Instruction: Jazz Composition. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors and minors or by permission of the instructor. 1 credit.

MUI 210. Individual Instruction: Piano. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 211. Individual Instruction: Organ. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 221. Individual Instruction: Voice. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 230. Individual Instruction: Trumpet. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 231. Individual Instruction: French Horn. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 232. Individual Instruction: Trombone. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 233. Individual Instruction: Euphonium. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 234. Individual Instruction: Tuba. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 240. Individual Instruction: Flute. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 241. Individual Instruction: Oboe. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 242. Individual Instruction: Bassoon. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 243. Individual Instruction: Clarinet. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 244. Individual Instruction: Saxophone. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 250. Individual Instruction: Violin. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 251. Individual Instruction: Viola. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 252. Individual Instruction: Cello. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 253. Individual Instruction: Bass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 254. Individual Instruction: Guitar. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 255. Individual Instruction: Percussion. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 260. Individual Instruction: Jazz Studies Guitar. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 261. Individual Instruction: Jazz Studies Percussion. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 262. Individual Instruction: Jazz Studies Piano. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 263. Individual Instruction: Jazz Studies Woodwind/Brass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 264. Individual Instruction: Jazz Studies Bass. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 270. Individual Instruction: Theory. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 271. Individual Instruction: Composition. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

MUI 272. Individual Instruction: Jazz Composition. Additional fees apply. May be repeated for credit. Enrollment restricted to music majors. 2 credits.

NEU 211. Behavioral Genetics. This course will take an interdisciplinary approach to examining variations in genotype and their behavioral correlates. We will study the biological principles of genetics and how they relate to personality traits, diseases, and disorders. Students will learn laboratory techniques for analyzing genetic variation and how each variation relates to behavioral predispositions. Prerequisite: PSY 111/L, BIO 111/L, and BIO 112/L. 3 credits.

NEU 211L. Behavioral Genetics Laboratory. Corresponding laboratory for NEU 211. Prerequisite: PSY 111/L, BIO 111/L, and BIO 112/L. 1 credit.

NEU 231. Neurobiology. This course takes an in-depth look at the biological and physiological processes that give rise to complexity of the nervous system and ultimately allow for complex function. It examines the biology of vertebrate nervous systems, with particular emphasis on the human nervous system. Topics include cellular and molecular biology of the neuron, neuroanatomy, neurophysiology, nervous system development and plasticity, mechanisms of learning and memory, and sensory and motor systems. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: NEU 231L. 3 credits. [This course is cross-listed with BIO 231]

NEU 231L. Neurobiology Laboratory. Corresponding laboratory for NEU 231. Prerequisite: a C- (1.67) average in BIO 111/L and BIO 112/L. Corequisite: NEU 231. 1 credit. [This course is cross-listed with BIO 231L]

NEU 232. Neuroanatomy of Disease. This course will examine, in depth, the neuroanatomical bases for selected disorders of the human central nervous system. The topics covered will include Parkinson's disease, Alzheimer's disease, Huntington's disease and stroke. Current trends in prevention and treatment of the disorders will also be studied. Prerequisite: BIO 111/L, BIO 112/L, and PSY 111/L. 3 credits. [This course is cross-listed with BIO 232]

NEU 285. Introduction to Psychopharmacology. This course surveys the most commonly used substances to treat mental disorders, such as antianxiety, antidepressant, antipsychotic, mood-stabilizer, psychostimulant, and cognitive enhancer medications. The course also discusses the brain and its most common neurotransmitters, how transmitting neurons send and receive electrochemical information, the pharmacokinetics (metabolism and elimination) and pharmacodynamics (absorption, distribution, and effects) of each drug as well as the action sites, side effects, and mechanisms of each drug. Prerequisite: PSY 111/L or 112, or junior-level Psychology major or minor. 3 credits. [This course is cross-listed with PSY 285]

NEU 291. Special Topics in Theoretical Neuroscience. Topics to be announced at time of registration. This course may be repeated for credit as topic changes. Corequisite: NEU 291L. 3 credits.

NEU 291L. Special Topics in Theoretical Neuroscience Laboratory. Topics to be announced at time of registration. Corresponding lab for NEU 291. This course may be repeated for credit as topic changes. Corequisite: NEU 291. 1 credit.

NEU 292. Special Topics in Applied Neuroscience. Topics to be announced at time of registration. This course may be repeated for credit as topic changes. Corequisite: NEU 292L. 3 credits.

NEU 292L. Special Topics in Applied Neuroscience Laboratory. Topics to be announced at time of registration. Corresponding lab for NEU 292. This course may be repeated for credit as topic changes. Corequisite: NEU 292. 1 credit.

NEU 299. Mind and Brain. This course serves to introduce students to the philosophical mind and the biochemical brain. We will explore arguments that they are one in the same, dichotomous, and where they may overlap. Using consciousness and its states as our basis, we will delve into questions about mind and matter and how they affect behavior. Students will also develop their skills in the written communication of arguments. Fulfills requirement: Writing Process. Prerequisite: Sophomore standing and PSY 111/L or BIO 112/L. 3 credits.

NEU 378. Behavioral Neuroscience. A study of the biological basis (substrates) of behavioral processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, ingestive behaviors, emotion and psychopathology. Prerequisites: PSY 111/L; PSY 211/L or 212/L; and junior-level neuroscience major or minor. 3 credits. [This course is cross-listed with PSY 378]

NEU 379. Behavioral Neuroscience Lab. Students will be introduced to methods used in the study of the nervous system and its influence on behavior. Lab work will include collecting, analyzing, and reporting data from physiological studies, as well as sheep brain dissection. In addition, students must complete an APA style proposal for an individual research project. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: NEU 378. 1 credit. [This course is cross-listed with PSY 379]

NEU 499. Advanced Seminar in Neuroscience. Readings, discussions, and reports on selected topics in neuroscience. This course may be repeated for credit as topic changes. Prerequisite: Permission of the instructor. 1 credit.

PBI 499. Psychobiology Seminar. Readings, discussions, and reports on selected topics in psychobiology. May be repeated for credit. Prerequisite: Permission of the instructor. 1 credit.

PHL 110. The Examined Life. Examination of major philosophical issues and the ways major philosophers have dealt with them. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.

PHL 140. Encountering World Philosophies. A study of diverse perspectives on the basic questions of philosophical inquiry: What is the nature of reality? What is the nature of the self? What is the nature of knowledge? By what standards do we evaluate truth claims? This course examines these questions from perspectives outside the classical philosophical approach rooted in the Mediterranean. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.

PHL 210. Ethics. An inquiry into the central problems of values applied to human conduct, with an examination of the responses of major ethical theories to those problems. Fulfills requirement: Writing Process, Liberal Studies Area 6 (Religion and Philosophy), Critical Thinking through Writing. 3 credits.

PHL 229. Culture and Conflict in Modern America. An examination of the social, political, economic and cultural upheaval of the 1960s and 1970s in the historical context. Fulfills requirement: Writing Process, American Social Diversity. 3 credits.

PHL 230. Philosophy of Religion. A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and interpretations of revelation, symbolism and religious language. Fulfills requirement: Writing Process, Liberal Studies Area 6 (Religion and Philosophy), Critical Thinking through Writing. 3 credits. [This course is cross-listed with REL 230]

PHL 270. Seminar in the History of Philosophy. This seminar is dedicated to a historical period or movement within the broader history of philosophy. Conducted in a seminar style, this course will introduce students to research and writing within the field of philosophy, as well as broaden students' understanding of the important figures and ideas that have shaped the course of philosophical thinking. Majors are required to take two of these seminars. Seminar topics include: Ancient Philosophy; Medieval Philosophy; The Enlightenment; 19th century Philosophy; Existentialism; The Linguistic Turn. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

PHL 280. Logic. Logic is the study of valid arguments, arguments whose conclusions follow from their premises. The course teaches the translation of arguments into symbolic logic so that their structure and validity become apparent. It also teaches how to construct proofs of valid arguments and refutations of invalid ones. 3 credits.

PHL 285. Independent Reading Forum. For this course students will, in consultation with a member of the faculty, develop a reading list to explore critical themes, significant theorists, and/or a key thinker or school of thought in religion or philosophy. The work of the course is in part the independent reading of this list and in part participation in a forum of all students enrolled in this course with faculty from the department, focused on sharing what each student learns in their independent readings. This course may be repeated for credit as topic changes. 1 credit. [This course is cross-listed with REL 285]

PHL 299. Gastro-Philosophy: Reflections on Place, Time, and Identity. This course begins from the simple premise that human life flourishes if thinking informs eating, and eating informs thinking. While this truth might be considered universal, one can also claim that our eating and thinking is radically shaped and transformed by the contingencies of a particular location, time, and culture. This seeming paradox is the starting point for a three-week study-abroad investigation of food and thought on the Italian peninsula. This course will be offered as a study-abroad course only. Students will live and study in Perugia, Italy for a course of study that matches philosophical reflection about eating and taste with hands-on encounters with Italian food, culture, and history. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.

PHL 301. Key Authors. Intensive studies of individual great philosophers or principal schools. Potential authors include Aristotle, Kant, Nietzsche, etc. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: one course in philosophy or permission of the instructor. 3 credits.

PHL 310. Themes in Philosophy. The course focuses on the issues surrounding one central theme/topic in the study of philosophy as it relates to the other two courses in a Cluster. Topics may include Postmodern Philosophy, Philosophy and Technology, Environmental Ethics, Philosophy of Mind, and so on. This course may be repeated for credit as topic changes. 3 credits.

PHL 311. Interdisciplinary Seminar in Philosophy. The course focuses on the issues surrounding one central topic in the study of Philosophy. Students will take an interdisciplinary and problem-oriented approach to such topics as Genocide, Postmodern Philosophy and Theology, Madness and Happiness. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

PHL 401. Senior Presentation. This course requires students to develop a presentation for their peers and faculty in the department integrating revelations garnered during their coursework. The students will prepare and give a formal presentation of their "one big idea" in a TED styled talk to be digitally archived. This course may be repeated for credit as topic changes. Prerequisite: Junior or senior standing. 1 credit.

PHL 417. Seminar in Law. This capstone seminar examines the historical and philosophical development of constitutional law in the United States; the seminar emphasizes the dynamic relationship between the law and moral and political philosophy. Fulfills requirement: Writing Process. Prerequisites: Junior or senior standing. POL 345/PHL 345, DSP 352, DSP 356 or BUS 450. 3 credits. [This course is cross-listed with LAW 499]

PHL 450. Undergraduate Research Symposium I. The LVC Undergraduate Research Symposium is a year-long, team-taught reading intensive course that will culminate in a public presentation and subsequent publication of the student's work. The subject may be thematic based (e. g. , "Race and Religion") or focused exclusively on a prominent contemporary figure (e. g. , Catherine Malabou, Paul Kahn). External expert scholars will be incorporated into the course as guides, resources, and critical respondents through videoconferencing. Students enrolled in the fall semester of the course will be expected to continue with REL 451 / PHL 451 in the spring. This course may be repeated for credit as topic changes. 3 credits. [This course is cross-listed with REL 450]

PHL 451. Undergraduate Research Symposium II. This is a continuation of the year-long, team-taught Undergraduate Research Symposium Course. It is a research and writing intensive course that builds on the reading, discussion and research begun in the fall semester. An external expert scholar will be incorporated into the course as guide, resource, and critical respondent in the public symposium held every spring in conjunction with INQUIRY, LVC's annual celebration of student learning. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: REL/PHL 450 in good standing, or permission of the instructor. 3 credits. [This course is cross-listed with REL 451]

PHT 311. Fundamentals of Anatomy. This course is designed to introduce students to the basics of human anatomy. The course will cover human muscle origins, insertions, and actions as well as describing in depth systemic anatomy of the skeletal, circulatory, -respiratory, renal, reproductive, and nervous systems. The course will use a traditional lecture format and both anatomical models and computer software to aid in learning course material. Prerequisite: BIO 112 and permission of the instructor. 4 credits.

PHT 412. Psychosocial Aspects of Disease and Disability. A survey course of the psychosocial implications of illness and disability. Specific attention is given to cultural differences, adjustment models, family stress from caregiving, family violence, and normal grieving processes. Fulfills requirement: Disciplinary Perspectives. Enrollment is restricted to majors; registration of non-majors is by permission only. 3 credits.

PHT 502. Professional Issues of Physical Therapy Practice I. Introduces students to key professional ethical and practice issues, including communication and health policy. 3 credits.

PHT 504. Professional Issues of Physical Therapy Practice II. Continued study of professional ethical and practice issues and patient care documentation. Students develop an understanding of the impact of ethical decision-making through self-discovery and teaching. Theories of teaching and learning are introduced as a basis to understand the learning process and to investigate patient education in physical therapy practice. 4 credits.

PHT 511. Human Anatomy. Explores human neuromusculoskeletal, cardiovascular, pulmonary, and integumentary systems. Laboratory exercises include cadaveric dissection. Prerequisites: GPA greater than 3.0. 5 credits. [This course is cross-listed with EXSC 511]

PHT 514. Pathophysiology. Examines basic human pathology and medical principles, including, but not limited to, inflammation, infection, systemic conditions, diagnostic imaging, genetics, and clinical laboratory tests. 4 credits. [This course is cross-listed with ATR 714]

PHT 516. Biomechanics and Kinesiology. Examines tissue and joint structure and function, and the mechanical principles involved in human motion. The laboratory portion will introduce students to the basics of postural and gait assessment. Prerequisite: PHT 311. 4 credits.

PHT 518. Exercise Science. Examines skeletal muscle structure and function and cardiovascular, respiratory, and neuromusculoskeletal physiology related to physical activity and exercise in general and special patient/client populations. Current methods of nutritional and physical assessment will be evaluated. 3 credits.

PHT 520. Motor Control Motor Learning. This course will focus on the processes that govern human movement acquisition and control across the lifespan and will prepare students to apply principles of motor development, motor control, and motor learning to clinical practice. Emphasis will be placed on developing a working knowledge of the neural, physical, and behavioral aspects of human movement and the process involved in acquiring and refining motor skills across the lifespan. 2 credits.

PHT 532. Clinical Examination. An introduction to the tests and measurements used by physical therapists in the clinical and research settings. Laboratory sessions will provide the student with an opportunity to integrate concepts and apply the therapeutic interventions discussed in lecture. 3 credits.

PHT 534. Cardiovascular-Pulmonary Physical Therapy. Examines the physical therapy management of individuals with cardiac and respiratory dysfunction. Particular attention is focused on exercise prescription, patient management in various clinical settings, current medical and surgical procedures, and guidelines and education for inpatient and outpatient rehabilitation. 3 credits.

PHT 535. Physical Therapy in the Inpatient Environment. This course introduces physical therapy students to the practice of physical therapy in the acute care environments, including hospitals, inpatient rehab centers, and skilled nursing facilities. Prerequisite: PHT 412, 502, 511, 514, 516, and 518. 2 credits.

PHT 542. Pharmacology in Rehabilitation. Provides a general introduction to pharmacological principles including basic pharmacokinetics and pharmacodynamics. Descriptions of general classes of medications and their impact and utilization in rehabilitation are stressed. 2 credits.

PHT 551. Foundations of Evidenced Based Critical Inquiry. Methods of research and scientific discovery are introduced as concepts and with application. The ethical issues of medical research and the role of Institutional Review Boards for the protection of human subjects are emphasized through historical perspectives and current guidelines published by NIH. The scientific peer-review process and components required for publication are reviewed. 3 credits.

PHT 595. Student Run Free Clinic I. This is one of a series of courses offered to all physical therapy students in the graduate phase of the program who are interested in participating in the LVC student run free physical therapy clinic for individuals who are underinsured/ uninsured in the community. Students have the opportunity to work with patients throughout the semester, as well as manage all aspects of the clinic. Students will be supervised throughout the experience by licensed physical therapists. Students will be required to undergo HIPPA, OSHA, Standard Precautions, and CPR training and demonstrate competency in all areas prior to working in the clinic. Graded pass/fail. 0 credits.

PHT 596. Student Run Free Clinic II. This is one of a series of courses offered to all physical therapy students in the graduate phase of the program who are interested in participating in the LVC student run free physical therapy clinic for individuals who are underinsured/ uninsured in the community. Students have the opportunity to work with patients throughout the semester, as well as manage all aspects of the clinic. Students will be supervised throughout the experience by licensed physical therapists. Students will be required to undergo HIPPA, OSHA, Standard Precautions, and CPR training and demonstrate competency in all areas prior to working in the clinic. Graded pass/fail. 0 credits.

PHY 103. General College Physics I. An introduction to the fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure, with laboratory work in each area. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PHY 103L. 3 credits.

PHY 103L. General College Physics I Laboratory. Laboratory course to cover the fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PHY 103. 1 credit.

PHY 104. General College Physics II. A continuation of PHY 103. Fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure, with laboratory work in each area. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: PHY 103 or equivalent. Corequisite: PHY 104L. 3 credits.

PHY 104L. General College Physics II Laboratory. A continuation of PHY 104. Laboratory course to cover the fundamental concepts and laws of the various branches of physics, including mechanics, heat, sound, electricity, magnetism, optics, and atomic and nuclear structure. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: PHY 103/L or equivalent. Corequisite: PHY 104. 1 credit.

PHY 111. Principles of Physics I. An introductory course in classical physics, designed for students who desire a rigorous mathematical approach to college physics. Calculus is used throughout. The first semester is devoted to mechanics and heat with laboratory work in each area. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite or corequisite: MAS 111 or 161. Corequisite: PHY 111L. 3 credits.

PHY 111L. Principles of Physics I Laboratory. Corresponding laboratory for PHY 111. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite or corequisite: MAS 111 or 161. Corequisite: PHY 111. 1 credit.

PHY 112. Principles of Physics II. Second semester of Principles of Physics. An introductory course in classical physics, designed for students who desire a rigorous mathematical approach to college physics. Calculus is used throughout. The second semester is devoted to electricity, magnetism and optics with laboratory work in each area. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: PHY 111/L and MAS 111 or 161. Corequisite: PHY 112L. 3 credits.

PHY 112L. Principles of Physics II Laboratory. Corresponding laboratory for PHY 112. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Prerequisite: PHY 111/L and MAS 111 or 161. Corequisite: PHY 112. 1 credit.

PHY 120. Principles of Astronomy. An introduction to the forces that shape the solar system and the universe as well as the tools used to observe them. It presents a comprehensive review of the modern scientific view of the physical universe. Topics include the history of astronomy, astronomical technology, and the structure and evolution of astrophysical systems including the solar system, Sun, other stars, and galaxies. Laboratory work required. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PHY 120L. 3 credits.

PHY 120L. Principles of Astronomy Laboratory. Corresponding laboratory for PHY 120. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PHY 120. 1 credit.

PHY 205. Physics of Sound. An investigation into the principles and applications of physics as relates to sound and audio. Sound waves, room acoustics and design, musical instrument sound propagation, harmonics and overtones, electromagnetic induction, and other related topics will be explored. 3 credits.

PHY 211. Atomic and Nuclear Physics. An introduction to modern physics, including special relativity, the foundation of atomic physics, quantum theory of radiation, the atomic nucleus, radioactivity and nuclear reactions, with laboratory work in each area. Prerequisite: PHY 102/L, 104/L or 112/L, MAS 111 or 161 or permission. Corequisite: PHY 211L. 3 credits.

PHY 211L. Atomic and Nuclear Physics Laboratory. Corresponding laboratory for PHY 211. Prerequisite: PHY 102/L, 104/L or 112/L, MAS 111 or 161 or permission. Corequisite: PHY 211. 1 credit.

PHY 212. Introduction to Electronics. The physics of electrons and electronic devices, including diodes, transistors, power supplies, amplifiers, oscillators, switching circuits, and integrated circuits, with laboratory work in each area. Prerequisite: PHY 102/L, 104/L or 112/L, or permission. Corequisite: PHY 212L. 3 credits.

PHY 212L. Introduction to Electronics Laboratory. Corresponding laboratory for PHY 212. Prerequisite: PHY 102/L, 104/L or 112/L, or permission. Corequisite: PHY 212. 1 credit.

PHY 261. Introduction to Computational Physics. An introduction to the approximate numerical solution of physical problems with computers. The course focuses on problems from mechanics, electromagnetics, and quantum mechanics that are not analytically solvable. Topics include realistic projectile motion, planetary motion, and electromagnetic fields produced by charge and current distributions. Prerequisites: PHY 102,104, or 112 and MAS 111 or 161. 3 credits.

PHY 302. Optics. A study of the physics of light, with emphasis on the mathematics of wave motion and the interference, diffraction and polarization of electromagnetic waves. The course also includes geometric optics with applications to thick lens, lens systems and fiber optics. Prerequisites: PHY 112 and either MAS 112 or MAS 162. 3 credits.

PHY 304. Thermodynamics. A study of the physics of heat, with emphasis on the first and second laws of thermodynamics. Applications of thermodynamics to physics and engineering are included. Elements of kinetic theory and statistical physics are developed. Prerequisites: PHY 112 and either MAS 112 or MAS 162. 3 credits.

PHY 311. Analytical Mechanics I. A rigorous study of classical mechanics, including the motion of a single particle, the motion of a system of particles and the motion of a rigid body. Damped and forced harmonic motion, the central force problem, the Euler description of rigid body motion and the Lagrange generalization of Newtonian mechanics are among the topics treated. Prerequisites: PHY 111 and MAS 266. 3 credits.

PHY 312. Analytical Mechanics II. Second semester of a rigorous study of classical mechanics, including the motion of a single particle, the motion of a system of particles and the motion of a rigid body. Damped and forced harmonic motion, the central force problem, the Euler description of rigid body motion and the Lagrange generalization of Newtonian mechanics are among the topics treated. Prerequisites: PHY 111/L and MAS 266. 3 credits.

PHY 321. Electricity and Magnetism I. Theory of the basic phenomena of electromagnetism together with the application of fundamental principles of the solving of problems. The electric and magnetic properties of matter, direct current circuits, alternating current circuits, the Maxwell field equations and the propagation of electromagnetic waves are among the topics treated. Prerequisite: PHY 112, MAS 261, and MAS 266. 3 credits.

PHY 322. Electricity and Magnetism II. Second semester of the theory of the basic phenomena of electromagnetism together with the application of fundamental principles of the solving of problems. The electric and magnetic properties of matter, direct current circuits, alternating current circuits, the Maxwell field equations and the propagation of electromagnetic waves are among the topics treated. Prerequisites: PHY 112, MAS 261, MAS 266. 3 credits.

PHY 327. Experimental Physics I. Experimental work selected from the area of mechanics, AC and DC electrical measurements, optics, atomic physics, and nuclear physics, with emphasis on experimental design, measuring techniques and analysis of data. Prerequisite: PHY 211. 1 credit.

PHY 328. Experimental Physics II. Second semester of experimental work selected from the areas of mechanics, AC and DC electrical measurements, optics, atomic physics, and nuclear physics, with emphasis on experimental design, measuring techniques and analysis of data. Fulfills requirement: Writing Process. Prerequisite: PHY 211. 2 credits.

PHY 350. Audio Electronics. Somebody has to design, install, and maintain the complex audio systems used in the industry. You'll learn about system design for sound reinforcement, cabling and interfacing for recording studios, basic troubleshooting and electronics, tests and measurements, and other behind-the-gear issues. Prerequisite: PHY 212 and MRT 278. 3 credits.

PHY 421. Quantum Mechanics I. A study of selected topics in modern physics, utilizing the methods of quantum mechanics. The Schrodinger equation is solved for such systems as potential barriers, potential wells, the linear oscillator and the hydrogen atom. Perturbation techniques and the operator formalism of quantum mechanics are introduced where appropriate. Prerequisites: PHY 211 and MAS 266, or permission. 3 credits.

PHY 422. Quantum Mechanics II. Second semester of a study of selected topics in modern physics, utilizing the methods of quantum mechanics. The Schrodinger equation is solved for such systems as potential barriers, potential wells, the linear oscillator and the hydrogen atom. Perturbation techniques and the operator formalism of quantum mechanics are introduced where appropriate. Prerequisites: PHY 211 and MAS 266, or permission. 3 credits.

POL 101. Controversies in Contemporary Politics. This course uses contemporary political controversies affecting the U. S. and other countries in order to understand basic concepts in politics. The issues vary from year to year. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

POL 110. The Architecture of American Power. This course provides a survey of key developments, institutions, and issues in American politics. Topics include the ideas that shaped the original American political system; the presidency; Congress and federal courts; the operation of political parties and interest groups; domestic and foreign policy debates; and contemporary issues such as civil rights and affirmative action. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

POL 200. The Discipline of Political Science. This course is a broadly-based introduction to the discipline of political science, with an emphasis on the design and evaluation of political research. Students will get practice writing a literature review, using empirical theories to formulate clear hypotheses, testing those hypotheses, and writing a compelling conclusion. We focus on improving information literacy and the kinds of research and communication skills necessary to succeed both in college and in today's workplace, in the context of learning more about political activity throughout the world. 3 credits.

POL 207. Europe in the 20th Century. An introduction to the main political, social, economic and intellectual developments in twentieth-century Europe. The major themes of the course include the experience of the two world wars; the development of fascist and communist regimes under Lenin and Stalin, Mussolini, and Hitler; the weakness of the western democracies after World War I; the Holocaust; the Cold War; the Communist Bloc; the end to colonialism; the European Union; the development of the welfare state, and the new nationalism. Fulfills requirement: Writing Process, Liberal Studies Area 1 (History). Prerequisite: Sophomore standing or permission of instructor. 3 credits. [This course is cross-listed with HIS 207]

POL 210. Comparative Politics. This is an introduction to the study of comparative politics: the comparison of political systems in order to understand how and why these systems function differently. The course is built around three fundamental questions: What is comparative politics? What kinds of phenomena do we compare? What are the major theoretical approaches that guide our studies? We also examine distinctions between the "developing" and the "developed" worlds, and between authoritarian and democratic political regimes. The last half of the semester is devoted to the study of individual country case studies, with an emphasis on those in Africa, Latin America, Asia and the Middle East. Fulfills requirement: Intercultural Diversity. Prerequisite: Sophomore standing or permission of the instructor. 3 credits.

POL 230. Electing the President. This course uses the current presidential election as a case study from which students can analyze the history of American parties and elections. The course will use political science concepts such as realignment and de-alignment to study the rise and fall of the various "party systems" in American history, and will attempt to place the current presidential election within its historical context. Prerequisites: Sophomore standing or permission of the instructor. 3 credits. [This course is cross-listed with HIS 230]

POL 245. Conceptions of Global Power and World Politics. This course uses the levels of analysis approach to understand international politics and applies theories in international relations to draw connections between political concepts and contemporary world issues. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

POL 256. Political Behavior. A key principle of democratic theory is the sovereignty of the people. Thus, the notion of the "will" and "power" of the people matters in democratic societies such as the U. S. , and helps us understand how the political system operates. This course examines critical topics including interest group behavior, political parties, elections, public opinion, and political communication and the mass media. We devote part of the course to a specific study of political behavior in the Commonwealth of Pennsylvania. 3 credits.

POL 275. Understanding Human Rights. This course develops an understanding of the practice of global human rights at Maastricht University in the Netherlands. 3 credits.

POL 312. American Foreign Policy. This course focuses on the roles and processes of formal and informal institutions shaping U. S. foreign policy and examines current and critical foreign policy problems and issues in contemporary geopolitical context. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisites: Sophomore standing or permission of the instructor. 3 credits.

POL 313. Contemporary Global Security. This course examines strategic thinking and theory in international politics, diplomacy and military muscle, cyber power and technological innovation in the changing world order, and security in the contemporary world. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: Sophomore standing or permission of the instructor. 3 credits.

POL 314. Global Politics of Wealth and Poverty. This course highlights world issues at the nexus of states and markets and focuses on how and why events unfold in the international political economy. Students will become versed in the primary assumptions and structural/macro conditions of economic and political geography in the global arena and examine micro-level conditions and mechanisms that influence political and economic outcomes to make sense of past and present changes in the global political economy. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

POL 316. Civil Liberties and Civil Rights. This course uses key cases to study important doctrines established by the Supreme Court with regard to civil rights and civil liberties. Students will examine the Court's rulings concerning the establishment and free exercise of religion, protection of freedom of speech and of the press, privacy rights (abortion and sexual freedom), the rights of the accused in the criminal justice system, and the law governing racial or sexual discrimination. The course places particular emphasis on various forms of textual interpretation used by individual justices to apply the Constitution in deciding cases and writing opinions. Fulfills requirement: Writing Process, American Social Diversity. Prerequisites: Sophomore standing or permission of the instructor. LAW 215 recommended. 3 credits. [This course is cross-listed with LAW 316]

POL 345. The Philosophical Foundations of Politics. Students in this course study the development of Western political thought from Classical Greece to modern times, examining the conceptual evolution of citizenship, civic obligation, and the nature of justice and exploring the connection between moral and positive law in the western tradition. Fulfills requirement: Writing Process. Prerequisite: Junior standing or permission of the instructor. 3 credits.

POL 352. Public Administration and the Crafting of Policy. Public policies affect the lives of all Americans, and public administrations are the main touchstones with government for most citizens. This course provides an understanding of how and why the public policymaking process functions as it does, and how policy is administered. We analyze various areas of policy at the national level, and in the Commonwealth of Pennsylvania more specifically. This course is of value to all citizens in a democracy and will be particularly helpful for students in all disciplines whose careers are affected by public policy. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

POL 370. Conduct of Political Inquiry. This course challenges students how to reason and think quantitatively about politics to solve and address contemporary problems and inform policy. Fulfills requirement: Quantitative Reasoning. Prerequisite: Junior standing or permission of the instructor. 3 credits.

POL 380. EU Simulation. This course offers an enriching, hands-on, interdisciplinary exploration of the dynamic processes of policy formation in the core institutions of the European Union. Students prepare for participation in the simulation held each November in Washington D. C. , organized by the Mid-Atlantic European Union Simulation Consortium (MEUSC). This experiential learning program endeavors to connect American students to EU policy makers and policy making in a unique way, utilizing the simulation experience to bridge the gap between the academic study of the EU and the actual political processes of the European Union. Students engage in discussions and debates about the EU that are current and topical in EU decision-making circles. A distinct theme is chosen as the focus of the simulation each year. This course may be repeated for credit as topic changes. Fulfills requirement: Disciplinary Perspectives. Prerequisite: Junior or senior standing. Course may be repeated for credit. 3 credits. [This course is cross-listed with DSP 380]

POL 391. Special Topics in U. S. Politics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

POL 392. Special Topics in Global Politics. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

POL 400. Internship. Field experience in a political science environment. May be repeated for credit (up to 12 credits of internship may be counted toward the degree). Fulfills requirement: Immersive Experience. Prerequisite: GPA of 2. 50 in major and permission of department chair. Students taking more than six internship credits in politics please note: POL 400 may count for no more than two elective courses in the POL major. 1-12 credits.

POL 450. Politics Conference Presentation. Conduct a conference presentation in the discipline of politics. Graded pass/fail. 0 credits.

POL 460. Undergraduate Research. This course is designed to provide students opportunities to obtain credit for engaging in undergraduate research projects. Students engage in research projects with faculty on a range of topics, subject to approval of the individual faculty member. Course may be repeated up to a limit of 12 credits; but only up to 6 credits can be applied to the major. Prerequisites: Sophomore standing, 2. 5 GPA, and permission of the instructor/chair. 1-6 credits.

POL 499. Seminar in Politics. This is the capstone class for politics majors, to be taken at the end of the student's junior or senior year. It is a reading- and writing-intensive course, conducted in traditional seminar style. This means that our weekly meetings are primarily discussion-driven (based on the assigned readings), with very little lecturing by the professor. The objective is for students to demonstrate a sophisticated understanding of the theoretical and empirical course material, both orally and in their written work. The seminar is based on a theme that changes from year to year; recent examples have been nationalism, democratization and the Arab Spring, and political communication. Fulfills requirement: Writing Process. Prerequisites: Major in politics and junior or senior standing or permission of the instructor. 3 credits.

POL 599. Honors in Politics. Students with junior or senior standing are eligible to apply for Departmental Honors in Politics. Students must have a GPA of 3. 5 in their major courses and a cumulative GPA of at least 3. 0. These requirements must be met both at the time of application and at the time of graduation. The honors program includes a substantial piece of work requiring extensive independent research, resulting in a high-caliber thesis. A thesis of this quality requires sustained research effort throughout at least one semester. Normally, students will develop and write their thesis as part of a POL 500 Independent Study. Students who successfully complete and defend their Honors project will receive recognition on their College transcript. 0 credits.

PST 505. Path to Project Success. Path to Project Success is an integrated Project Management (PM) and Business Analysis (BA) program that focuses on what is needed to achieve project success. Utilizing PMI's Project Management Body of Knowledge (PMBOK), Fifth Edition and IIBA's Business Analysis Body of Knowledge (BABOK) v3. 0, this course provides an applied approach to project strategy and implementation. This course is approved for 130 PMI PDUs and 75 IIBA CDUs. Applicants 24 or older must submit a professional resume demonstrating 3 or more years of work experience for acceptance into the program. 3 credits.

PSY 111. General Psychology I. This laboratory course is designed as an introduction to the conceptual and methodological foundations of psychological science. Through an exploration of several content areas in psychology, including physiological psychology, sensation & perception, learning, cognition, and states of consciousness, the course provides a conceptual background for understanding behavior, and active engagement with the scientific process (including theory building, hypothesis testing and critical analysis of empirical data). Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PSY 111L 3 credits.

PSY 111L. General Psychology I Laboratory. Corresponding laboratory for PSY 111. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: PSY 111 1 credit.

PSY 112. General Psychology II. This survey course examines the relationship between research and theory in the field of psychology, with emphasis on the field of applied psychology. Individual and societal influences on physical and psychological health will be examined. Topics will include human development, personality theory, health, motivation and emotion, social behavior, and psychological disorders and treatment. 3 credits.

PSY 201. Sophomore Seminar. This course is designed to help clarify students' interest and long-term plans for the field of psychology. Topics include identifying the academic and interpersonal abilities necessary to become a successful student at the undergraduate level and beyond, reviewing the broad skills and values related to different careers in psychology, preparing students for the different elements of job searching and applying to graduate school, exploring employment options in psychology available to individuals with bachelor's and graduate degrees, and reflecting on one's own skills/interests to develop a general career plan for their post-collegiate life. Graded pass/fail. 1 credit.

PSY 211. Research Methods in Psychology. This foundational laboratory course introduces students to scientific methodology and experiment design as it applies to psychology. Students learn how to identify research questions through literature reviews, develop hypotheses, appropriately design and conduct research projects, and draw conclusions from the findings. The course engages students in data-collection laboratory experiences that culminate in the development, execution, analysis and APA-style presentation of an original experiment on a behavior-related topic of their own choosing. Fulfills requirement: Writing Process. Prerequisite: PSY 111/L (with a minimum C- grade,) or junior-level Psychology major or minor. Corequisite: PSY 211L. 3 credits.

PSY 211L. Research Methods in Psychology Lab. Corresponding laboratory for PSY 211. Prerequisite: PSY 111/L (with a minimum C- grade,) or junior level psychology major or minor. Corequisite: PSY 211. 1 credit.

PSY 212. Statistics and Data Analysis. This laboratory course explores the basic quantitative and qualitative statistics and data-based analytical methods used by scientists to interpret and understand behavior. Topics include the logic of the scientific method applied to data analysis, descriptive statistics, the foundations and utility of inferential statistics, and the statistical methodologies of simple and advanced hypothesis testing. Students will also design, analyze, and present the results of their own original data-collection project. Fulfills requirement: Quantitative Reasoning. Prerequisite: PSY 111/L (with a minimum C- grade,) or junior level Psychology major or minor. Corequisite: PSY 212L. 3 credits.

PSY 212L. Statistics and Data Analysis Laboratory. Corresponding laboratory for PSY 212. Fulfills requirement: Quantitative Reasoning. Prerequisite: PSY 111/L (with a minimum C- grade,) or junior level Psychology major or minor. Corequisite: PSY 212. 1 credit.

PSY 230. Psychology of Adolescent Development. A study of the psychological characteristics and changes occurring during adolescence. Topics include psychological development, social influences, cognitive and intellectual development, identity and self-concept, sexual development, values and transition to adulthood. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 235. Psychology of Adult Development and Aging. A study of research, literature, and theories concerned with psychological change in the adult, from early adulthood to death. Current research methods and findings are covered in the areas of physical, cognitive, personality, and social changes in the adult years. Prerequisite: PSY 111 or 112, or junior-level psychology major or minor. 3 credits.

PSY 245. Personality. A study of the major theories of personality, with emphasis on psychoanalysis, humanistic psychology, behaviorism, social learning, and trait theory. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 247. Psychological Perspectives on Gender. This course is designed to address a broad spectrum of issues related to the psychology of gender. Of central importance is the examination of empirical findings related to gender differences and similarities in biological, behavioral, cognitive, social, and emotional domains. The course will also involve a critical examination of the meaning of gender in the field of psychology and in the broader society. Fulfills requirement: American Social Diversity. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 248. Health Psychology/Behavioral Medicine. This course is designed as an introduction to health psychology/behavioral medicine. It will consider the role of psychology in the health field, including medical settings. It covers the relationship between psychological factors and physical disease from predisposition through maintenance. The study of behavioral medicine will include treatment of stress and stress-related disorders, preventive health behaviors and factors related to adherence of treatment programs. It also explores the psychological connections of pain and pain management, and how personal control is related to both health and the disease process. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 250. Sensory and Perceptual Processes. Surveys structures and functions of, and research strategies to examine, the various sensory systems with particular emphasis on the visual system. Physiological and philosophical aspects of perception are discussed. Prerequisite: PSY 111 or 112, or junior-level psychology major or minor. 3 credits.

PSY 252. The Science of Emotion. This course covers the philosophical, psychological, scientific foundations and Implications of the emotion process. This course covers a) several key questions in the science of emotion, b) scientific approaches to the study of emotion, c) several processes associated with the emotion process, and d) major theories of emotion. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 255. Evolutionary Psychology. This course is an approach to psychology in which knowledge and principles from evolutionary biology are used to research the structure of the human mind. Topics will include the adaptive problems of survival, mating, parenting, kinship, cooperation, warfare, and conflict between the sexes. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 260. Learning and Memory. This course explores various processes involved in knowledge acquisition, storage, and retrieval. Specific topics include associative learning mechanisms, the impact of reinforcement and punishment on behavior, generalization and discrimination, memory encoding, long-term memory storage and retrieval, memory distortions, and the sources of individual differences in learning and memory. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 265. Abnormal Behavior and Experience. A study of mental, emotional and behavioral problems, including alcohol and drug abuse, brain disorders, criminal and psychopathic behavior, neuroses, psychophysiological reactions, psychoses, sexual deviations, subnormal intelligence and suicide. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 268. Introduction to Clinical Psychology. A study of the ways psychologists assist persons and groups. Particular attention is given to assessment, individual and group therapy, marriage and family counseling, and community psychology. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 270. Forensic Psychology. This course will focus on three critical areas that fall under the umbrella of forensic psychology. First, students will be introduced to the area of legal psychology, including applied empirical research on issues important to the legal system such as eyewitness accuracy, police selection, jury decision making, and legal assumptions about human behavior relevant to the rights of defendants, victims, children, and consumers of mental health services. Second, the area of psychological jurisprudence will be explored by studying efforts to develop a philosophy of law and justice based on psychological values. Third, students will be introduced to the concepts generally thought of as forensic psychology, such as criminal profiling, insanity defense, competence to stand trial, and child custody decisions. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits. [This course is cross-listed with SOC 270]

PSY 280. Introduction to Neuropsychology. This course serves as an introduction to the content areas and methodology of neuropsychology, the study of the relationships between brain function and behavior. Topics include basic communication in the nervous system, organization and function of sensory and motor systems, hemispheric specialization, localization of function, brain injury and plasticity, and issues associated with neuropsychological assessment. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits.

PSY 285. Introduction to Psychopharmacology. This course surveys the most commonly used substances to treat mental disorders, such as anti-anxiety, antidepressant, antipsychotic, mood-stabilizer, psychostimulant, and cognitive enhancer medications. The course also discusses the brain and its most common neurotransmitters, how transmitting neurons send and receive electrochemical information, the pharmacokinetics (metabolism and elimination) and pharmacodynamics (absorption, distribution, and effects) of each drug as well as the action sites, side effects, and mechanisms of each drug. Prerequisite: PSY 111 or 112, or junior-level Psychology major or minor. 3 credits. [This course is cross-listed with NEU 285]

PSY 291. Special Topics in Biopsychology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite(s): PSY 111 or PSY 112 or instructor permission. 3 credits.

PSY 292. Special Topics in Social Process. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite(s): PSY 111 or PSY 112 or instructor permission. 3 credits.

PSY 293. Special Topics in Psychopathology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite(s): PSY 111 or PSY 112 or instructor permission. 3 credits.

PSY 294. Special Topics in Cognition. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite(s): PSY 111 or PSY 112 or instructor permission. 3 credits.

PSY 295. Special Topics in Human Development. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite(s): PSY 111 or PSY 112 or instructor permission. 3 credits.

PSY 310. Advanced Research Design. This seminar, for junior- and senior-level undergraduates, is designed to prepare students for the capstone experience(s) of PSY 400 and/or PSY 410. The course focuses on developing students' abilities to apply their knowledge of psychological theory and experimental methodology towards the critical appraisal of existing empirical research within psychology. The course will culminate in students utilizing these evaluative skills in the context of proposing a novel experiment on a psychological topic of their choosing. Prerequisites: PSY 111/L, 211/L, and 212/L (with a minimum C- grade in all courses). 2 credits.

PSY 324. Psychology of Child Development. This course provides a broad foundation for understanding child development through an integration of practical, theoretical, and research orientations. Attention is given to both cultural and biological determinants of social, cognitive, physical, and emotional development, focusing on individual differences as well as group similarities. Prerequisites: PSY 111; PSY 211 or 212; and junior-level Psychology major or minor. 3 credits.

PSY 325. Child Development Laboratory. The course will provide students with experience planning (including IRB approval), observing, measuring, and analyzing child behavior using the methods employed by developmental researchers. This is intended to supplement the theory and research background they receive in PSY 324. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: PSY 324. 1 credit.

PSY 332. Psychological Testing and Assessment. An introduction to the principles of psychological measurement, methods of test design and construction, and applications and interpretations of existing psychological tests. Prerequisites: PSY 111, 112, 211, and 212; or permission of the instructor. 3 credits.

PSY 333. Psychological Testing and Assessment Laboratory. Students will be given the opportunity to experience how psychological tests are designed and evaluated. Each student will conduct a literature review on their selected topics, and then design, construct, distribute, and evaluate the validity/reliability of a psychological test instrument consistent with a research theme that will change every year. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: PSY 332. 1 credit.

PSY 346. Social Psychology. A study of the inter- and intra-personal relationships between individuals and groups, with emphasis on theories and research studies. The topics covered may include attitude development and change, conformity, persuasion, person perception, attribution, attraction and group processes. Prerequisites: PSY 111, 112, 211, and 212; or permission of the instructor. 3 credits.

PSY 347. Social Psychology Laboratory. This course is intended to provide students with hands-on experience in the types of survey design, observational research, and lab-based experimentation consistent with group behavior, interpersonal relationships, and the interaction between social issues and popular culture. The course culminates in the presentation of data from students' original research within social psychology. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: PSY 346. 1 credit.

PSY 363. Cognitive Science. This course explores the human mind by integrating philosophical, psychological, and biological perspectives on the nature of thought processes. Specific topics discussed in this framework include attention, perception, consciousness, memory, language, reasoning, intelligence, and thought-related dysfunctions. Fulfills requirement: Writing Process. Prerequisites: PSY 111/L, 112, 211/L, and 212/L; or permission of the instructor. 3 credits.

PSY 364. Cognitive Science Laboratory. This is an advanced, hands-on seminar in cognitive science, which will allow students to explore a preferred interest in human thinking via laboratory research. Students will review the literature on their chosen topic, design an experiment addressing this issue, and then collect and analyze the data from their experiment. The course culminates with an oral and written presentation of their research. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: PSY 363. 1 credit.

PSY 378. Behavioral Neuroscience. A study of the biological basis (substrates) of behavioral processes. The course focuses on the physiology of reflexes, sensation and perception, learning and memory, sleep, ingestive behaviors, emotion and psychopathology. Prerequisites: PSY 111; PSY 211 or 212; and junior-level Psychology major or minor. 3 credits. [This course is cross-listed with NEU 378]

PSY 379. Behavioral Neuroscience Lab. Students will be introduced to methods used in the study of the nervous system and its influence on behavior. Lab work will include collecting, analyzing, and reporting data from physiological studies, as well as sheep brain dissection. In addition, students must complete an APA style proposal for an individual research project. Prerequisites: PSY 111/L, 211/L, 212/L (with a minimum C- grade in all). Corequisite: PSY 378. 1 credit. [This course is cross-listed with NEU 379]

PSY 400. Internship. This course focuses on practical and professional work experience related to the student's work or research interests or graduate school plans. Internships are limited to off-campus sites only. Students should not take more than six credits per semester. Graded pass/fail. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Prerequisites: PSY 111/L, 112, 211/L, 212/L, and 310 (with a minimum C- grade in all); and completion of Department application; and approval of internship site by Department's internship coordinator. 1-12 credits.

PSY 443. History and Theory. A study of the history of psychology, including philosophical precursors to psychology, early and modern schools of thought within psychology, important trends, and famous psychologists. Fulfills requirement: Writing Process. Prerequisites: Junior standing; PSY 111/L, 112, 211/L, and 212/L. 3 credits.

PSY 550. Advanced Research. Advanced Research in Psychology This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Prerequisites: PSY 111/L, 112, 211/L, 212/L, and 310 (with a minimum C- grade in all); and a meeting with course instructor prior to the start of the semester. 1-3 credits.

- REL 110. The Sacred Life.** An exploration of the many dimensions of religion as a central human experience: self and meaning, religious expression, religious knowledge, religion in its cultural context, and religion and the natural order. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.
- REL 120. Religious Diversity in America.** A study of the origin and development of religious expression in America. Special emphasis will be given to issues of religious diversity. Fulfills requirement: American Social Diversity, Intercultural Competence. 3 credits.
- REL 140. Encountering World Religions.** This course examines the beliefs and practices of some of the world's major religious traditions and significant religious movements, focusing predominantly on non-Christian or non-European traditions. The course will be oriented topically (ritual, theology, etc.), geographically (India, the Middle East, etc.), or thematically (religion in the modern world, religious encounters in history, etc.) Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 150. Encountering Other Religions.** This course examines the beliefs and practices of various religious traditions that fall outside the rubric of world religions. The focus is on less widespread religious traditions, focusing predominantly on non-Christian and non-European traditions. The course takes a comparative approach to developing religious literacy, that is, understanding the variety of religious expression as seen in a lesser known religious traditions. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 200. Comparative Scripture.** This class aims to introduce students to the study of scripture as a key aspect of religiosity. It will be cross-cultural in nature and familiarize students with a variety of religious texts from several religious traditions. The study of textual religious expression will come from reading both primary sources and theoretical works on the study of scripture. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 202. Jewish and Christian Scripture.** A study of the Hebrew Bible and New Testament and related literature, including its historical and social context. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.
- REL 204. Hindu Scripture.** A study of the variety of religious literature produced over the last 4000 years that has shaped Hindu thought. Central to the aim of the course is engagement with a variety of types of scripture, including poetic praise of the divine, ritual manuals, epic narrative, and contemporary devotional songs. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 230. Philosophy of Religion.** A study of the issues raised for philosophy by contemporary religious thought. The course examines such topics as faith and reason; faith and culture; and interpretations of revelation, symbolism and religious language. Fulfills requirement: Writing Process, Liberal Studies Area 6 (Religion and Philosophy), Critical Thinking through Writing. 3 credits. [This course is cross-listed with PHL 230]
- REL 240. Hindu Traditions.** An examination of the major religious tradition of India, through its historical development from the oldest culture extant on the subcontinent to the modern world. Students will engage a variety of materials, texts, archaeology, images, and anthropological descriptions, in order to gain a broad understanding of the tradition. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 241. Jewish Traditions.** A survey of the development of Judaism and its contemporary teachings and practices. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.
- REL 242. Buddhist Traditions.** An examination of the religious traditions of Buddhism, from its historical development in ancient India to its spread across the entire globe. Students will engage a variety of materials, texts, archaeology, images, and anthropological descriptions, in order to gain a broad understanding of the tradition. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 243. Christian Traditions.** An examination of the history of Christianity and the development of Christian thought through the reading and discussion of primary works in Christian theology and philosophy. Fulfills requirement: Liberal Studies Area 6 (Religion and Philosophy). 3 credits.
- REL 244. Islamic Traditions.** This course will introduce students to the historical origins and development of Islam. Fulfills requirement: Intercultural Diversity, Intercultural Competence. 3 credits.
- REL 280. Theorizing Culture and Interpreting Religion.** The aim of the class is to familiarize students with the methods and theories which are constitutive of the academic discipline of Religious Studies and to attune them to the historical context of the development of the study of religion as an academic discipline. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.
- REL 285. Independent Reading Forum.** For this course students will, in consultation with a member of the faculty, develop a reading list to explore critical themes, significant theorists, and/or a key thinker or school of thought in religion or philosophy. The work of the course is in part the independent reading of this list and in part participation in a forum of all students enrolled in this course with faculty from the department, focused on sharing what each student learns in their independent readings. This course may be repeated for credit as topic changes. 1 credit. [This course is cross-listed with PHL 285]
- REL 310. Themes in Religious Studies.** The course focuses on the issues surrounding one central topic in the study of religion as it relates to the other two courses in a Cluster. Topics may include Death and Dying, Gender, Sustainability, Violence, and Globalization, but will be determined by the professors teaching the cluster. This course may be repeated for credit as topic changes. 3 credits.

REL 311. Interdisciplinary Seminar in Religion. The course focuses on the issues surrounding one central topic in the study of religion. Students will take an interdisciplinary approach to such topics as God, Postmodern Philosophy and Theology, Existentialism and Religion, Religion and Violence, Religious Fundamentalism, The Problem of Evil. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. 3 credits.

REL 313. The Search for Jesus. This course will examine ancient texts, contemporary commentaries, historical reconstructions, and artistic and literary depictions in its search for Jesus. Fulfills requirement: Writing Process, Disciplinary Perspectives. Prerequisite: Junior or senior standing. 3 credits.

REL 401. Senior Presentation. This course requires students to develop a presentation for their peers and faculty in the department integrating revelations garnered during their coursework. The students will prepare and give a formal presentation of their "one big idea" in a TED styled talk to be digitally archived. Prerequisite: Junior or senior standing. 1 credit.

REL 450. Undergraduate Research Symposium I. The LVC Undergraduate Research Symposium is a year-long, team-taught reading intensive course that will culminate in a public presentation and subsequent publication of the student's work. The subject may be thematic based (e. g. , "Race and Religion") or focused exclusively on a prominent contemporary figure (e. g. , Catherine Malabou, Paul Kahn). External expert scholars will be incorporated into the course as guides, resources, and critical respondents through videoconferencing. Students enrolled in the fall semester of the course will be expected to continue with REL 451 / PHL 451 in the spring. This course may be repeated for credit as topic changes. 3 credits. [This course is cross-listed with PHL 450]

REL 451. Undergraduate Research Symposium II. This is a continuation of the year-long, team-taught Undergraduate Research Symposium Course. It is a research and writing intensive course that builds on the reading, discussion and research begun in the fall semester. An external expert scholar will be incorporated into the course as guide, resource, and critical respondent in the public symposium held every spring in conjunction with INQUIRY, LVC's annual celebration of student learning. This course may be repeated for credit as topic changes. Fulfills requirement: Writing Process, Critical Thinking through Writing. Prerequisite: REL/PHL 450 in good standing, or permission of the instructor. 3 credits. [This course is cross-listed with PHL 451]

SCI 100. Introduction to Science. The study of scientific principles and experiments applicable to a person's everyday experiences. Student projects are selected from the areas of biology, chemistry, and physics. The course is open to all students and is appropriate for those intending to teach elementary school. Laboratory experience included. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: SCI 100L. 3 credits.

SCI 100L. Introduction to Science Laboratory. Corresponding laboratory for SCI 100. Fulfills requirement: Liberal Studies Area 3 (Natural Science). Corequisite: SCI 100. 1 credit.

SED 115. Introduction to Teaching and Learning. This course is designed to provide an introduction to secondary education majors about how people learn and how to successfully use that information in the classroom. It will cover the characteristics of secondary schools and students and the management of teaching and learning resources. 2 hours a week of fieldwork is required. 3 credits.

SED 362. Teaching of the Sciences in the Secondary Schools. This course will offer comprehensive preparation for teaching science in secondary schools through discussing, reading, writing, and completing projects. As part of this course, students will design lesson plans that will include teaching the literacy of science for all students including those with disabilities; explore and utilize materials, techniques and methods of lab instruction for a variety of populations including those with disabilities; create and teach a lesson for a target audience; synthesize, reconfigure and connect what they have learned within the areas of scientific literacy, writing and education; evaluate student work by creating their own rubrics to assess learning in units and assignments for all students including those with disabilities; use technology effectively as an instructional tool; establish and practice appropriate classroom management strategies. 4 hours a week of fieldwork is required. Prerequisite: Biology, Chemistry, or Physics major or permission of the instructor. 3 credits.

SED 363. Teaching of Social Sciences in the Secondary Schools. This course will offer comprehensive preparation for teaching social studies in secondary schools through discussing, reading, writing, and completing projects. As part of this course, students will establish and practice appropriate classroom management strategies; design lessons/units of study that meaningfully integrate different and varied aspects of social studies; develop appropriate assessment strategies for all students including those with disabilities; explore and utilize materials, techniques and methods of classroom instruction for a variety of populations including those with disabilities; synthesize, reconfigure and connect what they have learned within the areas of social studies literacy, writing and education; evaluate student work by creating their own rubrics to assess learning; use technology effectively as an instructional tool. 4 hours a week of fieldwork is required. Prerequisite: Social Studies major or permission of the instructor. 3 credits.

SED 364. Teaching of English in the Secondary Schools. This course will offer comprehensive preparation for teaching English in secondary schools through discussing, reading, writing, and completing projects. As part of this course, students will establish and practice appropriate classroom management strategies; design lessons/units of study that meaningfully integrate different and varied aspects of social studies; develop appropriate assessment strategies for all students including those with disabilities; explore and utilize materials, techniques and methods of classroom instruction for a variety of populations including those with disabilities; synthesize, reconfigure and connect what they have learned within the areas of social studies literacy, writing and education; evaluate student work by creating their own rubrics to assess learning; use technology effectively as an instructional tool. 4 hours a week of fieldwork is required. Prerequisite: English major or permission of instructor. 3 credits.

SED 365. Teaching of Second Languages in Schools. This course will offer comprehensive preparation for teaching foreign language in secondary schools through discussing, reading, writing, and completing projects. As a part of this course, students will synthesize, reconfigure and connect what they have learned within the areas of language acquisition, teaching, writing and education to formulate a mission statement for their own teaching practice; evaluate student work by creating their own rubrics to assess learning in foreign language acquisition, units of study and assignments; use technology effectively as an instructional tool; establish and practice appropriate classroom management strategies for all students including those with disabilities; design lessons/units of study that meaningfully integrate different and varied aspects of foreign language acquisition for all students including those with disabilities; develop appropriate assessment strategies for all students including those with disabilities; explore and utilize materials, techniques and methods of classroom instruction for a variety of populations. 4 hours a week of fieldwork is required. Prerequisites: Foreign Language major or permission. 3 credits.

SED 366. Teaching of Mathematics in the Secondary Schools. This course will offer comprehensive preparation for teaching mathematics in secondary schools through discussing, reading, writing, and completing projects. Students enrolled in this course will explore and utilize materials, techniques and methods of instruction for a variety of populations; synthesize, reconfigure and connect what they have learned within the areas of mathematical literacy, writing, and education; evaluate student work by creating their own rubrics to assess learning in units and assignments for all students including those with disabilities; use technology effectively as an instructional tool; establish and practice appropriate classroom management strategies for all students including those with disabilities; design lessons/units of study that meaningfully integrate different and varied aspects of mathematics; explore and utilize materials, techniques and methods of classroom instruction for a variety of populations. 4 hours a week of fieldwork is required. Prerequisites: Mathematics major or permission. 3 credits.

SED 421. Content Area Literacy. This course will guide preservice students to develop competencies in teaching literacy strategies in their content area subject(s) in middle and high school. Emphasis will be placed on teaching activities, specialized skills, technology skills and study strategies for learning substantive content. 4 hours a week of fieldwork is required. Prerequisite: SED 115. 3 credits.

SED 431. Practicum and Methods II. This course is designed to provide preservice secondary education students with the skills to develop an integrated approach to teaching and learning. Students will create lesson and unit plans and develop integrated curricula. 4 hours a week of fieldwork is required. Prerequisites: SED 115, 421; secondary teacher certification candidate; junior or senior status; permission of the instructor; must be taken the semester prior to SED 440. 3 credits.

SED 440. Student Teaching. Students spend an entire semester in an area school under the supervision of a cooperating teacher. Fulfills requirement: Immersive Experience. Prerequisites: A cumulative grade point average at or above the minimum GPA specified by PDE for the secondary 7-12 certificate, SED 431 and the appropriate teaching of course for the content certification, completion of all Chapter 354 and Act 49-2 course requirements. 12 credits.

SKT 101. Elementary Sanskrit I. This course introduce the student to the Sanskrit language, including the devanagari script, pronunciation, basic grammar, and vocabulary. Students will also learn about Indian religious culture. Fulfills requirement: Language. 3 credits.

SKT 102. Elementary Sanskrit II. Second semester of an introduction to the Sanskrit language, including the devanagari script, pronunciation, basic grammar, and vocabulary. Students will also learn about Indian religious culture. Fulfills requirement: Language. Prerequisite: SKT 101 or equivalent. 3 credits.

SOC 110. Introduction to Sociology. An introduction to the sociological perspective with a focus on how individual behavior is shaped by the social context. The nature and characteristics of human societies and social life are examined from a perspective known as the "sociological imagination". Topics range from the influence of culture on human behavior, the development of the self, group dynamics, deviance, population, and social inequality. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

SOC 120. Introduction to Anthropology. Introduction to both physical and cultural anthropology including human evolution, human variation, and cross-cultural analysis and comparison. Fulfills requirement: Liberal Studies Area 2 (Social Science). 3 credits.

SOC 162. Race and the Intersections of Identity. This course examines how race continues to be a central feature of identity in America. Students will explore how multiple facets of identity - such as class, ethnicity, gender, and sexuality - intersect with race and form a complex matrix of inequality that has shaped the United States, in the past as well as the present. Understanding such complex intersections of identity will prepare students to work affectively in diverse domestic and global contexts. Fulfills requirement: American Social Diversity, Intercultural Competence. 3 credits.

SOC 210. Social Problems. Contemporary social problems are examined from a constructionist perspective. Topics selected for study vary according to societal trends, but typically include an examination of social change, poverty, globalization, environmental degradation, deviance, and health. Fulfills requirement: Liberal Studies Area 2 (Social Science). Prerequisite: SOC 110. 3 credits.

SOC 220. Forensic Evidence. This course involves the application of scientific methods to solving crimes. The course will explore the many ways in which an offender leaves evidence behind at a crime scene and carries evidence away from that crime scene. A range of topics will be covered including, but not limited to: ballistics, DNA, fingerprints, tire prints, odontology and entomology. Prerequisite: SOC 110. 3 credits.

SOC 221. Crime Scene Investigation. For evidence to be used in court, it must be identified, collected, preserved and properly evaluated. This course will be a detailed description of the techniques, equipment and strategies for effective evidence collection and crime scene processing. We will also explore the difference between how Hollywood has portrayed crime scene "experts" and how it works in the real world. Prerequisite: SOC 110 and 245. 3 credits.

SOC 224. Native American Experience. A review of the development of Native American society, culture, politics and economy from prehistory to the present with special emphasis on the relationships between Native Americans and other immigrants to North America. Fulfills requirement: American Social Diversity. 3 credits.

SOC 226. Women and Gender Issues. An examination of women's contributions to the world, their roles in social institutions, and issues arising from their uniqueness and social situations. Topics will include images of women and their writings; biology and health; issues of sexuality and gender identity; and women's roles in the family, religion, education, and in the worlds of work and politics. Fulfills requirement: American Social Diversity. Prerequisite: SOC 110. 3 credits.

SOC 230. Sociology of Marriage and the Family. An overview of family focusing on family structure and interaction. Diverse topics range from sexuality and love, mate selection and dating, parenting, dysfunctional families, and divorce. A historical and cross-cultural approach is employed in addition to a sociological approach. Fulfills requirement: Liberal Studies Area 2 (Social Science). Prerequisite: SOC 110. 3 credits.

SOC 240. Diversity and Intercultural Communication. The major objective of this course is to help students become aware of the degree to which behavior (including one's own) is culturally determined. As we continue to move toward a global society with increasingly frequent intercultural contacts, we need more than simple factual knowledge about cultural differences; we need a framework for understanding inter-cultural communication and cross-cultural human relations. Through lecture, discussion, simulations, case-studies, role-plays and games, students will learn the inter-cultural communication framework and the skills necessary to make them feel comfortable and communicate effectively with people of any culture and in any situation involving a group of diverse backgrounds. Fulfills requirement: American Social Diversity. Prerequisite: SOC 110. 3 credits.

SOC 245. Crime and Criminals. An examination of different types of crime including a broad range of violent crimes and property crimes. Profiling and criminal typologies will be explored. Specific crimes such as arson, kidnapping, stalking, and homicide will be studied. Case studies of prototypical offenders will be included. Prerequisite: SOC 110. 3 credits.

SOC 261. Perspectives on Aging. Introduction to the study of aging from a multidisciplinary perspective. Topics include the biology of aging, demographic trends in aging, and aging impacts on social institutions and society. Policies on aging are reviewed. Fulfills requirement: Liberal Studies Area 2 (Social Science). Prerequisite: SOC 110. 3 credits.

SOC 270. Forensic Psychology. This course will focus on three critical areas that fall under the umbrella of forensic psychology. First, students will be introduced to the area of legal psychology, including applied empirical research on issues important to the legal system such as eyewitness accuracy, police selection, jury decision making, and legal assumptions about human behavior relevant to the rights of defendants, victims, children, and consumers of mental health services. Second, the area of psychological jurisprudence will be explored by studying efforts to develop a philosophy of law and justice based on psychological values. Third, students will be introduced to the concepts generally thought of as forensic psychology, such as criminal profiling, insanity defense, competence to stand trial, and child custody decisions. Prerequisites: SOC 110, PSY 111 or PSY 112. 3 credits. [This course is cross-listed with PSY 270]

SOC 271. Child Abuse. The study and analysis of child abuse in its various expressions with additional focus on physical and sexual abuse. Emphasis will be on models and theories of causation, dynamics, treatment and research. Prerequisite: SOC 110. 3 credits.

SOC 272. Substance Abuse. An examination of the problems associated with substance abuse including a study of the prevalent myths concerning substance abuse, and exploration of the causes of substance abuse and an exploration of how it affects the individual, the family and society as a whole. In addition, the course will examine current methods of intervention and treatment. Prerequisite: SOC 110. 3 credits.

SOC 278. Juvenile Justice. An examination of the causes and effects of juvenile delinquency, the juvenile justice system and treatment programs for the juvenile offender. Prerequisite: SOC 110. 3 credits.

SOC 280. Genders and Sexualities. Study of human sexuality from psychosocial and cultural perspectives. The course will include an examination of such topics as developmental sexuality, gender roles, sexual communication, sexual orientation, coercive sex, sexually transmitted diseases, HIV, and religious and ethical perspectives on sexuality. Prerequisite: SOC 110. 3 credits.

SOC 281. Police and Society. This course is an overview of the process of policing, police behavior, organization, operations and historical perspectives. The relationship between the police and the public is examined as are contemporary issues in the field of law enforcement. Prerequisites: SOC 110 and SOC 245. 3 credits.

SOC 282. Emergency Management and Disaster Preparedness. This course is an introduction to the topic of emergency management and disaster preparedness. Students are introduced to the philosophy, concepts, and principles of emergency management. The focus is on the examination of the four stages of emergency management; preparedness, response, mitigation, and recovery. Prerequisites: SOC 110. 3 credits.

SOC 290. Special Topics in Sociology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: SOC 110. 3 credits.

SOC 291. Special Topics in Criminal Justice. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

SOC 292. Special Topics in Family Studies. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

SOC 310. Research Tools for the Social Sciences. This laboratory course builds skills in basic data management, statistical analysis, and interpretation of statistical information. The course reviews how to interpret both descriptive and inferential statistical analysis. The skills acquired in this lab are employed in research methods to aide students in the design, analysis, and presentation of their research project. Prerequisite: SOC 110; plus 9 credits of Sociology at the 200-level or above; or permission of instructor. Corequisite: SOC 311. 1 credit.

SOC 311. Research Methods in Sociology. Experiential-based course covering fundamental concepts and problems in social science research. Topics include ethics or research on human behavior, design, measurement, sampling, and interviewing and questionnaire construction. There is an emphasis on four research methods: available data, survey research, experiments, and field research. Fulfills requirement: Writing Process. Prerequisite: SOC 110; plus 9 credits of Sociology at the 200-level or above; or permission of the instructor. Corequisite: SOC 310. 3 credits.

SOC 321. Social Theory. This course covers a critical examination of selected classical and contemporary theorists, including Marx, Durkheim, Weber, Parsons, Foucault, Bourdieu and Giddens. Classical, modern, post-modern and globalization theories will be covered. A meta-analytical approach will be used, looking at the social construction of theory. Prerequisite: SOC 110 and 6 credits in sociology at the 200-level or above, or permission of the instructor. 3 credits.

SOC 324. Medical Sociology. An examination of the societal bases of health, illness and health care. The course will include an examination of the three components of medicine: the patient, the medical professional and the health care organization. Specific topics will include: the role of the patient; doctor-patient relationships; the socialization of medical professionals; the hospital as a complex organization, cross-cultural comparisons of health care and current topics of concern such as the AIDS epidemic, new technologies and social response to the terminally ill patient. Fulfills requirement: Writing Process. Prerequisites: SOC 110 plus 9 credits of sociology at the 200-level or above and junior standing, or permission of the instructor. 3 credits.

SOC 331. Criminology. An examination of the causes of crime. The question of whether or not victimless crimes such as pornography, prostitution and drug use should be considered crimes is explored. This is primarily a theory course for criminal justice majors. Fulfills requirement: Writing Process. Prerequisite: SOC 110 and SOC 245, plus 6 credits of 200 level or above of Sociology, and junior standing, or permission. 3 credits.

SOC 333. Criminal Justice. A sociological, historical, and philosophical examination of punishment and the criminal justice system. Rights of the accused, victimology, prisons, and the death penalty are studied. Prerequisite: SOC 110, 245; plus 6 credits of Sociology at the 200-level or above of sociology; or permission of the instructor. 3 credits.

SOC 335. Probation and Parole. This course will provide students with a brief overview of the criminological theories and their applications by those who are employed within the probation and parole system. Most importantly, the course explores how offenders live in the community, who they are and what is done within the probation and parole system to protect society. Prerequisite: SOC 110 and SOC 245. 3 credits.

SOC 370. Adoption. This course will focus on populations involved in adoption, including birth parents, adoptees, foster and adoptive families and agencies, in both domestic and transnational adoptions. Special consideration will be given to recent policies and vehicles that have been put into place to facilitate the permanency placement of children. A consideration of ethics in adoption will be a central theme of the course. An examination of cultural, economic and policy factors in countries involved in transnational adoption will be included. The health (both physical and psychological) and cultural issues of adoptees and services that address these will be addressed. Prerequisites: SOC 110 and 6 credits in sociology at the 200 level or above, or permission of the instructor. 3 credits.

SOC 385. Comparative Family Studies. This course will examine, on a global scale, questions about families. Are there universal family structures? What are the different ways in which families are organized? How are "family values" similar or different in various contexts? What purposes do families serve in a society; and what kinds of challenges are faced by them? What are the social, ecological, economic, historic, and ideological reasons that family structures either change or remain static in response to varying conditions? Prerequisite: SOC 110 or 120; and SOC 230. 3 credits.

SOC 390. Special Topics in Sociology. Topic announced at the time of registration. This course may be repeated for credit as topic changes. 3 credits.

SOC 391. Special Topics in Criminal Justice. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: SOC 110 and SOC 245. 3 credits.

SOC 392. Special Topics in Family Studies. Topic announced at the time of registration. This course may be repeated for credit as topic changes. Prerequisite: SOC 110 and SOC 230. 3 credits.

SOC 400. Internship. Field experience for sociology or criminal justice majors. This course may be repeated for credit as topic changes. Fulfills requirement: Immersive Experience. Prerequisites for Criminal Justice majors: SOC 245, 331, and 333. Prerequisites for Sociology majors: SOC 110, SOC 311; 321 or 331. Seniors only or permission. 1-12 credits.

SOC 499. Senior Seminar. A critical analysis of selected themes and issues in contemporary sociology. Topics may vary. This course is conducted as a seminar requiring extensive student participation. Fulfills requirement: Writing Process. Prerequisite: SOC 110 plus SOC 311, 321, or 331 and 9 additional credits in sociology. This course is for senior Sociology majors and Criminal Justice majors only, or permission of the instructor. 3 credits.

SPA 101. Elementary Spanish I. Introductory course in Spanish. Aimed at developing basic communicative proficiency in Spanish. Also offers insights into Hispanic cultures. Fulfills requirement: Language. This course does not meet the new "Language and Culture" requirement of the common learning experience. 3 credits.

SPA 102. Language and Culture in the Spanish-Speaking World - Elementary Level. SPA 102 is an active and immersive language and culture course, taught almost entirely in Spanish in which students will develop skills in listening, speaking, reading and writing in Spanish and cultural awareness of the cultures associated with Spanish. Fulfills requirement: Language, Language and Culture. Prerequisite: SPA 101 or placement test. 4 credits.

SPA 201. Language and Culture in the Spanish-Speaking World - Intermediate Level I. This is an active and immersive language and culture course, taught almost entirely in Spanish in which students will develop skills in listening, speaking, reading and writing in Spanish and cultural awareness of the cultures associated with the Spanish. Fulfills requirement: Language, Language and Culture. Prerequisite: SPA 102 or placement test. Corequisite: SPA 201L. 4 credits.

SPA 202. Language and Culture in the Spanish-Speaking World - Intermediate Level II. This is an active and immersive language and culture course. Taught almost entirely in Spanish in which students will develop skills in listening, speaking, reading and writing in Spanish and cultural awareness of the cultures associated with Spanish. Fulfills requirement: Language, Language and Culture. Prerequisite: SPA 201 or placement test. Corequisite: SPA 202L. 4 credits.

SPA 300. Advanced Spanish: Oral Communication. This is an active and immersive course focused on the intensive use and analysis of spoken Spanish, including phonetics and phonology, designed to help students acquire native-like pronunciation and intonation. Classroom activities will include the practicing of oral skills such as summarizing, telling, narrating, explaining, arguing a point, discussions and presentations. Fulfills requirement: Language and Culture. Prerequisite: SPA 202 or placement into 300-level or higher according to the placement test. Students who have been placed into SPA 311 may not take this course. 4 credits.

SPA 310. Advanced Grammar and Writing. This course is an advanced course designed to help students develop communication, writing, and reading skills in Spanish, as well as an awareness and appreciation of Hispanic culture(s). It takes an interactive communicative approach and stresses cultural competency in language learning and successful communication. Fulfills requirement: Writing Process, Language and Culture. Prerequisite: SPA 202 or placement into 300-level or higher according to the placement test. 4 credits.

SPA 311. Spanish for Heritage Speakers. This is a special course for Hispanic, Latinos or students that have been exposed to Spanish consistently at home while growing up, have listened to it and want to develop the formal aspects like grammar, more extensive vocabulary and cultural information about their own places of origin. This class will include readings, movies and studies of geographical areas and maps in order to examine historical and social events represented in the students' countries of origin and will require work outside class in the Latino community. Fulfills requirement: American Social Diversity, Language and Culture. Prerequisite: SPA 202 or placement into 300-level or higher according to the placement test; permission of the instructor or chair. Corequisite: SPA 311L. 4 credits.

SPA 330. Literatures in Spanish. This course is an introduction to Literatures in Spanish, which offers a selection of authors and genres, introducing students to literary analysis through reading a selection of texts including novels, plays, short fiction, poetry, and lyrics. The primary objective of this course is to acquire communication skills in Spanish, and to develop an awareness and appreciation of Hispanic literature and cultures. Fulfills requirement: Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: SPA 202 or placement test. 4 credits.

SPA 345. Introduction to Spanish Linguistics. Introduces students to the study of the systems of Spanish: syntax, phonology, lexicon and morphology and language as a social construct. Regional varieties of Spanish spoken in Spanish, Latin America and the US as well as Spanish in contact with other languages will be considered. Prerequisite: SPA 300. Corequisite: SPA 345L. 4 credits.

SPA 355. Cultural Studies. Cultural Studies focuses on the analysis of written and visual representations (theatrical productions, poems, short stories, novels, songs, films, documentaries, and other visual media) in order to analyze how Hispanic cultures have been represented, experienced and interpreted during different decades until the present moment. The study of contemporary cultural productions will also help us to better understand the impact of global issues in present-day Hispanic societies and the current debates about their significance and consequences in the political, social, cultural, and intellectual milieu. These texts will also prepare the student for further work in more advanced courses of Hispanic literature(s) and culture(s). Fulfills requirement: Language and Culture. Prerequisite: SPA 310 or SPA 311. Corequisite: SPA 355L. 4 credits.

SPA 365. Global Hot Topics. Global Hot Topics offers a study of the major issues confronting the world today, from the perspective of Hispanic cultures. This provides a means of better understanding both the origin of, and potential solutions to, those global issues and problems faced by contemporary societies. It takes an interactive communicative approach and stresses cultural competency in language learning and successful communication. This course may be repeated for credit as topic changes. Fulfills requirement: Language and Culture. Prerequisite: SPA 310 or SPA 311. 4 credits.

SPA 385. Latinos in the United States. This course examines a definition of Latino literature and culture by reviewing some of the canonical and non-canonical texts and films produced about or by Central Americans, Mexican Americans, Chicano and Hispanic Caribbean writers in the diaspora. Fulfills requirement: Writing Process, American Social Diversity, Language and Culture. Prerequisite: SPA 310 or SPA 311. 4 credits.

SPA 480. Capstone Senior Seminar in Spanish. This course is designed to be a culminating experience for the Spanish major. As such, the focus of the course is on synthesizing knowledge from previous courses into a broad historical and cultural framework. It takes an interactive communicative approach to learning. Fulfills requirement: Writing Process, Liberal Studies Area 5 (Literature and Fine Art), Language and Culture. Prerequisite: A minimum of 30 total hours of Spanish credit. 4 credits.

SPE 250. Cognitive Development of Diverse Learners. This course is designed to introduce all categories of disability. Specific attention will be given to the potential cognitive, physical, social, behavioral, and language differences in children with disabilities. Delivery approach will include, but not be limited to: lecture, case study discussions, and writing process instruction. Two hours per week of field work is required. Fulfills requirement: Writing Process. 3 credits.

SPE 255. Special Education Processes and Procedures. This course will begin with a historical overview of the field of special education, including key legislation and litigation that drives current practice. Assessment tools for diagnosing disability will be introduced, as well as assessment tools for documenting student progress. In addition, collaboration and communication skills essential for working as a part of the special education team will be practiced and further developed. Delivery approach will include, but not be limited to: lecture, field experiences, and hands-on experience with various assessments. Two hours per week of field work is required. 3 credits.

SPE 258. Effective Instructional and Behavioral Strategies for Students with Disabilities. The focus of this course content will be on (a) behavioral principles and their application in the classroom, (b) literacy development and literacy interventions for students with disabilities, and (c) evidence-based instructional strategies in other content areas, such as creative arts, mathematics, social, studies, and science. Delivery approach will include, but not be limited to: lecture, case study applications, field experiences, hands-on experience with various literacy programs, and student presentations. Prerequisite: Restricted to Music majors and transfer students. 3 credits.

SPE 260. Evidenced Based Effective Instruction in Educating Students Identified with a High Incidence Disability. This course is designed to provide in-depth study of the high incidence disabilities (i. e. , specific learning disabilities, speech and language impairments, intellectual disabilities, emotional and behavioral disorders, and other health impairments). Specific attention will be given to the etiologies of various diagnoses, their prevalence, and their characteristics. Students will be prepared to offer special education using a least restrictive environment-school wide delivery model. Delivery approach will include, but not be limited to: lecture, case study discussions, project based learning and text analysis. Prerequisites: SPE 250, or permission of the instructor. 3 credits.

SPE 263. Intensive Math and Content Area Intervention Approaches. The focus of this course will be on systematic, direct instruction approaches for teaching mathematics to students in grades PreK-8 who perform below grade level. In addition, this course will address adaptations and accommodations for the content areas of social studies, science, and health for those students with disabilities who read below grade level and therefore, have difficulty reading grade level text. Delivery approach will include, but not be limited to: hands on activities, lesson planning, small group work, and application projects. Prerequisites: SPE 250, permission of the instructor. 3 credits.

SPE 266. Evidenced Based Effective Instruction in Intervention Approaches Educating Students Identified With a Low Incidence Disability. This course is designed to provide in-depth study of the low incidence disabilities (i. e. , autism, developmental delay, multiple disabilities, deaf-blindness, visual impairments, hearing impairments, orthopedic impairments, traumatic brain injury). Specific attention will be given to the etiologies and medical aspects of these diagnoses, their prevalence, and their characteristics. Instructional planning and assessment of student progress for these populations will be emphasized. Delivery approach will include, but not be limited to: lecture, case study discussions, research papers, and text analysis. Prerequisites: Restricted to education majors. 3 credits.

SPE 269. Positive Behavioral Supports - Evidence Based Behavioral Intervention and Prevention. This course will begin with study of behavior theories and researchers, as well as principles of applied behavior analysis. Students will learn how to use functional assessment of student behavior to hypothesize the functions of behavior and to plan appropriate and positive interventions. Students will learn how to measure and record behavioral data. Focus will be on prevention of problem behavior as well as how to manage challenging behaviors, both from a classroom and a school wide perspective. Delivery approach will include, but not be limited to: lecture, case study applications, field experiences, lesson plans, and research papers. 3 credits.

SPE 360. Intensive Language Arts Intervention Approaches. The focus of this course content will be on intensive language arts interventions for those students with disabilities who need systematic, direct instruction in order to become competent readers and writers. A variety of literacy programs will be examined, as well as language arts strategies and approaches which have been found effective for struggling readers. The requirements for a writing process course will be fulfilled through a case study paper and a research paper. Delivery approach will include, but not be limited to: case study papers, research papers, student presentations, simulations, field experiences, hands-on experience with various literacy programs, and lesson plans. Prerequisites: Restricted to education majors. 3 credits.

SPE 363. Assessment in Special Education. This course will involve an in-depth examination of assessment, to include: universal screenings, diagnostic assessments to diagnose disabilities, authentic assessments, and benchmark, formative, and summative tools. Students will practice administering and scoring various assessments. They will analyze student progress data and use that data for writing IEP goals and for instructional planning. Delivery approach will include, but not be limited to: text analysis, field experiences, case study analyses, and hands-on experience with various assessments. Prerequisites: Restricted to education majors. 3 credits.

SPE 366. Collaboration and Communication - Advocacy, Leadership, and Ethical Practice. This course will begin with an examination of the professional and ethical standards expected of both general and special educators. Review of special education legislation and litigation will be conducted as it relates to safeguarding student health and welfare and in order that special education certifiers will have the knowledge to effectively advocate on behalf of their students with disabilities. In addition, collaboration and communication skills will be practiced and further developed through co-teaching opportunities and participation on special education teams. Delivery approach will include, but not be limited to: field experiences, class discussions, simulations, and reflective writing. Prerequisites: Restricted to education majors. 3 credits.

SPE 441. ECE Special Education Student Teaching. Each ECE/SPE dual major will spend eight weeks in a stand-alone special education environment in an area school under the supervision of a carefully selected cooperating teacher. Open to seniors or students who are seeking certification only. Fulfills requirement: Immersive Experience. Prerequisite: Completion of all courses in the ECE/Special Education Dual Major, cumulative GPA at or above the minimum GPA specified by PDE for the PreK-4 Early Childhood Education certificate, completion of all Chapter 354 and Act 49-2 course requirements. 6 credits.

GRADUATE COURSES

ACT 859. Forensic Accounting. What do you get when you mix psychology, criminology, computer forensics and accounting? You get an exciting, first-hand view of forensic accounting and fraud examination. This course will examine the motives for committing fraud, common methods for detecting fraud and techniques used in investigating fraud. We will explore theory, as well as follow an actual case from detection to prosecution. 3 credits.

ACT 869. CFO - Lessons in Financial Leadership. At times it appears that the life of a CFO looks like a "jack-of-all-trades and a master of none". In many companies, the CFO oversees not just the accounting department, but also human resources and information technology. All of this oversight is typically additional to the role of right hand of the CEO. This course will provide an overview of the role of the CFO in strategy and leadership. In addition, students will be exposed to the important function of due diligence. "Due diligence" can loosely be described as understanding, researching, and investigating a company's finances and operations, both historically and with an eye toward future value. This course is a high-speed, seminar-style course that seeks active participants. 3 credits.

ACT 879. Advanced Taxation. This course leverages knowledge of individual and entity taxation. Students will be exposed to the importance of taxation planning in business decision making. Accountants must be business partners in the "C-Suite". Topics include Estate and Trust Taxation, International Taxation, and Taxation of Business Combinations. Additionally, students will explore the ethics around topics such as off-shoring and inversions. 3 credits.

ATR 714. Pathophysiology. Examines basic human pathology and medical principles, including, but not limited to, inflammation, infection, systemic conditions, diagnostic imaging, genetics, and clinical laboratory tests. 4 credits. [This course is cross-listed with PHT 514]

ATR 730. Clinical Topics in Sports Medicine. This course will provide an overview of current and cutting edge topics in the field of sports medicine. Topics may include clinical and surgical innovations in the prevention and management of sports related injuries, specialized diagnostic procedures, and evolving position statements developed by the NATA and the American College of Sports Medicine. Course content will vary, with respect to content, based on new ongoing developments within the sports medicine arena. 2 credits.

ATR 734. Neurological Evaluation, Assessment, and Management in Sports Participants. This course is designed to address sport-related injury to the brain, spinal cord, and nervous system. Coverage encompasses the full range of issues arising in the care of the neurologically impaired athlete, from diagnostic tests, to prevention and treatment of injuries from specific sports, to current strategies for rehabilitation. Concussion, acute spinal and spinal cord injuries will be emphasized. 3 credits.

ATR 736. Optimizing Athletic Performance Management in Sports Participants. This course is designed to provide the student with safe, appropriate and legal strategies to optimize sports performance. Topics such as sport specific training, glycogen loading, peaking, diet, hydration, and supplements will be covered. Adverse reactions to optimal performance, including overtraining will also be included. 3 credits.

ATR 742. Ergogenic Aids in Sports. This course will provide the student with an understanding of performance enhancing agents, including pharmacological agents, blood doping, human growth hormone, and weight control. Insight into administration of these agents and physiological/performance effects will also be studied. 3 credits.

ATR 744. Administration and Management in Athletic Training. This course provides an introduction to administrative and management procedures associated with the various occupational settings for athletic trainers. 3 credits.

ATR 746. Psychological Aspects of Health, Injury, and Performance. This course provides the student with an understanding of an athlete's mindset in choosing to participate in unhealthy practices to enhance performance. Discussion of motivating factors to training and performance, and the adverse effects of depression, anxiety, self-esteem, and parental/peer pressures will also be studied. 3 credits.

ATR 750. Seminar in Athletic Training. This course is designed to provide students with the more advanced clinical skills and manual techniques used in the evaluation, assessment, and management of musculoskeletal injury and pathology. Topics to be covered include manual joint and soft tissue techniques, and advanced functional rehabilitation, including agility exercises, neuromuscular techniques, and progressive return to sport training techniques. Laboratory components will allow for application and practice of these clinical skills. 3 credits.

ATR 752. Evidence Based Practice III. This course is the third in a sequence of evidence-based coursework related to the understanding of clinical research and its application to the development and justification of treatment interventions that are implemented in various injuries and pathologies that occur in the athletic population. Emphasis in this course will be placed on critiquing clinical research articles, and peer discussion of articles using a journal club format. 1 credit.

ATR 760. Athletic Training Clinical Experience III. This is the third of a five series progression of athletic training experiences with respect to various clinical settings and experiences. Each experience will reflect the integration and clinical application of didactic and laboratory experiences in line with concurrent academic course progression. Clinical education experiences will familiarize students with athletic training policies and procedures, sports and safety equipment and evaluation/intervention strategies. There will also be opportunities to apply clinical skills related to examination, therapeutic interventions, first aid, and emergency assessment and management. Prerequisite: ATR 562 (with a grade of "B" or higher) 2 credits.

ATR 762. Athletic Training Clinical Experience IV. This is the fourth of a five series progression of athletic training experiences with respect to various clinical settings and experiences. Each experience will reflect the integration and clinical application of didactic and laboratory experiences in line with concurrent academic course progression. Clinical education experiences will familiarize students with athletic training policies and procedures, sports and safety equipment and evaluation/intervention strategies. There will also be opportunities to apply clinical skills related to examination, therapeutic interventions, first aid, and emergency assessment and management. Prerequisite: ATR 760 (with a grade of "B" or higher) 4 credits.

ATR 764. Athletic Training Clinical Experience V. This is the fifth of a five series progression of athletic training experiences with respect to various clinical settings and experiences. Each experience will reflect the integration and clinical application of didactic and laboratory experiences in line with concurrent academic course progression. Clinical education experiences will familiarize students with athletic training policies and procedures, sports and safety equipment and evaluation/intervention strategies. There will also be opportunities to apply clinical skills related to examination, therapeutic interventions, first aid, and emergency assessment and management. Prerequisite: ATR 762 (with a grade of "B" or higher) 3 credits.

MBA 801. Introduction to Healthcare Management. The course examines the history of medicine; healthcare delivery systems such as acute hospital care, chronic care, outpatient systems, and long term care; healthcare professions and medical education; US and World healthcare systems; health insurance, healthcare financing and payers; employee based coverage compared to government coverage; public health; and healthcare technology and innovation and its cost. The course provides an introduction to management across functions in a healthcare organization. 3 credits.

MBA 802. Ethical, Legal, and Regulatory Issues in Healthcare. This course introduces students to the legal, regulatory, and ethical issues they are likely to face in managing a healthcare organization. With the increasing intersection between healthcare delivery and law, healthcare managers will encounter a wide range of legal and regulatory issues, including patients' rights, antitrust, institutional liability, privacy, security and reimbursement. It is thus important for students to be familiar with basic legal principles affecting how healthcare institutions operate, how legal rules and doctrine are formulated, and how to interact effectively with attorneys. 3 credits.

MBA 805. Financial Policy. A quantitative and qualitative approach to managerial problems of short and long term financing, asset management, and dividend policies, to advance the understanding of financial concepts, policies, theories and tools to make investment and financing decisions. Emphasis placed on the application of experience to class discussion based on the use of "The Wall Street Journal." The primary objective of this course is to be able to evaluate investment opportunities, understand the various sources of financing and its impact on the firm's structure. Must satisfy Finance prerequisite. 3 credits.

MBA 807. Innovation. Why are some companies considered innovative and others stodgy? What cultural, organizational, and personal elements make innovation in technology possible? This course attempts to answer these questions by exploring how technology ideas are created, fostered, and shared. The course will study innovation from both theoretical and applied perspectives using case studies, creative exercises, research, and simulations as learning experiences. 3 credits.

MBA 810. Organizational Behavior. Utilizing an experiential case study method, this course surveys the evolution of theory and research in the areas of organization behavior. Learning topics include motivation theory, group dynamics, leadership, decision-making, conflict transformation, emotional intelligence and communication. The course affirms a systemic perspective and approach to organizational behavior, a systematic presentation of theory and research in areas of organizational behavior; including motivation, group dynamics, leadership, decision-making, organization change, career planning, and communication. Must satisfy Organizational Behavior prerequisite. 3 credits.

MBA 815. Marketing Management. A focus on issues in the interplay between marketing and society including the ethics of selling, advertising, marketing research, and the social responsibility of marketers. An understanding of the role of marketing in businesses and not-for-profit organizations and its importance for individuals within a society. Discover how marketing interfaces with domestic and global environments. Understand consumer and organizational buyer behavior for identifying market opportunities, segmenting and targeting markets, and developing positioning strategies. Must satisfy Marketing prerequisite. 3 credits.

MBA 816. Internet Marketing. The course examines the principles and processes of Internet Marketing. Students will examine current topics including search engine advertising; social media, online advertising strategies and models; metrics, and ethics. The course will also integrate a comparison and contrast of online promotion to traditional channels and extensively employ case studies. 3 credits.

MBA 817. Business and Technology. This course examines the role technology plays in collaboration and knowledge management in business organizations. The class will present both theoretical and applied concepts, including organizational knowledge models, knowledge exchange, collaboration tools, Communities of Practice, and Web 2.0. Case studies are employed to build critical thinking skills, especially for a recurring analysis of the complex relationship between people, information, and IT. 3 credits.

MBA 825. Executive Communications. Executive Communications focuses on the communication skills that managers at all levels must acquire, develop and demonstrate in order to achieve success in the workplace. The course combines communication theory with practical techniques for conveying information; for motivating associates and enhancing teamwork via the spoken and written word; and for exhibiting leadership through language at the interpersonal, small group and organizational levels. Organizational communications skills, emphasizing writing, speaking and listening techniques and interpersonal communication are included. Recommended as one of the first 3 courses taken in the MBA program. 3 credits.

MBA 827. Project Management. Project Management is "the application of knowledge, skills, tools and techniques to project activities to meet project requirements," as defined by the Project Management Body of Knowledge (*PMBOK*®). The course provides students an introduction to the five process groups of project management, the nine knowledge areas of project management, and the Project Management Institute (PMI®). Introduces appropriate project management computer software. 3 credits.

MBA 832. Management Information Systems. This course addresses key issues associated with the management of enterprise-level technology and information systems. Topics includes creating business intelligence, using technology for competitive advantage, building and using relational databases, creating and using decision support systems, exploring strategies for e-commerce, understanding systems development, designing and managing networks, protecting information systems, and examining and evaluating emerging technologies. Must satisfy the Management Information Systems prerequisite. 3 credits.

MBA 833. Managerial Economics. This course studies the role of economic theory in management analysis and decisions. The study of demand, cost, and supply theories from a business viewpoint are also covered. This course is about economic principles and their relevance to business decision-making. It will explore the interaction of information, economic incentives and market competition and how these interact to determine prices, products available, profits, and patterns of trade and organization. At the end of this course students should be able to understand how basic economic reasoning can improve managerial decisions. Must satisfy Economics (Micro and Macro) prerequisite. 3 credits.

MBA 840. Business Analytics. This course reviews the quantitative techniques and systems approaches that managers need to make effective decisions for their organization. A philosophy of problem solving will be introduced as well as systems thinking and the use of models in solving business problems. Emphasis is placed on analyzing and critically evaluating data to inform managerial decision-making. Topics include supply chain management and control of inventory, forecasting, and quality management. Appropriate computer software is used. Must satisfy Statistics prerequisite. 3 credits.

MBA 845. Managing Operations and Business Processes. Business decisions are made with consideration of the resources available, costs (both internal and external) and the impact on all stakeholders of an organization. This course provides the knowledge and skills that managers use in describing and understanding, measuring and analyzing, and developing plans for changing the operating process to best serve those interests. Tools such as including Queuing models, Simulations and Linear Programming applications will be employed. Decisions regarding the best use of limited resources, staffing requirements, and facility location/layout are featured. Prerequisite: MBA 840; must also satisfy Operations prerequisite. 3 credits.

MBA 847. Sales Management. This course will utilizing an experiential case study method, this course critically examines the role of sales management in crafting and executing business strategy. Emphasis is placed on the functions of a sales manager, including the planning, execution, and control of a sales force. Topics are investigated using case study, in class discussion, and analytical and hands on exercises. 3 credits.

MBA 850. Human Resource Management. A survey of personnel management activities in organizations including exploration of recent developments in the field of human resource management. Topics include human resource planning, recruitment, selection, training, equal employment opportunity, performance appraisal, discipline, career planning, compensation, safety, and health. Instruction method includes case study, readings, and classroom lecture. 3 credits.

MBA 855. Legal Environment of Business. Legal concepts and principles important to business decision making including employment law, labor-management relations and relevant legislation, tax consequences of business transactions, government regulation, contract law, and application of the Uniform Commercial Code to business transactions. Case study, readings, and lecture. 3 credits.

MBA 857. Supply Chain Management. This course takes a strategic, managerial, and cross-functional view of supply chain management, enabling managers to participate in the vision and implementation of world-class supply chain networks. To achieve this, the course introduces a Supply Chain Roadmap process model as a guiding framework for designing and implementing integrated supply chains. Students will gain the knowledge and analytical tools to perform analysis and act as change agents within their organizations. 3 credits.

MBA 860. International Business Management. The theories, concepts, practices, and techniques of conducting business in foreign countries. The strategic issues, the operational practices, and the governmental relations of multinational companies are analyzed through the use of case studies, videos, lectures, the development of an international strategic plan, and an international trade game. Topics include: economic, political, and cultural integration; trade restrictions and barriers; overseas investment and financing; entry into foreign markets and marketing strategies 3 credits.

MBA 865. Entrepreneurship. Entrepreneurship, intrapreneurship, small business, and acquisitions. Special attention to entrepreneurial behavior, sources of funding and actual case studies in the development of new enterprises. 3 credits.

MBA 870. Labor Management Relations. Directed primarily to the understanding of the issues and alternatives arising out of the work place. The course provides both an overview of what has been identified as industrial relations as well as familiarity with the tools used by its practitioners. Students will study negotiation, administration, wage/fringe issues, and contents of labor agreements. 3 credits.

MBA 875. Accounting for Managerial Decision Making. Provides students previously exposed to managerial accounting principles with the essential tools and strategies managers need to develop data for making decisions related to pricing strategy; product expansion, discontinuance or redesign; performance measurement; resource allocation and management; merger and acquisition planning; and other types of managerial decisions. Stresses ways to avoid mistakes that result when internal decision-making is based on data developed for external financial reporting. Business topics covered include financial statement analysis, responsibility accounting, Economic Value Added (EVA), and Activity Based Costing (ABC). Must satisfy Accounting prerequisite. 3 credits.

MBA 880. Investments and Portfolio Management. Reviews the tools essential for sound money management. Considers the goals of the investor with respect to risk exposure, tax environment, liquidity needs and appreciation versus income potentials. Strategies will be developed to satisfy these objectives. Mathematical models of portfolio selection to help reduce risk through diversification will be developed. Special attention will be paid to the theories of determinants of asset prices, including the capital-asset pricing model. 3 credits.

MBA 885. Ethical Leadership. A focus on the examination of leadership theories and concepts and how to recognize, analyze, and resolve ethical dilemmas in our leadership roles. Through the use of case studies and self-analysis, students will assess: corporate social responsibility; the public and private morality of leaders; the moral obligations of leaders and followers; the ways in which leaders shape the moral environment of institutions; the temptations of power; and leader-follower interaction. 3 credits.

MBA 890. Special Topics. This course option allows for the exploration of current topics in the field of business management. Topics include Risk Management, Business and Technology, Supply Chain Management, Project Management, International Trade Policy, and Health Care Management. This course may be repeated for credit as topic changes. 3 credits.

MBA 891. Special Topics in Health Care Management. This course option allows for the exploration of current topics in the field of health care management. This course may be repeated for credit as topic changes. 3 credits.

MBA 895. Strategic Management. Strategic Management is a capstone course to be taken near or at the completion of the MBA program. Strategic Management is designed to tie together and integrate all the business courses taken by challenging students to look at a total organization and what it must do to compete successfully in its environment. This course includes an examination of the many principles and techniques used today in strategy formation and implementation. Case studies will be used extensively throughout the course to enhance understanding of strategy concepts and practices. Also included is the strategic management of large and small business entities, including the formulation and evaluation of missions, strategies, objectives, and policies. Historical and current situations are discussed. Cases are widely used and outside research is required. Prerequisite: At least 24 hours of graduate credit. Must satisfy Strategic Management prerequisite. 3 credits.

MBA 900. Internship. Practical, professional work experience related to the student's career interests and academic studies involving both organizational/on-site and faculty supervision. Students may complete up to two internship experiences for credit or not-for-credit during pursuit of the MBA Degree, with a maximum of 3 credits per internship (6 credits total). A minimum of 60 hours of per credit will be required for students seeking credit for their internship. Graded pass/fail. May be repeated for credit (up to 6 credits of internship may be counted toward the degree). 0-3 credits.

MME 801. Foundations of Music Education. A consideration of philosophical and historical issues in music education and their implications for developing curricular and instructional approaches to the field. A core course. 3 credits.

MME 802. Research Methods in Music Education. A study in the organization, presentation, interpretation, and documentation of research that makes use of encyclopedias, indices, databases, and other aids. A core course. 3 credits.

MME 803. Technology for Music Educators. An exploration of how technology can enhance the music learning process. This course examines what is involved in planning, configuring, and teaching various technology systems and applications so as to facilitate creative interaction with musical experiences. A core course. 3 credits.

MME 804. Psychology of Music Learning. An investigation and discussion of theories of learning as they relate to the teaching of music. This course includes the study of specific teaching strategies and the nature of musical response. A core course. 3 credits.

MME 805. Project. Project capstone. Graded pass/fail. This course may be repeated for credit as topic changes. 1-3 credits.

MME 806. Thesis. Thesis capstone. Graded pass/fail. This course may be repeated for credit as topic changes. 1-3 credits.

MME 807. Interpreting and Using Research in Music Education. An investigation of research in music education, its practical application in classrooms and rehearsal halls, and its role in influencing decision-making and policy-making in music education. Prerequisite: MME 802. 3 credits.

MME 830. Private Applied. Up to a maximum of 3 elective credits in the program (including MME 840). 1 credit.

MME 840. Private Applied. Up to a maximum of 3 elective credits in the program (including MME 830). 2 credits.

MME 890. Special Topics. Elective courses will be offered as special topics courses, (e. g. , Teaching Choral Music, Teaching General Music, Teaching Instrumental Music, Theory for Teaching, Graduate Music History Seminar, Music in Early Childhood, Music and the Exceptional Child, Statistics for the Music Researcher, Conducting, Arranging [band scoring, choral arranging, jazz arranging]). This course may be repeated for credit as topic changes. 3 credits.

MSE 801. Principles of Biology and Life Science. This course addresses biology and life science concepts prevalent in virtually all science curricula, as well as those set forth in the National Science Education Standards. Students engage in the use of scientific methods to address topics typically taught in biology and life science courses. 3 credits.

MSE 802. Principles of Chemistry. This course utilizes concepts in chemistry to make connections to common substances. Establishing chemistry as an integral part of everyday life, as well as discoveries made by chance, will make this topic relevant to all students. Prerequisite: MSE 800. 3 credits.

MSE 803. Principles of Physics and Physical Science. This course utilizes hands-on experimental methods to gain confidence and experience with inquiry-based learning of physics. Topics include motion, heat, light, electricity and magnetism. 3 credits.

MSE 805. Principles of Earth and Space Science. The interaction and effects of geology, meteorology, and space exploration will be explored in this course. Field study is combined with experimental inquiries from exemplary curricula to illustrate critical connections of physics, chemistry and biology with the earth sciences. 3 credits.

MSE 806. Principles of Mathematics in a STEM Classroom. This course is designed for K-12 educators, administrators, and informal educators as a rich and deep inquiry into mathematical concepts related to STEM curriculum. This course will include mathematical concepts that are developed through inquiry-based learning. Educators will then have the opportunity to develop hands-on and inquiry-based activities that can be implemented in their classroom to enable students to have a deeper understanding of Common Core eligible content. Prerequisite: MSE 880. 3 credits.

MSE 807. Principles of Technology and Engineering in a STEM Classroom. This course is designed to empower K-12 educators, administrators, and informal educators to properly address engineering concepts within STEM. This includes an introduction to the curricular nature and signature pedagogies unique to engineering, technology, and the engineering design process. This course will also include an examination of state and national standards to technology and engineering education, an investigation of related political, global, and economic trends and issues, and a review of technology and engineering education research. Prerequisite: MSE 880. 3 credits.

MSE 813. Literacy in the Science Classroom. This course will explore the communication and reading literacy skills that K-12 students need in understanding science education and scientific literature. The course will provide students with opportunities to choose, apply, and evaluate writing, reading, and communication skills with their students by selecting appropriate materials and exercises that reflect the needs of a diverse population of students. The components of a balanced literacy curriculum - phonics, fluency, vocabulary, and comprehension - will be addressed as well as strategies to improve these skills in students weak in one or more of the components. Literacy skills that are unique to science will be explored, including learning to communicate in the language of science (charts, tables, data, maps, etc.). 3 credits.

MSE 820. Seminar. This course will permit some flexibility to explore current topics in elementary/middle school education as they arise. Seminar courses permit special topics to be included in the course of study. Recent offerings include literacy in science, forensics, and multimedia science. In addition, certain transfer courses may be valid for degree accreditation but may not be a complete match in the courses listed. May be repeated for credit. 1-3 credits.

MSE 821. STEM Business Tours to the Classroom. Students will tour select local industries and organizations which utilize science, technology, engineering and mathematics (STEM) on a daily basis. The focus of the central PA tours will be to raise awareness of scientific applications that encompass STEM to produce or analyze a product or test samples. Students will be able to build partnerships with local industries which will enable them to connect industry directly into their classroom. Additionally, emphasis will be placed on safety and environmental concerns within the industrial setting. Students will be provided with time to query the various company representatives about specific applications to the classroom. Journal articles, reflective journals, and a culminating project are requirements of the course. 3 credits.

MSE 822. Forensic Science to the Classroom. In this course, students will read, research, hypothesize, interview, compute, and use deductive reasoning to propose solutions to crimes in an effort to develop hands-on, inquiry-based lessons for their K-12 students. Students will use forensic techniques such as lifting and inking fingerprints, shoe casting, and bite identification. Science, English, and Math Standards will be incorporated into this project-based course. 3 credits.

MSE 823. Waterways: Water Chemistry, Biology, Environment, and Safety. This course provides students with a field-based opportunity to study and monitor various habitats in an attempt to become more aware of our water resources. Students will compare and contrast various local waterway systems and synthesize data regarding overall health and water quality. 3 credits.

MSE 824. Emerging Internet Technology. This course will raise awareness and competence with ever emerging Internet technologies useful for education. Although the focus will be on science education application, students will find that these technologies can be applied in a variety of educational and personal contexts. The course will involve both instructor and student based sharing and presentations on technology. 3 credits.

MSE 825. Meeting the Needs of the Exceptional Learner in the Science Classroom. Exceptional learners-those students who are atypical and not what we expect as teachers-are becoming more of an influence in education. In this course, we will discuss the characteristics of exceptional learners, what interventions are in place to assist the exceptional learner realize success in the general education classroom, and what teachers can do to advocate for exceptional learners in the school system. 3 credits.

MSE 826. Watersheds and Wetlands: Citizen Science Inquiry and the Atlantic Horseshoe Crab. Population studies, data collection, investigation, analysis, problem solving, and developing an action plan are all key to conducting citizen science. This course embraces the amazing story of the horseshoe crab in modern medicine, in the fisheries industry, in the food chain, in tourism, and its connection to a time when dinosaurs walked the earth. Students complete an overnight field trip to an estuary/saltwater marsh and complete research in the tidal wetland. 3 credits.

MSE 827. Applying Wildlife and Natural Resources to the Classroom. This course is designed to increase participants' knowledge of the birds and mammals native to Pennsylvania through the study in the classroom and the field of various wildlife habitats associated with Middle Creek Wildlife Management Area and throughout the state of Pennsylvania. A primary goal will be to develop the tools and methods necessary for participants to comfortably present wildlife topics of Pennsylvania to their respective classroom. A key resource for the course will be the expertise of one of the area's wildlife specialists, who will be a co-instructor for the course. All instructional time will occur on site at the Middle Creek Wildlife Management Area. 3 credits.

MSE 829. Research Methods and Statistics. Designed to develop the understanding of the methods employed in planning and developing research in science, students will gain experience in generating ideas for research, critically evaluating literature, synthesizing and presenting results of research, and writing in a clear and organized way. Students will explore research-based rationale for reform in science education and address the use of statistics in analyzing science education research as well as local, state, and national assessments. Enduring understandings, content worthy of understanding and the development of essential questions for science courses will be addressed. 3 credits.

MSE 850. Independent Study. May be repeated for credit. 1-6 credits.

MSE 880. Introduction to STEM Education. This course serves as a general exploration of the disciplines and approaches to STEM education. Pedagogy, assessment, standards alignment, and trends and issues will be covered in this course. 3 credits.

MSE 881. STEM Education Systemic Reform. This is the second course of the 3-course STEM concentration. Students will investigate STEM initiatives and programs, including individuals and organizations that have impacted the development of STEM education. The course will also explore funding, budgeting, and grant writing in relation to STEM reform. Prerequisite: MSE 880. 3 credits.

MSE 882. STEM Integrative Curriculum Design. This is the third course of the three-course STEM concentration. This course will explore integrative curriculum design and assessment. Topics will include state and national standards and analysis of existing STEM curricula and pedagogies. Prerequisite: MSE 880 and MSE 881. 3 credits.

MSE 883. Integrative STEM Education Practicum. In this course students will apply and extend integrative STEM knowledge, understanding, and skills acquired through coursework to meaningful field experiences. During the Integrative STEM Education Practicum, students will develop a digital portfolio of artifacts as evidence in meeting the program competencies and as demonstration of reflective practice. This course may be repeated for credit as topic changes. Corequisite: MSE 880, 881, or 882. 1-3 credits.

PHT 716. Health Promotion for Self and Society. Covers health and health promotion topics across the lifespan. Students will begin to identify community needs that would benefit from a physical therapy program of prevention, health promotion, wellness, and screening services. 3 credits.

PHT 720. Neuroscience. Neuroscience examines the anatomy and physiology of the nervous system and changes that occur across the life-span, relevant pathophysiology and the functional manifestations of this pathology, and acquisition of basic neurologic examination skills. 4 credits.

PHT 726. Clinical Interventions I. First of a two course sequence designed to instruct students in the use of therapeutic modalities to affect change in human tissues. Laboratory exercises include applying modalities, gait training with various devices, and therapeutic exercise. 4 credits.

PHT 728. Musculoskeletal I. First of a two course sequence providing an in depth study of the evaluation, assessment, and treatment methods used in the management of musculoskeletal pathology and/or injury. This first component of the two course sequence will emphasize the upper and lower limbs, with an introductory component to the spine. 4 credits. [This course is cross-listed with ATR 528]

PHT 730. Clinical Interventions II. A continuation of Clinical Intervention I. This course will examine edema and integumentary concerns, incontinence, and specific exercise techniques. 4 credits.

PHT 732. Musculoskeletal II. Second of a two course sequence providing an in-depth study of the evaluation, assessment, and treatment methods used in the management of musculoskeletal pathology and injury. This course will build upon material studied in PHT 728 and emphasize anatomical, biomechanical, and physiological factors relevant to musculoskeletal dysfunction. 3 credits. [This course is cross-listed with ATR 532]

PHT 734. Selected P. T. Practice Topics. This course will cover specialized physical therapy practice areas and advanced evaluative, assessment, and interventional strategies for special populations. 2 credits.

PHT 736. Neuromuscular Physical Therapy I. Provides an examination of techniques used in the examination and assessment of persons with nervous system dysfunction. 4 credits.

PHT 738. Geriatrics Physical Therapy. Presents the aging process in relation to pathokinesiology, the immune system, cardiopulmonary system, musculoskeletal system, neuromuscular function, and therapeutic intervention adaptation. 3 credits.

PHT 740. Prosthetics and Orthotics. Provides a detailed examination of the physical therapy management of individuals requiring splinting or bracing, as well as individuals with amputations requiring prosthetic devices. 2 credits.

PHT 752. Evidence in Practice. This is the third course in a four-part course sequence of critical inquiry/evidence-based physical therapy. The extensive use of Comprehensive Appraisals of a Topic Is the central theme of this semester. Current published research topics include: clinical prediction rules, prognosis, low back dysfunction, shoulder dysfunction and patient satisfaction. Graded pass/fail. 2 credits.

PHT 760. Clinical Education I. Students will be assigned to a supervising Clinical Instructor (CI) and have the opportunity to examine, evaluate, propose, and implement intervention strategies in a full-time clinical experience. Students will complete documentation for patient care management and are expected to demonstrate professional behaviors. Graded pass/fail. 3 credits.

PHT 762. Clinical Education II. A seven-week, full-time supervised clinical learning experience to provide students the opportunity to develop clinical competence in the physical therapy management of individuals in an ambulatory or inpatient environment. Graded pass/fail. 3 credits.

PHT 764. Clinical Education III. The second, seven-week supervised clinical learning experience where students continue to develop clinical competence in the management of various musculoskeletal, cardiovascular- pulmonary, integumentary, and neuromuscular disorders. Graded pass/fail. 3 credits.

PHT 795. Student Run Free Clinic III. This is one of a series of courses offered to all physical therapy students in the graduate phase of the program who are interested in participating in the LVC student run free physical therapy clinic for individuals who are underinsured/ uninsured in the community. Students have the opportunity to work with patients throughout the semester, as well as manage all aspects of the clinic. Students will be supervised throughout the experience by licensed physical therapists. Students will be required to undergo HIPPA, OSHA, Standard Precautions, and CPR training and demonstrate competency in all areas prior to working in the clinic. Graded pass/fail. 0 credits.

PHT 796. Student Run Free Clinic IV. This is one of a series of courses offered to all physical therapy students in the graduate phase of the program who are interested in participating in the LVC student run free physical therapy clinic for individuals who are underinsured/ uninsured in the community. Students have the opportunity to work with patients throughout the semester, as well as manage all aspects of the clinic. Students will be supervised throughout the experience by licensed physical therapists. Students will be required to undergo HIPPA, OSHA, Standard Precautions, and CPR training and demonstrate competency in all areas prior to working in the clinic. Graded pass/fail. 0 credits.

PHT 802. Physical Therapy Administration and Management. Examines current issues and trends in physical therapy clinical management. 4 credits.

PHT 830. Neuromuscular PT II. Examines in detail through a case-based approach specific neurologic conditions, the resulting impairments and functional limitations, and the physical therapy management of persons presenting with these conditions. 4 credits.

PHT 832. Pediatric Physical Therapy. Presents an introduction to the physical therapy management of pediatric patients. Topics include normal motor development, and client examination, evaluation, and intervention aimed at improving function and limiting disability. 4 credits.

PHT 835. Patient Management Seminar. This course is collection of seminars focused on specific areas of practice. Students will have the option of selecting from the list of topics. Each seminar /section of the course is to be taken as Pass/Fail. Students must pass both sections of the seminar to pass the course. Graded pass/fail. This course may be repeated for credit as topic changes. 1-2 credits.

PHT 836. Differential Diagnosis. Designed to integrate the curricular content to date. In this capstone course, students will demonstrate differential diagnosis as it relates to autonomous practice in realistic clinical situations. 3 credits.

PHT 850. Critical Inquiry Capstone. This is the capstone course in a four-part course sequence of critical inquiry/evidence-based physical therapy. A formal case study is prepared in two formats for presentation at a professional meeting. The poster format is developed using the elements of the "Physical Therapist Patient Management Model" as well as a formal case study document detailing the evidence gathered. 2 credits.

PHT 860. Clinical Education IV. Final, full-time supervised clinical learning experience spanning sixteen weeks in a multidisciplinary care environment. Students will demonstrate patient management skills for pediatric or adult patients with complex medical diagnoses utilizing an evidence-based approach. Graded pass/fail. 12 credits.

PHT 861. Clinical Education V. First of the two final, full-time supervised clinical learning experience spanning eight weeks in a multidisciplinary care environment. Students will demonstrate patient management skills for pediatric or adult patients with complex medical diagnoses utilizing an evidence-based approach. Graded pass/fail. 6 credits.

PHT 862. Clinical Education VI. Second of the two final, full-time supervised clinical learning experience spanning eight weeks in a multidisciplinary care environment. Students will demonstrate patient management skills for pediatric or adult patients with complex medical diagnoses utilizing an evidence-based approach. Graded pass/fail. 6 credits.

PHT 895. Student Run Free Clinic V. This is one of a series of courses offered to all physical therapy students in the graduate phase of the program who are interested in participating in the LVC student run free physical therapy clinic for individuals who are underinsured/ uninsured in the community. Students have the opportunity to work with patients throughout the semester, as well as manage all aspects of the clinic. Students will be supervised throughout the experience by licensed physical therapists. Students will be required to undergo HIPPA, OSHA, Standard Precautions, and CPR training and demonstrate competency in all areas prior to working in the clinic. Graded pass/fail. 0 credits.